# Quinoline Derivatives and MELK Inhibitors Containing the Same

## Technical Field

The present invention relates to a quinoline derivative for inhibiting MELK activity, a method for the preparation thereof, and a pharmaceutical composition containing the compound as an active ingredient.

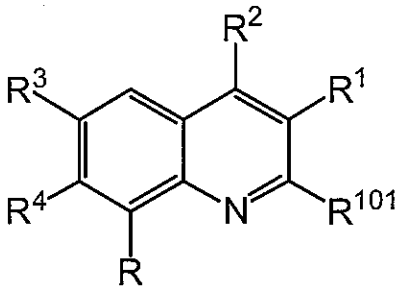
## Background Art

MELK, maternal embryonic leucine zipper kinase, was previously identified as a new member of the snf1/AMPK serine-threonine kinase family that is involved in mammalian embryonic development (Heyer BS et al., Dev Dyn. 1999 Aug 215(4):344-51). The gene was shown to play an important role in stem cell renewal (Nakano I et al., J Cell Biol. 2005 Aug 1, 170(3):413-27), cell-cycle progression (Blot J et al., Dev Biol. 2002 Jan 15, 241(2):327-38; Seong HA et al., Biochem J. 2002 Feb 1, 361(Pt 3):597-604) and pre-mRNA splicing (Vulsteke V et al., J Biol Chem. 2004 Mar 5, 279(10):8642-7. Epub 2003 Dec 29). In addition, through gene expression profile analysis using a genome-wide cDNA microarray containing 23,040 genes, MELK was recently shown to be up-regulated in breast cancer (Lin ML et al., Breast Cancer Res. 2007; 9 (1):R17, WO2006/016525, WO2008/023841). In fact, MELK is up-regulated in several cancer cells, for example lung, bladder, lymphoma and cervical cancer cells (See WO2004/031413, WO2007/013665, and WO2006/085684, the disclosures of which are incorporated by reference herein). Northern blot analysis on multiple human tissues and cancer cell lines demonstrated that MELK was over-expressed at a significantly high level in a great majority of breast cancers and cell lines, but was not expressed in normal vital organs (heart, liver, lung and kidney) (WO2006/016525). Furthermore, suppression of MELK expression by siRNA was shown to significantly inhibit growth of human breast cancer cells. Accordingly, MELK is considered to be a suitable target for cancer therapy in the treatment of a wide array of cancer types. The present inventors have endeavored to develop an effective inhibitor of MELK and have found that a compound can selectively inhibit the activity of MELK.

## Summary of Invention

The present invention relates to the following (1) to (33).

(1) A compound represented by the following formula or a pharmaceutically acceptable salt thereof:



(I)

wherein,

$R^1$ represents

a hydrogen atom,

a halogen,

a cyano,

an optionally substituted $C_3$-$C_{10}$ cycloalkyl,

an optionally substituted aromatic heterocyclic group,

an optionally substituted $C_1$-$C_6$ alkylsulfinyl,

an optionally substituted $C_1$-$C_6$ alkylsulfonyl, or

-CO-$R^5$ [wherein,

$R^5$ is

an optionally substituted $C_1$-$C_6$ alkyl,

an optionally substituted aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl),

an optionally substituted $C_3$-$C_{10}$ cycloalkyl,

an optionally substituted aryl,

an optionally substituted aromatic heterocyclic group,

a hydroxy,

an optionally substituted $C_1$-$C_6$ alkoxy, or

-$NR^8R^9$ (wherein,

$R^8$ and $R^9$ are the same or different and represent

a hydrogen atom,

an optionally substituted aryl,

an optionally substituted $C_1$-$C_6$ alkyl,

an optionally substituted $C_3$-$C_{10}$ cycloalkyl,

an optionally substituted aromatic heterocyclic-($C_1$-$C_6$ alkylenyl), or

an optionally substituted aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl))],

$R^2$ represents

a hydrogen atom,

a halogen,

a hydroxy,
a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyloxy),
an optionally substituted aryl,
an optionally substituted aromatic heterocyclic group,
an optionally substituted aliphatic heterocyclic group,
$-NR^6R^7$ [wherein,
$R^6$ and $R^7$ are the same or different and represent
a hydrogen atom,
an optionally substituted $C_1$-$C_6$ alkyl,
a $C_1$-$C_6$ aminoalkyl,
an optionally substituted $C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl),
an optionally substituted di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl),
an optionally substituted $C_2$-$C_7$ alkanoylamino-($C_1$-$C_6$ alkylenyl), or
$-(CH_2)_n-R^{10}$ (wherein,
n represents an integer of 0 to 6, and
$R^{10}$ is
an optionally substituted $C_3$-$C_{10}$ cycloalkyl,
an optionally substituted aryl,
an optionally substituted aromatic heterocyclic group, or
an optionally substituted aliphatic heterocyclic group), or
$R^6$ and $R^7$ form with an adjacent nitrogen atom an optionally substituted heterocyclic group],
$R^3$ represents
a hydrogen atom,
a halogen,
an optionally substituted $C_1$-$C_6$ alkyl,
an optionally substituted $C_1$-$C_6$ alkoxy,
an optionally substituted $C_3$-$C_8$ cycloalkenyl,
an optionally substituted aryl,
an optionally substituted aromatic heterocyclic group, or
an optionally substituted aliphatic heterocyclic group,
$R^4$ represents
a hydrogen atom,
a halogen
a cyano,
a $C_1$-$C_6$ alkyl which may have a halogen as a substituent, or
an optionally substituted $C_1$-$C_6$ alkoxy,

R represents
a hydrogen atom, or
a halogen, and
$R^{101}$ represents
a hydrogen atom, or a $C_1$-$C_6$ alkyl.

In particular, the following compounds or pharmaceutically acceptable salts thereof among the compounds represented by the above-mentioned formula (I):
wherein,
$R^1$ is
a hydrogen atom,
a halogen,
a cyano,
a $C_3$-$C_{10}$ cycloalkyl,
an aromatic heterocyclic group,
a $C_1$-$C_6$ alkylsulfinyl,
a $C_1$-$C_6$ alkylsulfonyl, or
-CO-$R^5$ [wherein,
$R^5$ represents
an optionally substituted $C_1$-$C_6$ alkyl which may have a substituent group selected from Substituent Group A,
an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl),
a $C_3$-$C_{10}$ cycloalkyl,
an optionally substituted aryl which may have a substituent group selected from Substituent Group B,
an aromatic heterocyclic group,
a hydroxy,
a $C_1$-$C_6$ alkoxy, or
-$NR^8R^9$ (wherein,
$R^8$ and $R^9$ are the same or different and represent
a hydrogen atom,
an optionally substituted aryl which may have a substituent group selected from Substituent Group B,
a $C_1$-$C_6$ alkyl,
an optionally substituted $C_3$-$C_{10}$ cycloalkyl which may have a substituent group selected from Substituent Group B,
an aromatic heterocyclic-($C_1$-$C_6$ alkylenyl), or

an optionally substituted aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl) which may have a substituent group selected from Substituent Group B)],

$R^2$ represents

a hydrogen atom,

a halogen,

a hydroxy,

a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyloxy),

an optionally substituted aryl which may have a substituent group selected from Substituent Group B,

an optionally substituted aromatic heterocyclic group which may have a substituent group selected from Substituent Group B,

an optionally substituted aliphatic heterocyclic group which may have a substituent group selected from Substituent Group B,

$-NR^6R^7$ [wherein,

$R^6$ and $R^7$ are the same or different and represent

a hydrogen atom,

an optionally substituted $C_1$-$C_6$ alkyl which may have a substituent group selected from Substituent Group A,

a $C_1$-$C_6$ aminoalkyl,

a $C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl),

a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl) which may be substituted with a hydroxy,

a $C_2$-$C_7$ alkanoylamino-($C_1$-$C_6$ alkylenyl), or

$-(CH_2)_n-R^{10}$ (wherein,

n represents an integer of 0 to 6, and

$R^{10}$ represents

an optionally substituted $C_3$-$C_{10}$ cycloalkyl which may have a substituent group selected from Substituent Group B,

an optionally substituted aryl which may have a substituent group selected from Substituent Group B,

an optionally substituted aromatic heterocyclic group which may have a substituent group selected from Substituent Group B, or

an optionally substituted aliphatic heterocyclic group which may have a substituent group selected from Substituent Group B), or

$R^6$ and $R^7$ form with an adjacent nitrogen atom an optionally substituted heterocyclic group which may have a substituent group selected from Substituent Group B],

$R^3$ represents

a hydrogen atom,

a halogen,

a $C_1$-$C_6$ alkyl,

an optionally substituted $C_1$-$C_6$ alkoxy which may have a substituent group selected from Substituent Group A,

an optionally substituted $C_3$-$C_8$ cycloalkenyl which may have a substituent group selected from Substituent Group B,

an optionally substituted aryl which may have a substituent group selected from Substituent Group B,

an optionally substituted aromatic heterocyclic group which may have a substituent group selected from Substituent Group B, or

an optionally substituted aliphatic heterocyclic group which may have a substituent group selected from Substituent Group B, and

$R^4$ represents

a hydrogen atom, or

a halogen,

$R^{101}$ represents

a hydrogen atom,

the above-mentioned substituents are one to three substituents each independently selected from the following Substituent Groups:

Substituent Group A: a halogen, an aliphatic heterocyclic group, an optionally substituted aliphatic heterocyclic-carbonyl which may be substituted with a $C_1$-$C_6$ alkyl (the $C_1$-$C_6$ alkyl has the same meaning as the aforementioned $C_1$-$C_6$ alkyl)

Substituent Group B:

a halogen,

a hydroxy,

a cyano,

a $C_1$-$C_6$ alkyl,

a $C_1$-$C_6$ alkoxy,

a carboxyl,

a $C_1$-$C_6$ alkoxycarbonyl,

a trifluoromethoxy,

a difluoromethoxy,

a trifluoromethyl,

a difluoromethyl,

an amino,

a $C_1$-$C_6$ alkylamino (wherein, the $C_1$-$C_6$ alkyl may have a hydroxy as a substituent),

a di($C_1$-$C_6$ alkyl)amino,

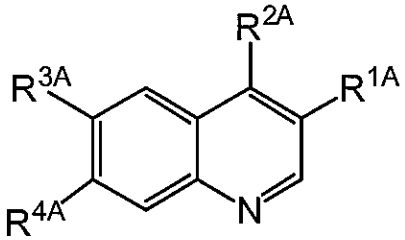
a diallylamino,
a $C_1$-$C_6$ alkylsulfonylamino,
a $C_2$-$C_7$ alkanoylamino,
a carbamoyl,
a sulfamoyl,
a benzylureide,
a ($C_1$-$C_6$ alkyl)ureide,
a $C_1$-$C_6$ hydroxyalkyl,
a $C_1$-$C_6$ aminoalkyl,
a $C_1$-$C_6$ aminoalkylenyloxy,
a $C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl) (wherein, the $C_1$-$C_6$ alkyl may have a halogen as a substituent),
a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl) (wherein, either a $C_1$-$C_6$ alkyl or a $C_1$-$C_6$ alkylenyl may have a hydroxy or a cyano as a substituent, and wherein hydrogen atom of $C_1$-$C_6$ alkyl may be substituted with deuterium atom),
a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)oxy,
a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)amino,
a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)carbonyl,
a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)carbonylamino,
a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)aminocarbonyl,
an aliphatic heterocyclic group (wherein, the aliphatic heterocyclic group may have a $C_1$-$C_6$ alkyl, an amino, a hydroxy, a halogen, a di($C_1$-$C_6$ alkyl)amino, a $C_1$-$C_6$ alkylamino, or a $C_1$-$C_6$ alkoxy as a substituent),
an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl) (wherein, the aliphatic heterocyclic may have a $C_1$-$C_6$ alkyl, an amino, a hydroxy, a $C_1$-$C_6$ hydroxyalkyl, a $C_1$-$C_6$ alkoxy, a $C_1$-$C_6$ alkylamino, a di($C_1$-$C_6$ alkyl)amino, or a halogen as a substituent),
an aliphatic heterocyclic-carbonyl (wherein, the aliphatic heterocyclic may have a $C_1$-$C_6$ alkyl as a substituent),
an aliphatic heterocyclic-carbonylamino (wherein, the aliphatic heterocyclic may have a $C_1$-$C_6$ alkyl as a substituent),
an aliphatic heterocyclic-amino (wherein, the aliphatic heterocyclic may have a $C_1$-$C_6$ alkyl or an amino as a substituent),
an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl)amino,
an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl)oxy,
an aromatic heterocyclic-($C_1$-$C_6$ alkylenyl),
an aliphatic heterocyclic-sulfonyl which may be substituted with a $C_1$-$C_6$ alkyl,
a $C_1$-$C_6$ aminoalkylcarbonylamino,

a hydroxyphenyl,
a dimethylaminocarbonyl,
an aminocyclohexylaminocarbonyl,
a methylpiperazinylphosphonyl,
a $C_3$-$C_8$ cycloalkyl (wherein, the cycloalkyl may have an amino, a $C_1$-$C_6$ alkylamino, or a $C_1$-$C_6$ aminoalkyl as a substituent), and
an oxo.

(2) The compound or a pharmaceutically acceptable salt thereof of the above-mentioned (1), wherein $R^4$ is a hydrogen atom or a halogen and $R^{101}$ is a hydrogen atom.

(3) The compound or a pharmaceutically acceptable salt thereof of the above-mentioned (2), wherein
$R^1$ is $R^{1A}$ [$R^{1A}$ represents a cyano, a $C_1$-$C_6$ alkylsulfinyl, a $C_1$-$C_6$ alkylsulfonyl, or -CO-$R^{5A}$ (wherein, $R^{5A}$ represents a $C_1$-$C_6$ alkyl or a $C_3$-$C_{10}$ cycloalkyl)],
$R^2$ is $R^{2A}$ {$R^{2A}$ represents an optionally substituted aryl which may have a substituent group selected from Substituent Group C, an optionally substituted aromatic heterocyclic group which may have a substituent group selected from Substituent Group H, or -$NR^{6A}R^{7A}$ [wherein, $R^{6A}$ represents a hydrogen atom, and $R^{7A}$ represents -$(CH_2)_n$-$R^{10A}$ (wherein, n represents an integer of 0 to 6, and $R^{10A}$ represents an optionally substituted $C_3$-$C_{10}$ cycloalkyl which may have a substituent group selected from Substituent Group D, an optionally substituted aryl which may have a substituent group selected from Substituent Group E, an aliphatic heterocyclic group which may be substituted with a $C_1$-$C_6$ alkyl, or an aromatic heterocyclic group which may have a substituent group selected from Substituent Group I), or $R^{6A}$ and $R^{7A}$ form with an adjacent nitrogen atom an optionally substituted heterocyclic group which may have a substituent group selected from Substituent Group F]},
$R^3$ is $R^{3A}$ ($R^{3A}$ represents an optionally substituted aryl which may have a substituent group selected from Substituent Group G, or an optionally substituted aromatic heterocyclic group which may have a substituent group selected from Substituent Group H), and
$R^4$ is a hydrogen atom or a halogen and $R^{101}$ is a hydrogen atom.

More specifically, a compound represented by the following formula (IA) or a pharmaceutically acceptable salt thereof:




( IA )

wherein,

$R^{1A}$ represents

a cyano,

a $C_1$-$C_6$ alkylsulfinyl,

a $C_1$-$C_6$ alkylsulfonyl, or

a -CO-$R^{5A}$ (wherein, $R^{5A}$ represents a $C_1$-$C_6$ alkyl, or a $C_3$-$C_{10}$ cycloalkyl),

$R^{2A}$ represents

an optionally substituted aryl which may have a substituent group selected from Substituent Group C,

an optionally substituted aromatic heterocyclic group which may have a substituent group selected from Substituent Group H, or

-$NR^{6A}R^{7A}$ [wherein,

$R^{6A}$ represents a hydrogen atom, and

$R^{7A}$ represents

-$(CH_2)_n$-$R^{10A}$ (wherein,

n represents an integer of 0 to 6, and

$R^{10A}$ represents

an optionally substituted $C_3$-$C_{10}$ cycloalkyl which may have a substituent group selected from Substituent Group D,

an optionally substituted aryl which may have a substituent group selected from Substituent Group E,

an aliphatic heterocyclic group which may be substituted with a $C_1$-$C_6$ alkyl, or

an optionally substituted aromatic heterocyclic group which may have a substituent group selected from Substituent Group I), or

$R^{6A}$ and $R^{7A}$ form with an adjacent nitrogen atom an optionally substituted heterocyclic group which may have a substituent group selected from Substituent Group F],

$R^{3A}$ represents

an optionally substituted aryl which may have a substituent group selected from Substituent Group G, or

an optionally substituted aromatic heterocyclic group which may have a substituent group selected from Substituent Group H,

$R^{4A}$ represents a hydrogen atom or a halogen, and

the above-mentioned substituents C to I are one to three substituents each independently selected from the following Substituent Groups:

Substituent Group C: a halogen, a hydroxy, a $C_1$-$C_6$ alkoxy, and a di($C_1$-$C_6$ alkyl)amino;

Substituent Group D: a hydroxy, a $C_1$-$C_6$ alkyl, a $C_1$-$C_6$ aminoalkyl, an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl) (wherein, the aliphatic heterocyclic may have an amino, a

hydroxy, a $C_1$-$C_6$ hydroxyalkyl, a $C_1$-$C_6$ alkoxy, or a halogen as a substituent), a $C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl), a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl) (wherein, either $C_1$-$C_6$ alkyl may have a hydroxy or a cyano as a substituent, and wherein hydrogen atom of $C_1$-$C_6$ alkyl may be substituted with deuterium atom), an amino, a $C_1$-$C_6$ alkylamino, a di($C_1$-$C_6$ alkyl)amino, a $C_1$-$C_6$ aminoalkylcarbonylamino, a di($C_1$-$C_6$ alkyl)amino($C_1$-$C_6$ alkylenyl)carbonylamino, an aliphatic heterocyclic group (wherein, the aliphatic heterocyclic group may have a $C_1$-$C_6$ alkoxy as a substituent), and an aliphatic heterocyclic-carbonylamino;

Substituent Group E: a halogen, a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl) (wherein, the $C_1$-$C_6$ alkylenyl may have a hydroxy as a substituent), an amino, a $C_2$-$C_7$ alkanoylamino, a di($C_1$-$C_6$ alkyl)amino, a $C_1$-$C_6$ aminoalkyl, and an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl) (wherein, the aliphatic heterocyclic may have a $C_1$-$C_6$ alkyl as a substituent);

Substituent Group F: a carbamoyl, an amino, a $C_1$-$C_6$ aminoalkyl, a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl), a $C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl), an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl), and an aliphatic heterocyclic group which may be substituted with a $C_1$-$C_6$ alkyl;

Substituent Group G: a halogen, a hydroxy, a cyano, a $C_1$-$C_6$ alkyl, a $C_1$-$C_6$ alkoxy, a trifluoromethoxy, a $C_1$-$C_6$ aminoalkyl, a $C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl), a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl), an amino, a $C_1$-$C_6$ alkylsulfonylamino, a carbamoyl, a sulfamoyl, a ($C_1$-$C_6$ alkyl)ureide, a benzylureide, and an aliphatic heterocyclic group;

Substituent Group H: a halogen, a cyano, a $C_1$-$C_6$ alkyl, a $C_1$-$C_6$ alkoxy, an amino, a carbamoyl, a dimethylaminopropylaminocarbonyl, and an aminocyclohexylaminocarbonyl;

Substituent Group H: a halogen, a cyano, a $C_1$-$C_6$ alkyl, a $C_1$-$C_6$ alkoxy, an amino, a carbamoyl, a dimethylaminopropylaminocarbonyl, and an aminocyclohexylaminocarbonyl;

Substituent Group I: an aliphatic heterocyclic group (wherein, the aliphatic heterocyclic group may have a $C_1$-$C_6$ alkyl, an amino group, or a $C_1$-$C_6$ alkylamino as a substituent); an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl); an aliphatic heterocyclic-amino (wherein, the aliphatic heterocyclic may have a $C_1$-$C_6$ alkyl or an amino as a substituent); a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl); a $C_1$-$C_6$ aminoalkyloxy; a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)oxy; a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)amino; a cyclohexyl (wherein, the cyclohexyl may have an amino or a $C_1$-$C_6$ aminoalkyl as a substituent).

(4) The compound or a pharmaceutically acceptable salt thereof of any one of the above-mentioned (1) to (3), wherein $R^1$ is -CO-$R^{5A}$ (wherein, $R^{5A}$ has the same meaning as described above).

(5) The compound or a pharmaceutically acceptable salt thereof of the above-mentioned (4), wherein $R^{5A}$ is a $C_1$-$C_6$ alkyl or a $C_3$-$C_{10}$ cycloalkyl.

(6) The compound or a pharmaceutically acceptable salt thereof of the above-mentioned (4),

wherein $R^{5A}$ is a methyl, an n-propyl, an isopropyl, an isobutyl, or a cyclopropyl.

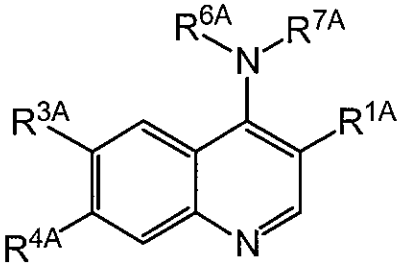
(7) The compound or a pharmaceutically acceptable salt thereof of any one of the above-mentioned (1) to (3), wherein $R^1$ is a cyano.

(8) The compound or a pharmaceutically acceptable salt thereof of any one of the above-mentioned (1) to (3), wherein $R^1$ is a $C_1$-$C_6$ alkylsulfonyl.

(9) The compound or a pharmaceutically acceptable salt thereof of any one of the above-mentioned (1) to (3), wherein $R^1$ is a methylsulfonyl.

(10) The compound or a pharmaceutically acceptable salt thereof of any one of the above-mentioned (1) to (9), wherein $R^2$ is $-NR^{6A}R^{7A}$ (wherein, $R^{6A}$ and $R^{7A}$ have the same meaning as described above).

Especially, a compound represented by the following formula (IB) or a pharmaceutically acceptable salt thereof:



( IB )

wherein, $R^{1A}$, $R^{3A}$, $R^{4A}$, $R^{6A}$, and $R^{7A}$ have the same meaning as described above.

(11) The compound or a pharmaceutically acceptable salt thereof of the above-mentioned (10), wherein $R^{6A}$ is a hydrogen atom, and $R^{7A}$ is $-(CH_2)_n-R^{10A}$ (wherein, n and $R^{10A}$ have the same meaning as described above).

(12) The compound or a pharmaceutically acceptable salt thereof of the above-mentioned (11), wherein $R^{10A}$ is a three- to eight-membered monocyclic aliphatic heterocyclic group comprising at least one nitrogen atom which may be substituted with a $C_1$-$C_6$ alkyl; a $C_3$-$C_{10}$ cycloalkyl which may have a substituent group selected from Substituent Group D; a phenyl which may have a substituent group selected from Substituent Group E; or an aromatic heterocyclic group which may have a substituent group selected from Substituent Group I, wherein the aromatic heterocyclic group is a pyridyl, a pyrimidinyl, or a pyrazolyl.

Substituent Group D: a hydroxy, a $C_1$-$C_6$ alkyl, a $C_1$-$C_6$ aminoalkyl, an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl) (wherein, the aliphatic heterocyclic may have an amino, a hydroxy, a $C_1$-$C_6$ hydroxyalkyl, a $C_1$-$C_6$ alkoxy, or a halogen as a substituent), a $C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl), a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl) (wherein, either $C_1$-$C_6$ alkyl may have a hydroxy or a cyano as a substituent, and wherein hydrogen atom of $C_1$-$C_6$ alkyl may be substituted with deuterium atom), an amino, a $C_1$-$C_6$ alkylamino, a di($C_1$-$C_6$ alkyl)amino, a $C_1$-$C_6$ aminoalkylcarbonylamino, a di($C_1$-$C_6$ alkyl)amino($C_1$-$C_6$

alkylenyl)carbonylamino, an aliphatic heterocyclic group (wherein, the aliphatic heterocyclic group may have a $C_1$-$C_6$ alkoxy as a substituent), and an aliphatic heterocyclic-carbonylamino

Substituent Group E: a halogen, a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl) (wherein, the $C_1$-$C_6$ alkylenyl may have a hydroxy as a substituent), an amino, a $C_2$-$C_7$ alkanoylamino, a di($C_1$-$C_6$ alkyl)amino, a $C_1$-$C_6$ aminoalkyl, and an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl) (wherein, the aliphatic heterocyclic may have a $C_1$-$C_6$ alkyl as a substituent)

(13) The compound or a pharmaceutically acceptable salt thereof of the above-mentioned (11) or (12), wherein n is an integer of 0 to 2.

(14) The compound or a pharmaceutically acceptable salt thereof of the above-mentioned (10), wherein $R^{6A}$ and $R^{7A}$ form with an adjacent nitrogen atom an optionally substituted heterocyclic group which may have a substituent group selected from Substituent Group F.

(15) The compound or a pharmaceutically acceptable salt thereof of the above-mentioned (10), wherein $R^2$ is a piperidin-4-spiro-3'-pyrrolidin-1-yl, an optionally substituted piperidino which may have a substituent group selected from Substituent Group F, or an optionally substituted 1-piperazinyl which may have a substituent group selected from Substituent Group F.

(16) The compound or a pharmaceutically acceptable salt thereof of the above-mentioned (10), wherein $R^2$ is a piperidin-4-spiro-3'-pyrrolidin-1-yl, a piperidino which may have a substituent group selected from substituent Fa, or a 1-piperazinyl which may have a substituent group selected from substituent Fa, wherein the substituent Fa is a substituent selected from the group consisting of an amino, a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl), a $C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl), a pyrrolidinyl-($C_1$-$C_6$ alkylenyl), a morpholino-($C_1$-$C_6$ alkylenyl), a 1-piperazinyl whose hydrogen atom on the nitrogen of position 4 may be substituted with a $C_1$-$C_6$ alkyl, and a piperazin-1-yl-($C_1$-$C_6$ alkylenyl) whose hydrogen atom on the nitrogen of position 4 may be substituted with a $C_1$-$C_6$ alkyl.

(17) The compound or a pharmaceutically acceptable salt thereof of any one of the above-mentioned (1) to (9), wherein $R^2$ is an optionally substituted aryl which may have a substituent group selected from Substituent Group C.

(18) The compound or a pharmaceutically acceptable salt thereof of the above-mentioned (1) to (9), wherein $R^2$ is an optionally substituted phenyl which may have a substituent group selected from Substituent Group C.

(19) The compound or a pharmaceutically acceptable salt thereof of any one of the above-mentioned (1) to (18), wherein $R^3$ is an optionally substituted aryl which may have a substituent group selected from Substituent Group G, or an optionally substituted aromatic heterocyclic group which may have a substituent group selected from Substituent Group H.

(20) The compound or a pharmaceutically acceptable salt thereof of any one of the above-mentioned (1) to (18), wherein $R^3$ is an optionally substituted phenyl which may have a

substituent group selected from Substituent Group G, or an optionally substituted aromatic heterocyclic group which may have a substituent group selected from Substituent Group H, wherein the aromatic heterocyclic group is selected from the group consisting of a thienyl, a pyrrolyl, an imidazolyl, an isoxazolyl, a pyridyl, a pyrimidinyl, a pyrazolyl, a 1H-indazolyl, a benzimidazolyl, a [1,2,4]triazolo[1,5-a]pyridyl, or a pyrrolo[2,3-b]pyridyl.

(21) The compound or a pharmaceutically acceptable salt thereof of any one of the above-mentioned (1) to (18), wherein $R^3$ is an optionally substituted phenyl which may have a substituent group selected from Substituent Group G, or an optionally substituted aromatic heterocyclic group which may have a substituent group selected from Substituent Group H, wherein the aromatic heterocyclic group is selected from the group consisting of a pyridyl, a thienyl, a pyrimidinyl, a benzimidazolyl, and a 1H-indazolyl.

(22) The compound or a pharmaceutically acceptable salt thereof of any one of the above-mentioned (1) to (21), wherein R is a hydrogen atom.

(23) A compound or a pharmaceutically acceptable salt thereof, selected from the following Compound Group:

compound 55 : (4-((trans)-4-aminocyclohexylamino)-6- (4-hydroxyphenyl)quinolin-3-yl) (cyclopropyl)methanone

compound 76 : 5-(4-((trans)-4-aminocyclohexylamino)-3- (cyclopropanecarbonyl) quinolin-6-yl)picolinonitrile

compound 81 : (4-((trans)-4-aminocyclohexylamino)-6- (4-hydroxy-3-methoxyphenyl) quinolin-3-yl)(cyclopropyl) methanone

compound 96 : 5-(4-((trans)-4-aminocyclohexylamino)-3- (cyclopropanecarbonyl)quinolin -6-yl)pyrimidine-2-carbonitrile

compound 107 : 1-(4-((trans)-4-aminocyclohexylamino)-6- (4-hydroxy-3-methoxyphenyl) quinolin-3-yl)-2-methylpropan -1-one

compound 108 : 5-(4-((trans)-4-aminocyclohexylamino) -3-isobutyrylquinolin-6-yl) picolinonitrile

compound 116 : (4-((trans)-4-aminocyclohexylamino)-6- (1H-benzo[d]imidazol-5-yl) quinolin-3-yl)(cyclopropyl) methanone

compound 118 : 4-(4-((trans)-4-aminocyclohexylamino)-3- (methylsulfonyl)quinolin-6-yl) -2-methoxyphenol

compound 119 : 5-(4-((trans)-4-aminocyclohexylamino)-3- (cyclopropanecarbonyl)quinolin -6-yl)thiophene-2-carbonitrile

compound 124 : (4-((trans)-4-aminocyclohexylamino)-6- (3-chloro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl) methanone

compound 125 : 5-(4-((trans)-4-aminocyclohexylamino)-3- (methylsulfonyl)quinolin-6-yl) picolinamide

compound 126 : (4-((trans)-4-aminocyclohexylamino)-6- (3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl) (cyclopropyl)methanone

compound 132 : 5-(4-((trans)-4-aminocyclohexylamino)-3-(cyclopropanecarbonyl)quinolin -6-yl)pyridin-2(1H)-one

compound 133 : cyclopropyl(4-(4-((dimethylamino) methyl)piperidin-1-yl)-6-(4-hydroxy-3-methoxyphenyl) quinolin-3-yl)methanone

compound 136 : 5-(3-(cyclopropanecarbonyl)-4- (4-((dimethylamino)methyl) piperidin-1-yl)quinolin-6-yl) pyrimidine-2-carbonitrile

compound 143 : (4-((trans)-4-aminocyclohexylamino)-6- (3,5-dimethylisoxazol-4-yl) quinolin-3-yl)(cyclopropyl) methanone

compound 144 : (4-((trans)-4-aminocyclohexylamino)-6- (1H-pyrrol-3-yl)quinolin-3-yl) (cyclopropyl)methanone

compound 147 : (4-((trans)-4-aminocyclohexylamino)-6- (4-(aminomethyl)phenyl) quinolin-3-yl)(cyclopropyl) methanone

compound 148 : (6-([1,2,4]triazolo[1,5-a]pyridin -6-yl)-4-((trans)-4-aminocyclohexylamino)quinolin -3-yl)(cyclopropyl)methanone

compound 155 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(2,8-diazaspiro[4.5]decan-8-yl) quinolin-3-yl)(cyclopropyl) methanone

compound 156 : (4-((trans)-4-aminocyclohexylamino)-6- (3,5-difluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl) methanone

compound 157(a) : (4-((trans)-4-aminocyclohexylamino)-6- (3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl) methanone hydrochloride

compound 157(b) : (4-((trans)-4-aminocyclohexylamino)-6- (3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl) methanone dihydrochloride

compound 158 : (4-((trans)-4-aminocyclohexylamino)-6- (3-fluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl) methanone

compound 159 : 5-(4-((trans)-4-aminocyclohexylamino)-3-(cyclopropanecarbonyl)quinolin -6-yl)-2-hydroxybenzonitrile

compound 160 : (4-((trans)-4-aminocyclohexylamino)-6- (2,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl) methanone

compound 161 : (4-((trans)-4-aminocyclohexylamino)-6- (4-hydroxy-3,5-dimethylphenyl) quinolin-3-yl)(cyclopropyl) methanone

compound 162 : (6-(1H-benzo[d]imidazol-5-yl)-4- (2,8-diazaspiro[4.5]decan-8-yl) quinolin-3-yl)(cyclopropyl) methanone

compound 163 : (4-((cis)-4-aminocyclohexylamino)-6- (3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl) methanone

compound 164 : 5-(4-((cis)-4-aminocyclohexylamino)-3-(cyclopropanecarbonyl)quinolin-6-yl) pyrimidine-2-carbonitrile

compound 165 : (4-((cis)-4-aminocyclohexylamino)-6-(4-hydroxy-3-methoxyphenyl)quin olin -3-yl)(cyclopropyl)methanone

compound 166 : (4-((cis)-4-aminocyclohexylamino)-6- (1H-benzo[d]imidazol-5-yl) quinolin-3-yl)(cyclopropyl) methanone

compound 169 : (4-((trans)-4-aminocyclohexylamino)-6- (3-chloro-4-methoxyphenyl) quinolin-3-yl)(cyclopropyl) methanone

compound 170 : 5-(3-(cyclopropanecarbonyl)-4- (1-methylpiperidin-4-ylamino) quinolin-6-yl)pyrimidine-2- carbonitrile

compound 172 : 5-(4-((trans)-4-aminocyclohexylamino)-3- (cyclopropanecarbonyl)quinolin -6-yl)-3-methylpicolinonitrile

compound 174 : cyclopropyl(6-(3,5-difluoro -4-hydroxyphenyl)-4- (1-methylpiperidin-4-ylamino) quinolin-3-yl)methanone

compound 175 : cyclopropyl(6-(3,5-dichloro -4-hydroxyphenyl)-4- (1-methylpiperidin-4-ylamino) quinolin-3-yl)methanone

compound 176 : (6-(3-chloro-4-hydroxyphenyl)-4- (1-methylpiperidin-4-ylamino) quinolin-3-yl)(cyclopropyl) methanone

compound 177 : cyclopropyl(6-(4-hydroxy -3-methoxyphenyl)-4- (1-methylpiperidin-4-ylamino) quinolin-3-yl)methanone

compound 178 : 5-(4-((trans)-4-aminocyclohexylamino)-3- (cyclopropanecarbonyl)quinolin -6-yl)-1H-benzo[d]imidazol -2(3H)-one

compound 179 : (4-((trans)-4-aminocyclohexylamino)-6- (3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl) (cyclopropyl)methanone

compound 180 : (4-((cis)-4-aminocyclohexylamino)-6- (3,5-difluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl) methanone

compound 181 : cyclopropyl(6-(3,5-difluoro-4- hydroxyphenyl)-4- (4-(1-(dimethylamino)ethyl) piperidin-1-yl)quinolin-3-yl) methanone

compound 182 : 4-(4-((trans)-4-aminocyclohexylamino)-3- (cyclopropanecarbonyl)quinolin -6-yl)-1H-pyrrole-2-carbonitrile

compound 183 : (4-((trans)-4-aminocyclohexylamino)-6- (1H-pyrrolo[2,3-b]pyridin-5-yl) quinolin-3-yl)(cyclopropyl) methanone

compound 185(a) : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(4-(diethylamino)cyclohexylamino) quinolin-3-yl)(cyclopropyl) methanone hydrochloride

compound 185(b) : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4- (4-(diethylamino) cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone dihydrochloride

compound 186 : 5-(3-(cyclopropanecarbonyl)-4- (4-(diethylamino) cyclohexylamino)quinolin-6-yl) pyrimidine-2-carbonitrile

compound 187 : cyclopropyl(4-(4-(1- (dimethylamino)ethyl)piperidin -1-yl)-6-(4-hydroxy -3-methoxyphenyl)quinolin-3-yl) methanone

compound 189 : (4-((trans)-4-aminocyclohexylamino)-6- (2,5-difluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl) methanone

compound 190 : (4-((trans)-4-aminocyclohexylamino)-6- (2,3-difluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl) methanone

compound 191 : 4-(4-((trans)-4-aminocyclohexylamino)-3- (methylsulfonyl)quinolin-6-yl) -2-chloro-6-fluorophenol

compound 192 : (6-(3-chloro-4-hydroxyphenyl) -4-(4-(diethylamino) cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 193 : cyclopropyl(4-(4-(diethylamino) cyclohexylamino)-6-(4-hydroxy-3-methoxyphenyl)quinolin-3-yl) methanone

compound 194 : cyclopropyl(4-(4-(diethylamino) cyclohexylamino)-6-(3,5-difluoro-4-hydroxyphenyl)quinolin-3-yl) methanone

compound 195 : 4-(4-((trans)-4-aminocyclohexylamino)-3- (methylsulfonyl)quinolin-6-yl) -2-chlorophenol

compound 196 : cyclopropyl(6-(4-hydroxy-3- methoxyphenyl)-4-((1-methylpiperidin-4-yl) methylamino)quinolin-3-yl) methanone

compound 197 : (4-((trans)-4-aminocyclohexylamino)-6- (3-chloro-4-hydroxy-5-methylphenyl)quinolin-3-yl) (cyclopropyl)methanone

compound 199 : (6-(1H-benzo[d]imidazol-5-yl)-4- (4-(diethylamino) cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 200 : 5-(3-(cyclopropanecarbonyl)-4- ((1-methylpiperidin-4-yl) methylamino)quinolin-6-yl) pyrimidine-2-carbonitrile

compound 201 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4- ((1-methylpiperidin-4-yl) methylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 202 : (6-(1H-benzo[d]imidazol-5-yl)-4- ((1-methylpiperidin-4-yl) methylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 203 : (6-(3-chloro-4-hydroxyphenyl)-4- ((1-methylpiperidin-4-yl) methylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 204 : cyclopropyl(6-(3,5-difluoro-4- hydroxyphenyl)-4- ((1-methylpiperidin-4-yl) methylamino)quinolin-3-yl) methanone

compound 205 : 1-(4-((trans)-4-aminocyclohexylamino) -6-(3-chloro-5-fluoro-4- hydroxyphenyl)quinolin-3-yl) -2-methylpropan-1-one

compound 207 : 4-(4-((trans)-4-aminocyclohexylamino)-3- (methylsulfonyl)quinolin-6-yl) -2,6-difluorophenol

compound 208 : Cyclopropy l(6-(3,5-difluoro-4-hydroxyphenyl) -4-(2-(piperazin-1-yl)ethylamino) quinolin-3-yl)methanone

compound 209 : (4-((cis)-4-aminocyclohexylamino)-6- (2-chlorophenyl)quinolin-3-yl) (cyclopropyl)methanone

compound 210 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(2- (piperazin-1-yl)ethylamino) quinolin-3-yl)(cyclopropyl) methanone

compound 212 : (4-((trans)-4-aminocyclohexylamino)-6- (pyridin-4-yl)quinolin-3-yl) (cyclopropyl)methanone

compound 213 : (4-((trans)-4-aminocyclohexylamino)-6- (1H-pyrazol-4-yl)quinolin-3-yl) (cyclopropyl)methanone

compound 214 : 1-(4-((trans)-4-aminocyclohexylamino)-6- (3,5-difluoro-4-hydroxyphenyl) quinolin-3-yl)-2- methylpropan-1-one

compound 215 : (6-(3-chloro-4-hydroxyphenyl)-4- (2-(piperazin-1-yl)ethylamino) quinolin-3-yl)(cyclopropyl) methanone

compound 216 : cyclopropyl(6-(4-hydroxy-3 -methoxyphenyl)-4- (2-(piperazin-1-yl)ethylamino) quinolin-3-yl)methanone

compound 219 : 1-(4-((trans)-4-aminocyclohexylamino)-6- (3-chloro-4-hydroxyphenyl) quinolin-3-yl)-2- methylpropan-1-one

compound 220 : 5-(4-((trans)-4-aminocyclohexylamino)-3- (cyclopropanecarbonyl)quinolin -6-yl)-3-fluoropicolinonitrile

compound 222 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(piperidin-1-yl) quinolin-3-yl)(cyclopropyl) methanone

compound 224 : 5-(3-(cyclopropanecarbonyl)-4- (piperidin-1-yl)quinolin-6-yl) pyrimidine-2-carbonitrile

compound 225(a) : 1-(4-((trans)-4-aminocyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)-2- methylpropan-1-one

compound 225(b) : 1-(4-((trans)-4-aminocyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)-2-methylpropan -1-one dihydrochloride

compound 226 : 4-(4-((trans)-4-aminocyclohexylamino)-3- (methylsulfonyl)quinolin-6-yl) -2,6-dichlorophenol

compound 227 : 4-(4-((trans)-4-aminocyclohexylamino)-3- (methylsulfonyl)quinolin-6-yl) -2-chloro-6-methoxyphenol

compound 228 : (4-((trans)-4-aminocyclohexylamino)-6- (2-methoxypyridin-4-yl)quinolin -3-yl)(cyclopropyl)methanone

compound 229 : (4-((trans)-4-aminocyclohexylamino)-6- (3-methyl-1H-pyrazol-4-yl) quinolin-3-yl)(cyclopropyl) methanone

compound 230 : (4-((trans)-4-aminocyclohexylamino)-6- (3,4-dimethoxyphenyl)quinolin -3-yl)(cyclopropyl)methanone

compound 231 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(cyclopentylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 233 : (6-(3-chloro-4-hydroxyphenyl)-4- (piperidin-1-yl)quinolin-3-yl) (cyclopropyl)methanone

compound 236 : 2-chloro-4-(4-(4-(diethylamino) cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl) phenol

compound 237 : (4-((trans)-4-aminocyclohexylamino)-6- (2-chloropyridin-4-yl)quinolin -3-yl)(cyclopropyl)methanone

compound 239 : 5-(4-(cyclopentylamino)-3- (cyclopropanecarbonyl)quinolin -6-yl)pyrimidine-2-carbonitrile

compound 240 : 2-chloro-4-(4-(4-(diethylamino) cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl)-6- methoxyphenol dihydrochloride

compound 241 : cyclopropyl(6-(3,5-difluoro-4- hydroxyphenyl)-4-(piperidin -4-ylmethylamino)quinolin-3-yl) methanone

compound 242 : cyclopropyl(6-(4-hydroxy -3-methoxyphenyl)-4-(piperidin -4-ylmethylamino)quinolin-3-yl) methanone

compound 243 : (6-(3-chloro-4-hydroxy -5-methoxyphenyl)-4-(piperidin -4-ylmethylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 244 : 5-(4-(4-(1-(dimethylamino)ethyl) piperidin-1-yl)-3-(methylsulfonyl) quinolin-6-yl)pyrimidine -2-carbonitrile

compound 245 : 2-chloro-4-(4-(4-(1- (dimethylamino)ethyl)piperidin -1-yl)-3-(methylsulfonyl) quinolin-6-yl)-6-methoxyphenol

compound 246 : 2-chloro-4-(4-(4-(1- (dimethylamino)ethyl)piperidin -1-yl)-3-(methylsulfonyl) quinolin-6-yl)phenol

compound 247 : 5-(4-(4-(diethylamino) cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl) pyrimidine-2-carbonitrile

compound 249 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(1-methylpiperidin-4-ylamino) quinolin-3-yl)(cyclopropyl) methanone

compound 250 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(4-(1-(dimethylamino)ethyl)piperidin -1-yl)quinolin-3-yl)(cyclopropyl) methanone

compound 251 : 2-chloro-4-(4-((1-methylpiperidin- 4-yl)methylamino)-3-(methylsulfonyl)quinolin-6-yl) phenol

compound 252 : 2-chloro-6-methoxy-4- (4-((1-methylpiperidin-4-yl) methylamino)-3-(methylsulfonyl) quinolin-6-yl)phenol

compound 254 : cyclopropyl(6-(3,5-difluoro-4- hydroxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl)methanone

compound 255 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl)(cyclopropyl) methanone

compound 256 : 1-(4-((trans)-4-aminocyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)ethanone

compound 258 : 1-(4-((trans)-4-aminocyclohexylamino)-6-(3,5-difluoro-4-hydroxyphenyl) quinolin-3-yl)ethanone

compound 259 : 1-(4-((trans)-4-aminocyclohexylamino)-6- (3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl) ethanone

compound 261 : 1-(4-((trans)-4-aminocyclohexylamino)-6-(3,5-difluoro-4-hydroxyphenyl) quinolin-3-yl)-3- methylbutan-1-one

compound 262 : 1-(4-((trans)-4-aminocyclohexylamino)-6- (3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl) -3-methylbutan-1-one

compound 263 : cyclopropyl(6-(3,5-dichloro-4- hydroxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl)methanone

compound 264 : (6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl)(cyclopropyl) methanone

compound 265 : (6-(3-chloro-4-hydroxyphenyl)-4- ((trans)-4-(dimethylamino) cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 266 : cyclopropyl(4-((trans)-4- (dimethylamino)cyclohexylamino) -6-(4-hydroxy-3-methoxyphenyl) quinolin-3-yl)methanone

compound 267 : 1-(4-((trans)-4-aminocyclohexylamino)-6- (3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)-3-methylbutan -1-one dihydrochloride

compound 268 : 5-(3-(cyclopropanecarbonyl)-4- ((trans)-4-(dimethylamino) cyclohexylamino)quinolin -6-yl)pyrimidine-2-carbonitrile

compound 269 : (6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-(4-(1- (dimethylamino)ethyl)piperidin-1- yl)quinolin-3-yl)(cyclopropyl) methanone

compound 270 : (6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4- ((1-methylpiperidin-4-yl) methylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 271 : (6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4- (1-methylpiperidin-4-ylamino) quinolin-3-yl)(cyclopropyl) methanone

compound 273 : (4-((trans)-4-aminocyclohexylamino)-6- (2-fluoropyridin-4-yl)quinolin -3-yl)(cyclopropyl)methanone

compound 274 : 2-chloro-4-(4-(4-(1- (dimethylamino)ethyl)piperidin -1-yl)-3-(isopropylsulfonyl) quinolin-6-yl)-6-methoxyphenol

compound 275 : 2-chloro-4-(4-(4-(1- (dimethylamino)ethyl)piperidin -1-yl)-3-(isopropylsulfonyl) quinolin-6-yl)phenol

compound 276 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(4- ((dimethylamino)methyl)piperidin- 1-yl)quinolin-3-yl)(cyclopropyl) methanone

compound 278 : cyclopropyl(4-((trans)-4- (dimethylamino)cyclohexylamino) -7-fluoro-6-(4-hydroxy-3- methoxyphenyl)quinolin-3-yl) methanone

compound 279 : (6-(3-chloro-4-hydroxyphenyl)-4- (4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) (cyclopropyl)methanone

compound 280 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(4-(pyrrolidin -1-ylmethyl)piperidin-1-yl) quinolin-3-yl)(cyclopropyl) methanone

compound 281 : (6-(3-chloro-4-hydroxyphenyl)-4- (4-(pyrrolidin-1-ylmethyl)piperidin -1-yl)quinolin-3-yl)(cyclopropyl) methanone

compound 282 : 5-(3-(cyclopropanecarbonyl)-4- (4-(pyrrolidin-1-ylmethyl)piperidin -1-yl)quinolin-6-yl)pyrimidine-2- carbonitrile

compound 283 : (6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin-1-yl)quinolin -3-yl)(cyclopropyl)methanone

compound 284 : (4-((trans)-4-aminocyclohexylamino)-6-(3- chloro-4-hydroxy-5-methoxyphenyl)-7-fluoroquinolin- 3-yl)(cyclopropyl)methanone

compound 285 : (4-((trans)-4-aminocyclohexylamino)-6-(3,5-difluoro-4-hydroxyphenyl)-7- fluoroquinolin-3-yl)(cyclopropyl) methanone

compound 286 : (4-((trans)-4-aminocyclohexylamino)-7-fluoro-6 -(4-hydroxy-3-methoxyphenyl) quinolin-3-yl)(cyclopropyl) methanone

compound 287 : (4-((trans)-4-aminocyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl) -7-fluoroquinolin-3-yl) (cyclopropyl)methanone

compound 288 : (4-((trans)-4-aminocyclohexylamino)-6- (2-chloro-3-fluoropyridin-4-yl) quinolin-3-yl)(cyclopropyl) methanone

compound 289 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) -7-fluoroquinolin-3-yl) (cyclopropyl)methanone

compound 290 : 5-(3-(cyclopropanecarbonyl)-4- ((trans)-4-(dimethylamino) cyclohexylamino)-7- fluoroquinolin-6-yl)pyrimidine-2- carbonitrile

compound 294 : cyclopropyl(6-(3,5-difluoro-4- hydroxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) -7-fluoroquinolin-3-yl)methanone

compound 295 : (6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) -7-fluoroquinolin-3-yl) (cyclopropyl)methanone

compound 296 : 1-(6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl)-2-methylpropan -1-one

compound 297 : 1-(4-((trans)-4-(dimethylamino) cyclohexylamino)-6-(3-fluoro-4-hydroxy-5-methoxyphenyl) quinolin-3-yl)-2-methylpropan -1-one

compound 298 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(4-(1-(dimethylamino)ethyl)piperidin -1-yl)-7-fluoroquinolin-3-yl) (cyclopropyl)methanone

compound 299 : cyclopropyl(4-(4-(1- (dimethylamino)ethyl)piperidin -1-yl)-7-fluoro-6-(4-hydroxy-3- methoxyphenyl)quinolin-3-yl) methanone

compound 300 : (6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-(4-(1-(dimethylamino)ethyl)piperidin -1-yl)-7-fluoroquinolin-3-yl) (cyclopropyl)methanone

compound 301 : cyclopropyl(6-(3,5-dichloro-4- hydroxyphenyl)-4-(4-(1-(dimethylamino)ethyl) piperidin-1-yl)-7-fluoroquinolin -3-yl)methanone

compound 302 : 1-(6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl)-2-methylpropan-1-one

compound 303 : 1-(6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(4-(diethylamino)cyclohexylamino) quinolin-3-yl)ethanone

compound 304 : (6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-(piperidin -4-ylmethylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 305 : 1-(6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) ethanone

compound 306 : 1-(4-((trans)-4-(dimethylamino) cyclohexylamino)-6-(4-hydroxy -3-(trifluoromethoxy)phenyl) quinolin-3-yl)-2- methylpropan-1-one

compound 307 : cyclopropyl(6-(3-fluoro-4-hydroxy -5-methoxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin -1-yl)quinolin-3-yl)methanone

compound 308 : {6-(3-Chloro-5-fluoro-4 -hydroxyphenyl)-4-[(3-amino) adamantylamino]quinolin-3-yl} (cyclopropyl)methanone

compound 309 : {6-(3-Chloro-4-hydroxy-5 -methoxyphenyl)-4-[(3-amino) adamantylamino]quinolin-3-yl} (cyclopropyl)methanone

compound 310 : cyclopropyl(6-(3,5-dichloro-4- hydroxyphenyl)-4-(piperidin -4-ylmethylamino)quinolin-3-yl) methanone

compound 311 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-((cis)-4-(diethylamino)cyclohexylamino) quinolin-3-yl)(cyclopropyl) methanone

compound 312 : 1-(4-((trans)-4-aminocyclohexylamino)-6-(3,5-dichlorophenyl)quinolin-3-yl) -2-methylpropan-1-one

compound 313 : cyclopropyl(6-(4-hydroxy-3- (trifluoromethoxy)phenyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin -1-yl)quinolin-3-yl)methanone

compound 314 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-((trans)-4-(diethylamino)cyclohexylamino) quinolin-3-yl)(cyclopropyl) methanone

compound 315 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(((trans)-4-(dimethylamino)cyclohexyl) methylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 316 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-((trans)-4-((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 317 : 1-(4-((trans)-4-(dimethylamino) cyclohexylamino)-6-(3-ethoxy-4-hydroxyphenyl)quinolin-3-yl)-2- methylpropan-1-one

compound 318 : 1-(6-(3-chloro-4-hydroxyphenyl) -4-(4-(pyrrolidin-1-ylmethyl) piperidin-1-yl)quinolin-3-yl) -2-methylpropan-1-one

compound 319 : 1-(6-(3-chloro-4-hydroxy-5 -methoxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin -1-yl)quinolin-3-yl)-2-methylpropan-1-one

compound 320 : 1-(6-(3-chloro-4-hydroxyphenyl)-4 -(4-(pyrrolidin-1-ylmethyl) piperidin-1-yl)quinolin-3-yl) ethanone

compound 321 : 1-(6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin -1-yl)quinolin-3-yl)ethanone

compound 322 : 1-(6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl)-2-methylpropan -1-one

compound 323 : 1-(6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin-1-yl)quinolin-3 -yl)-2-methylpropan-1-one

compound 324 : cyclopropyl(6-(3,5-dichloro-4- hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl) methanone

compound 325 : cyclopropyl(6-(3,5-dichloro-4- hydroxyphenyl)-4-(((trans)-4-(dimethylamino)cyclohexyl) methylamino)quinolin-3-yl) methanone

compound 326 : (6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 327 : (6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-(((trans)-4-(dimethylamino)cyclohexyl) methylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 328 : (6-(3-chloro-4-hydroxyphenyl)-4- ((trans)-4-((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 329 : (6-(3-chloro-4-hydroxyphenyl)-4- (((trans)-4-(dimethylamino) cyclohexyl)methylamino) quinolin-3-yl)(cyclopropyl) methanone

compound 330 : 1-(4-(4-((trans)-4-aminocyclohexylamino)-3-isobutyrylquinolin-6-yl)phenyl)-3- benzylurea

compound 331 : 1-(6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) -3-methylbutan-1-one

compound 332 : (6-(3-chloro-4-hydroxyphenyl)-4- (4-(morpholinomethyl)piperidin -1-yl)quinolin-3-yl) (cyclopropyl)methanone

compound 333 : 1-(4-(4-((trans)-4-aminocyclohexylamino)-3-isobutyrylquinolin-6-yl)phenyl) -3-methylurea

compound 334 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(4-(morpholinomethyl)piperidin-1-yl) quinolin-3-yl)(cyclopropyl) methanone

compound 335 : 1-(6-(3-chloro-4-hydroxyphenyl) -4-(4-(diethylamino) cyclohexylamino)quinolin-3-yl) ethanone

compound 336 : 1-(6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-(4-(pyrrolidin -1-ylmethyl)piperidin-1-yl) quinolin-3-yl)ethanone

compound 337 : (6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-(4-(morpholinomethyl)piperidin-1-yl) quinolin-3-yl) (cyclopropyl)methanone

compound 338 : (6-(3-chloro-4-hydroxyphenyl)-4- (4-((dimethylamino)methyl) phenylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 339 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(4-((dimethylamino)methyl) phenylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 341 : (6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-((trans)-4-(pyrrolidin-1-yl)cyclohexylamino) quinolin-3-yl)(cyclopropyl) methanone

compound 342 : (6-(3-chloro-4-hydroxyphenyl)-4- ((trans)-4-(pyrrolidin-1-yl) cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 343 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-((trans)-4-(pyrrolidin-1-yl)cyclohexylamino) quinolin-3-yl)(cyclopropyl) methanone

compound 344 : 1-(6-(3-chloro-4-hydroxyphenyl) -4-(4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) -3-methylbutan-1-one

compound 345 : cyclopropyl(6-(3,5-dichloro -4-hydroxyphenyl)-4-(4-((dimethylamino)methyl) phenylamino)quinolin-3-yl) methanone

compound 346 : (6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-(4- ((dimethylamino)methyl) phenylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 347 : (6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-(4- ((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) (cyclopropyl)methanone

compound 348 : 1-(6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl)-3-methylbutan -1-one

compound 349 : (6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-(4- (4-methylpiperazin-1-yl) piperidin-1-yl)quinolin-3-yl) (cyclopropyl)methanone

compound 350 : (6-(3-chloro-4-hydroxyphenyl)-4- (4-(4-methylpiperazin-1-yl) piperidin-1-yl)quinolin-3-yl) (cyclopropyl)methanone

compound 351 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(4-(4-methylpiperazin-1-yl) piperidin-1-yl)quinolin-3-yl) (cyclopropyl)methanone

compound 353 : cyclopropyl(4-(4-((dimethylamino) methyl)piperidin-1-yl)-6-(3-ethoxy-4-hydroxyphenyl) quinolin-3-yl)methanone

compound 354 : 1-(6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(4-((dimethylamino)methyl)piperidin -1-yl)quinolin-3-yl)-2,2-dimethylpropan-1-one

compound 355 : 1-(6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-(4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) -2,2-dimethylpropan-1-one

compound 358 : 1-(6-(3-chloro-4-hydroxyphenyl) -4-(4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) -2,2-dimethylpropan-1-one

compound 359 : cyclopropyl(4-(4-((dimethylamino) methyl)phenylamino)-6-(4-hydroxy-3-methoxyphenyl) quinolin-3-yl)methanone

compound 360 : 1-(6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl) -2,2-dimethylpropan-1-one

compound 361 : 1-(6-(3-chloro-4-hydroxyphenyl) -4-((trans)-4-(dimethylamino) cyclohexylamino)quinolin-3-yl) -2,2-dimethylpropan-1-one

compound 362 : 1-(6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-(4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) ethanone

compound 363 : 1-(6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl) -2,2-dimethylpropan-1-one

compound 364 : 1-(6-(3-chloro-4-hydroxyphenyl) -4-(4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) ethanone

compound 365 : cyclopropyl(6-(4-hydroxy-3 -methoxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl) phenylamino)quinolin-3-yl) methanone

compound 366 : cyclopropyl(6-(3,5-dichloro-4- hydroxyphenyl)-4-(4-(pyrrolidin -1-ylmethyl)phenylamino) quinolin-3-yl)methanone

compound 367 : (6-(3-chloro-4-hydroxyphenyl) -4-(4-(pyrrolidin-1-ylmethyl) phenylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 368 : (6-(3-chloro-4-hydroxy -5-methoxyphenyl)-4-(4- (pyrrolidin-1-ylmethyl) phenylamino)quinolin-3-yl) (cyclopropyl)methanone

compound 369 : 5-(3-acetyl-4-(4-(pyrrolidin -1-ylmethyl)piperidin-1-yl) quinolin-6-yl)pyrimidine -2-carbonitrile

compound 370 : (6-(3-chloro-4-hydroxy -5-methoxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl) piperidin-1-yl)quinolin-3-yl) (cyclopropyl)methanone

compound 371 : (6-(3-chloro-4-hydroxyphenyl)-4- (4-(2-(pyrrolidin-1-yl)ethyl) piperidin-1-yl)quinolin-3-yl) (cyclopropyl)methanone

compound 372 : (6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl)piperidin -1-yl)quinolin-3-yl)(cyclopropyl) methanone

compound 373 : (6-(3-chloro-4-hydroxy -5-methoxyphenyl)-4-(4-(1-methylpiperidin-4-yl)piperazin -1-yl)quinolin-3-yl)(cyclopropyl) methanone

compound 374 : 1-(6-(3,5-dichloro-4- hydroxyphenyl)-4-(4- ((dimethylamino)methyl) phenylamino)quinolin-3-yl) ethanone

compound 375 : (6-(3-chloro-4-hydroxyphenyl)-4- (4-(1-methylpiperidin-4-yl) piperazin-1-yl)quinolin-3-yl) (cyclopropyl)methanone

compound 376 : (6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-(4- (1-methylpiperidin-4-yl) piperazin-1-yl)quinolin-3-yl) (cyclopropyl)methanone

compound 377 : 1-(6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-(4-((dimethylamino)methyl) phenylamino)quinolin-3-yl) ethanone

compound 378 : 1-(6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl) ethanone

compound 379 : 1-(6-(3,5-dichloro-4- hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl) ethanone

compound 380 : 5-(3-(cyclopropanecarbonyl)-4-(4- (pyrrolidin-1-ylmethyl) phenylamino)quinolin-6-yl) pyrimidine-2-carbonitrile

compound 381 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(4-(diethylamino)cyclohexylamino) quinolin-3-yl)(cyclopentyl) methanone

compound 382 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) (cyclopentyl)methanone

compound 383 : (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(4-((dimethylamino)methyl) phenylamino)quinolin-3-yl) (cyclopentyl)methanone

compound 384 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-3-yl)(cyclopentyl)methanone

compound 385 : (6-(3-chloro-4-hydroxyphenyl)-4-(4-(diethylamino)cyclohexylamino)quinolin-3-yl)(cyclopentyl)methanone

compound 386 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(diethylamino)cyclohexylamino)quinolin-3-yl)(cyclopentyl)methanone

compound 387 : (6-(3-chloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)(cyclopentyl)methanone

compound 388 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)(cyclopentyl)methanone

compound 389 : (6-(3-chloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-3-yl)(cyclopentyl)methanone

compound 391 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)ethanone

compound 392 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone

compound 394 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl)piperazin-1-yl)quinolin-3-yl)(cyclopropyl)methanone

compound 397 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)methanone

compound 398 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 399 : 2-chloro-4-(4-(4-((dimethylamino)methyl)phenylamino)-3-(methylsulfonyl)quinolin-6-yl)-6-fluorophenol

compound 400 : 2,6-dichloro-4-(4-(4-((dimethylamino)methyl)phenylamino)-3-(methylsulfonyl)quinolin-6-yl)phenol

compound 401 : 2,6-dichloro-4-(4-(4-((dimethylamino)methyl)phenylamino)-3-(methylsulfonyl)quinolin-6-yl)phenol hydrochloride

compound 402 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl)piperazin-1-yl)quinolin-3-yl)(cyclopropyl)methanone

compound 403 : (6-(3-chloro-4-hydroxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl)piperazin-1-yl)quinolin-3-yl)(cyclopropyl)methanone

compound 404 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(5-(piperazin-1-yl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 405 : cyclopropyl(6-(4-hydroxy-3-methoxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)methanone

compound 406 : (6-(3-chloro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 407 : 2-chloro-6-fluoro-4-(3-(methylsulfonyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin-1-yl)quinolin-6-yl)phenol

compound 408 : 2-chloro-4-(3-(methylsulfonyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin-1-yl)quinolin-6-yl)phenol

compound 409 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(5-(piperazin-1-yl)pyridin-2-ylamino)quinolin-3-yl)methanone

compound 410 : 2-chloro-4-(4-(4-((dimethylamino)methyl)phenylamino)-3-(methylsulfonyl)quinolin-6-yl)-6-methoxyphenol

compound 411 : 2-chloro-4-(4-(4-((dimethylamino)methyl)phenylamino)-3-(methylsulfonyl)quinolin-6-yl)phenol

compound 412 : 2-chloro-6-methoxy-4-(3-(methylsulfonyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin-1-yl)quinolin-6-yl)phenol

compound 413 : 5-(3-acetyl-4-(4-(pyrrolidin-1-ylmethyl)phenylamino)quinolin-6-yl)pyrimidine-2-carbonitrile

compound 414 : 5-(3-acetyl-4-(4-((dimethylamino)methyl)phenylamino)quinolin-6-yl)pyrimidine-2-carbonitrile

compound 415 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)phenylamino)quinolin-3-yl)ethanone

compound 416 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)phenylamino)quinolin-3-yl)ethanone **dihydrobromide**

compound 417 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(5-((dimethylamino)methyl)pyridin-2-ylamino)quinolin-3-yl)methanone

compound 418 : 5-(3-acetyl-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-6-yl)pyrimidine-2-carbonitrile

compound 419 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl )phenylamino)quinolin-3-yl)ethanone

compound 420 : 2,6-dichloro-4-(4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl)phenol

compound 421 : 2,6-dichloro-4-(4-((1R,4R)-4-((dimethylamino)methyl)cyclohexylamino) -3-(methylsulfonyl)quinolin-6-yl)phenol

compound 422 : 2-chloro-4-(4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)-3-( methylsulfonyl)quinolin-6-yl)-6-methoxyphenol

compound 423 : 2-chloro-4-(4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)-3-( methylsulfonyl)quinolin-6-yl)-6-fluorophenol

compound 424 : 2-chloro-4-(4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)-3-( methylsulfonyl)quinolin-6-yl)phenol

compound 425 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-yl amino)quinolin-3-yl)(cyclopropyl)methanone

compound 426 : 5-(3-(cyclopropanecarbonyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclo hexylamino)quinolin-6-yl)pyrimidine-2-carbonitrile

compound 427 : (6-(3-chloro-4-hydroxyphenyl)-4-(5-(piperazin-1-yl)pyridin-2-ylamino)q uinolin-3-yl)(cyclopropyl)methanone

compound 429 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(5-((dimethylamino)methyl) pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 435 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(5-((dimethylamino)methyl)py ridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 439 : 5-(3-(cyclopropanecarbonyl)-4-(5-((dimethylamino)methyl)pyridin-2-yla mino)quinolin-6-yl)pyrimidine-2-carbonitrile

compound 440 : 4-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quin olin-4-yl)-1-(2-(pyrrolidin-1-yl)ethyl)piperazin-2-one

compound 443 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(5-(1-methylpyrrolidin-2-yl)py ridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 444 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(5-(1-methylpyrrolidin-2-yl )pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 445 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(5-(1-methylpyrrolidin-2-yl)pyridin-2-ylamino)quinolin-3-yl)methanone

compound 448 : (6-(5-chloro-4-hydroxy-2-methylphenyl)-4-(4-((dimethylamino)methyl)p iperidin-1-yl)quinolin-3-yl)(cyclopropyl)methanone

compound 449 : cyclopropyl(4-(4-((dimethylamino)methyl)piperidin-1-yl)-6-(6-hydroxynaphthalen-2-yl)quinolin-3-yl)methanone

compound 453 : cyclopropyl(4-(4-((dimethylamino)methyl)piperidin-1-yl)-6-(1H-indol-5-yl)quinolin-3-yl)methanone

compound 457 : (6-(3-chloro-5-ethoxy-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-3-yl)(cyclopropyl)methanone

compound 459 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-yl)quinolin-3-yl)methanone

compound 460 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(morpholinomethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 461 : 5-(3-(cyclopropanecarbonyl)-4-(4-(morpholinomethyl)phenylamino)quinolin-6-yl)pyrimidine-2-carbonitrile

compound 462 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(morpholinomethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 463 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(morpholinomethyl)phenylamino)quinolin-3-yl)methanone

compound 469 : 5-(3-(cyclopropanecarbonyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-6-yl)pyrimidine-2-carbonitrile

compound 470 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 471 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 472 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone

compound 474 : 5-(3-(cyclopropanecarbonyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-6-yl)indolin-2-one

compound 480 : 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(5-hydroxy-1H-indol-2-yl)quinolin-3-yl)-2-methylpropan-1-one

compound 481 : methyl
4-(3-(cyclopropanecarbonyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-6-yl)benzoate

compound 482 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenyl)quinolin-3-yl)methanone

compound 483 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone

compound 486 : 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-5-ethoxy-4-hydroxyphenyl)quinolin-3-yl)ethanone

compound 487 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone

compound 488 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone

compound 493 : (4-(1R,4R)-4-(aminomethyl)cyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 494 : (4-(1R,4R)-4-(aminomethyl)cyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride

compound 495 : (4-(1R,4R)-4-(aminomethyl)cyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 496 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 497 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)methanone

compound 501 : (4-(1R,4R)-4-(aminomethyl)cyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 502 : 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)-2-methylpropan-1-one

compound 503 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 504 : (4-(4-(aminomethyl)phenylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 505 : (4-(4-(aminomethyl)phenylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride

compound 506 : (4-(4-(aminomethyl)phenylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 507 : (4-(4-(aminomethyl)phenylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 508 : (4-(4-(aminomethyl)phenylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride

compound 509 : 5-(4-(4-(aminomethyl)phenylamino)-3-(cyclopropanecarbonyl)quinolin-6-yl)pyrimidine-2-carbonitrile

compound 510 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-3-yl)methanone

compound 511 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(piperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)methanone

compound 512 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1-(piperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 513 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 514 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 515 : (4-((1s,4s)-4-(aminomethyl)cyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 517 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1R,4R)-4-(methylamino)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone

compound 518 : 2-((((1s,4s)-4-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino)cyclohexyl)methyl)(methyl)amino)acetonitrile

compound 519 : (6-(3-chloro-4-hydroxyphenyl)-4-(1-(piperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 520 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(piperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 522 : 5-(3-(cyclopropanecarbonyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-6-yl)pyrimidine-2-carbonitrile

compound 523 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 524 : 2-((((1s,4s)-4-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino)cyclohexyl)methyl)(methyl)amino)acetonitrile

compound 525 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(5-(piperazin-1-yl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 526 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)methanone

compound 527 : 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxy phenyl)quinolin-3-yl)ethanone

compound 528 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(5-(piperazin-1-yl)pyridin-2 -ylamino)quinolin-3-yl)(cyclopropyl)methanone hydrochloride

compound 529 : 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-4-hydroxy-5-metho xyphenyl)quinolin-3-yl)butan-1-one

compound 530 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phen ylamino)quinolin-3-yl)butan-1-one

compound 531 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phen ylamino)quinolin-3-yl)butan-1-one dihydrochloride

compound 532 : 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxy phenyl)quinolin-3-yl)butan-1-one

compound 535 : 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3,5-dichloro-4-hydroxypheny l)quinolin-3-yl)butan-1-one

compound 537 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl) phenylamino)quinolin-3-yl)butan-1-one

compound 538 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)meth yl)phenylamino)quinolin-3-yl)butan-1-one

compound 539 : 5-(3-butyryl-4-(4-((dimethylamino)methyl)phenylamino)quinolin-6-yl)py rimidine-2-carbonitrile

compound 540 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl) phenylamino)-7-fluoroquinolin-3-yl)(cyclopropyl)methanone

compound 541 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)ph enylamino)-7-fluoroquinolin-3-yl)(cyclopropyl)methanone

compound 542 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(methylamino) cyclohexylamino)quinolin-3-yl)ethanone

compound 543 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(methylamino) cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride

compound 547 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)me thyl)phenylamino)-7-fluoroquinolin-3-yl)methanone

compound 548 : (4-(6-(4-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydro xyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 549 : (4-(6-(4-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydro xyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride

compound 550 : (4-(6-(4-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 551 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone

compound 552 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-8-fluoroquinolin-3-yl)methanone

compound 553 : (4-(2-(4-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 554 : (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 555 : (4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone

compound 556 : (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 557 : (4-(6-(4-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 558 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-3-yl)ethanone

compound 559 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-7-fluoro-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone

compound 560 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-3-yl)ethanone

compound 561 : (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 562 : (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride

compound 563 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone

compound 564 : (4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone

compound 565 : (4-(1R,4R)-4-aminocyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone

compound 566 : (4-(2-(4-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 567 : (4-(2-(4-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 568 : (4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 569 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(((R)-3-fluoropyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 570 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(((R)-3-fluoropyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 571 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(((R)-3-fluoropyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)methanone

compound 572 : (4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 573 : (4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride

compound 574 : (4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 575 : (4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 576 : (4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 577 : (4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride)

compound 578 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-7-fluoro-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 579 : (4-((1R,3r,5S)-8-azabicyclo[3.2.1]octan-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 580 : (4-((1R,3r,5S)-8-azabicyclo[3.2.1]octan-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 582 : (4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 584 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)methanone

compound 585 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)methanone hydrochloride

compound 586 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-yl methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 587 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmet hyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 588 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmet hyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone hydrochloride

compound 589 : (4-(6-aminopyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl) quinolin-3-yl)(cyclopropyl)methanone

compound 590 : (4-(6-aminopyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinoli n-3-yl)(cyclopropyl)methanone

compound 591 : (4-(6-aminopyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)qu inolin-3-yl)(cyclopropyl)methanone

compound 592 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-4-yl)-1 H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 593 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-4 -yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)methanone

compound 594 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin -5-ylamino)quinolin-3-yl)ethanone

compound 595 : (4-(4,4'-bipiperidin-1-yl)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinol in-3-yl)(cyclopropyl)methanone

compound 596 : (4-(4,4'-bipiperidin-1-yl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl) (cyclopropyl)methanone

compound 597 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino) methyl)cyclohexylamino)quinolin-3-yl)butan-1-one

compound 598 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((3-methoxy pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)methanone

compound 599 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((3-methoxypyrr olidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methano ne

compound 600 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((3-hydroxy pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)methanone

compound 601 : (4-(4-(2-aminopropan-2-yl)phenylamino)-6-(3,5-dichloro-4-hydroxyphen yl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride

compound 602 : (4-(4-(2-aminopropan-2-yl)phenylamino)-6-(3,5-dichloro-4-hydroxyphen yl)quinolin-3-yl)(cyclopropyl)methanone

compound 603 : (4-(4-(2-aminopropan-2-yl)phenylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 604 : (4-(4-(2-aminopropan-2-yl)phenylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 605 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)butan-1-one

compound 606 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)-2-methylpropan-1-one

compound 607 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)butan-1-one

compound 608 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)-2-methylpropan-1-one

compound 609 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(piperidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 610 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(piperidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)methanone

compound 611 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(piperidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 612 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 613 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)methanone

compound 614 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)methanone hydrochloride

compound 615 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 616 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)ethanone

compound 617 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)butan-1-one

compound 620 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)-2-methylpropan-1-one

compound 621 : (4-((1R,3r,5S)-8-azabicyclo[3.2.1]octan-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 622 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(3-((dimethylamino)methyl) phenylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 623 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)butan-1-one

compound 624 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-((dimethylamino)methyl)phenylamino)quinolin-3-yl)methanone

compound 625 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)butan-1-one

compound 626 : (4-(2-(3-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 627 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((3-methoxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 628 : (4-(2-(3-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 629 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-((dimethylamino)methyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 630 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 631 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 632 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 633 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 634 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)methanone

compound 635 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)methanone hydrochloride

compound 638 : (4-(4-amino-4-methylcyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 639 : (4-(4-amino-4-methylcyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 640 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)-2-methylpropan-1-one

compound 641 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)-2-methylpropan-1-one

compound 644 : (4-(2-(3-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 646 : (S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 647 : (S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride

compound 648 : (S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 649 : (R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 650 : (R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 651 : (R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 652 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)-4-hydroxycyclohexylamino)quinolin-3-yl)methanone

compound 653 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)ethanone

compound 654 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)ethanone

compound 655 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((4-((4-methylpiperazin-1-yl)methyl)phenyl)amino)quinolin-3-yl)ethanone

compound 656 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)ethanone

compound 657 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-((dimethylamino)methyl)pyridin-3-ylamino)quinolin-3-yl)methanone

compound 658 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(pyrrolidin-1-ylmethyl)pyridin-3-ylamino)quinolin-3-yl)methanone

compound 659 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(pyrrolidin-1-ylmethyl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 660 : (S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 661 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(3-methoxypyrrolidin-1-yl)cyclohexylamino)quinolin-3-yl)methanone

compound 665 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(pyrrolidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 666 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(pyrrolidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)methanone

compound 667 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(pyrrolidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 672 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(pyrrolidin-1-ylmethyl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 673 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)-4-hydroxycyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 674 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)-2-methylpropan-1-one

compound 680 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)-2-methylpropan-1-one

compound 681 : 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)ethanone

compound 685 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((methylamino)methyl)cyclohexylamino)quinolin-3-yl)methanone

compound 686 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(3-methoxypyrrolidin-1-yl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 687 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(3-methoxypyrrolidin-1-yl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 688 : 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)ethanone

compound 692 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 693 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 698 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)methanone

compound 699 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-3-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 702 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone hydrochloride

compound 703 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-3-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)methanone

compound 704 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone hydrochloride

compound 706 : (4-(1-(1R,4R)-4-aminocyclohexyl)-1H-pyrazol-4-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride

compound 707 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)-1-hydroxyethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 708 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(2-(dimethylamino)-1-hydroxyethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 709 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)-1-hydroxyethyl)phenylamino)quinolin-3-yl)methanone

compound 710 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 711 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)methanone

compound 712 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 713 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)propan-1-one

compound 714 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)propan-1-one

compound 715 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)propan-1-one

compound 716 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)propan-1-one dihydrochloride

compound 717 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclopentylamino)quinolin-3-yl)ethanone

compound 718 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclopentylamino)quinolin-3-yl)ethanone

compound 719 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(piperidin-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 720 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(dimethylamino)-2,3-dihydro-1H-inden-5-ylamino)quinolin-3-yl)ethanone

compound 721 : 1-(6-(3,5-difluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone

compound 722 : (4-(6-(2-aminoethoxy)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 723 : (4-(6-(2-aminoethoxy)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 724 : (4-(6-(2-aminoethoxy)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 725 : (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-difluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 726 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(piperidin-4-ylamino)quinolin-3-yl)methanone

compound 727 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(piperidin-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 729 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone

compound 730 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone

compound 731 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone

compound 732 : 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone

compound 733 : 1-(4-((6-(3-aminopiperidin-1-yl)pyridin-3-yl)amino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone

compound 734 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone

compound 735 : (4-(2-(4-aminopiperidin-1-yl)pyridin-4-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

compound 736 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)propan-1-one

compound 737 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)propan-1-one

compound 738 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexylamino)quinolin-3-yl)ethanone

compound 739 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexylamino)quinolin-3-yl)ethanone

compound 740 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride

compound 741 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexylamino)quinolin-3-yl)ethanone

compound 742 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexylamino)quinolin-3-yl)ethanone **di**hydrochloride

compound 743 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone

compound 744 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone

compound 745 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone

compound 746 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 747 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)methanone

compound 748 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)methanone hydrochloride

compound 749 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone

compound 750 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone

compound 751 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone

compound 752 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone

compound 753 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone

compound 754 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)propan-1-one

compound 755 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)propan-1-one

compound 756 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl)piperidin-1-yl)quinolin-3-yl)methanone

compound 757 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)propan-1-one

compound 758 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)ethanone

compound 759 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone

compound 760 : 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one

compound 761 : 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one

compound 762 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)ethanone

compound 763 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)ethanone

compound 765 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)ethanone

compound 766 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-(dimethylamino)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride

compound 767 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone

compound 768 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride

compound 769 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)propan-1-one

compound 770 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)propan-1-one

compound 771 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)propan-1-one

compound 772 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(piperazin-1-ylmethyl) cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride

compound 773 : 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone

compound 774 : 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydro xy-5-methoxyphenyl)quinolin-3-yl)ethanone

compound 775 : 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydro xy-5-methoxyphenyl)quinolin-3-yl)propan-1-one

compound 776 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylam ino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 777 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylam ino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone trihydrochloride

compound 778 : cyclopropyl(6-(3,5-difluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1 -yl)pyridin-3-ylamino)quinolin-3-yl)methanone

compound 779 : 1-(4-(1R,4R)-4-((3-aminopyrrolidin-1-yl)methyl)cyclohexylamino)-6-(3, 5-dichloro-4-hydroxyphenyl)quinolin-3-yl)ethanone hydrochloride

compound 780 : 1-(4-(1R,4R)-4-((3-aminopyrrolidin-1-yl)methyl)cyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)ethanone hydrochloride

compound 783 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(piperazin-1-ylm ethyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride

compound 784 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1r,3r)-3-((dimethylamino)methy l)cyclobutylamino)quinolin-3-yl)ethanone

compound 785 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(3-(methylamino)pyrrolid in-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone trihydrochloride

compound 786 : 1-(4-(1R,4R)-4-((3-aminopyrrolidin-1-yl)methyl)cyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone hydrochloride

compound 788 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(3-(methylamino)pyrrolidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone trihydrochloride

compound 789 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(3-(methylamino)pyrrolidin -1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone trihydrochloride

compound 790 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((diethylamino)methyl )cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride

compound 791 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((diethylamino )methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride

compound 792 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1S,4r)-4-(((S)-2-(hydroxymethy l)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone

compound 793 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1S,4r)-4-(((S)-2-(hydro xymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanon e

compound 794 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((diethylamino)m ethyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride

compound 795 : cyclopropyl(6-(3,5-difluoro-4-hydroxyphenyl)-4-(6-(pyrrolidin-1-ylmeth yl)pyridin-3-ylamino)quinolin-3-yl)methanone

compound 796 : cyclopropyl(6-(3,5-difluoro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)et hyl)phenylamino)quinolin-3-yl)methanone

compound 797 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)et hyl)phenylamino)quinolin-3-yl)methanone

compound 798 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)et hyl)phenylamino)quinolin-3-yl)methanone hydrochloride

compound 799 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)ph enylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 800 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)ph enylamino)quinolin-3-yl)(cyclopropyl)methanone hydrochloride

compound 801 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phen ylamino)quinolin-3-yl)ethanone

compound 802 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phen yl)amino)quinolin-3-yl)ethanone hydrochloride

compound 803 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl) phenylamino)quinolin-3-yl)ethanone

compound 804 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(3-(methylamino)pyr rolidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone trihydrochloride

compound 805 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)ethanone hydrochloride

compound 806 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(3-(methylamino)piperidin-1-y l)pyridin-3-ylamino)quinolin-3-yl)ethanone trihydrochloride

compound 807 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(3-(methylamino)pip eridin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone trihydrochloride

compound 808 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(((R)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride

compound 809 : 1-(4-(1R,4R)-4-((3-aminopiperidin-1-yl)methyl)cyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)ethanone hydrochloride

compound 810 : 1-(4-(1R,4R)-4-((3-aminopiperidin-1-yl)methyl)cyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)ethanone trihydrochloride

compound 811 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(((R)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone

compound 812 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(((R)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone

compound 813 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(1-methylpyrrolidin-3-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)ethanone dihydrochloride

compound 814 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(1-methylpyrrolidin-3-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)ethanone dihydrochloride

compound 815 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(3-(methylamino)piperidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone trihydrochloride

compound 816 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((ethyl(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride

compound 817 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((ethyl(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride

compound 818 : 1-(4-(1R,4R)-4-((3-aminopiperidin-1-yl)methyl)cyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone trihydrochloride

compound 819 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)methanone

compound 820 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)methanone

compound 821 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)ethanone

compound 822 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 823 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)ethanone

compound 824 : 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one trihydrochloride

compound 825 : 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one trihydrochloride

compound 826 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1S,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride

compound 827 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1S,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride

compound 828 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(4-methylpiperazin-1-yl)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone

compound 829 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(4-methylpiperazin-1-yl)ethyl)phenylamino)quinolin-3-yl)methanone

compound 830 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(4-methylpiperazin-1-yl)ethyl)phenylamino)quinolin-3-yl)ethanone

compound 831 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(4-methylpiperazin-1-yl)ethyl)phenylamino)quinolin-3-yl)ethanone

compound 836 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)ethanone dihydrochloride

compound 843 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)propan-1-one dihydrochloride

compound 844 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1S,4r)-4-(((S)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone

compound 845 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((ethyl(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride

compound 846 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)propan-1-one dihydrochloride

compound 848 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)ethanone hydrochloride

compound 852 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)ethanone dihydrochloride

compound 861 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(((1S,3R)-3-(2-(dimethylamino)ethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride

compound 862 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(((1S,3R)-3-(2-(dimethylamino)ethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride

compound 864 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((bis-(trideuteromethyl)amino)methyl)cyclohexyl)amino)quinolin-3-yl)ethanone dihydrochloride

compound 873 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((5-(2-(pyrrolidin-1-yl)ethyl)pyridin-3-yl)amino)quinolin-3-yl)ethanone hydrochloride

compound 876 : N-(1R,4R)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-(dimethylamino)acetamide dihydrochloride

compound 877 : N-(1R,4R)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-(dimethylamino)acetamide hydrochloride

compound 878 : (S)-N-((1r,4S)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-aminopropanamide dihydrochloride

compound 879 : 2-chloro-6-fluoro-4-(3-(methylsulfonyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-6-yl)phenol hydrochloride

compound 880 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((5-(2-(pyrrolidin-1-yl)ethyl)pyridin-3-yl)amino)quinolin-3-yl)ethanone hydrochloride

compound 881 : cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((5-(2-(pyrrolidin-1-yl)ethyl)pyridin-3-yl)amino)quinolin-3-yl)methanone

compound 882 : (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((5-(2-(pyrrolidin-1-yl)ethyl)pyridin-3-yl)amino)quinolin-3-yl)(cyclopropyl)methanone

compound 883 : 2,6-dichloro-4-(3-(methylsulfonyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-6-yl)phenol hydrochloride

compound 884 : 2,6-dichloro-4-(4-((6-(2-(dimethylamino)ethoxy)pyridin-3-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)phenol hydrochloride

compound 885 : 2-chloro-4-(4-((6-(2-(dimethylamino)ethoxy)pyridin-3-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)-6-fluorophenol hydrochloride

compound 886 : (S)-N-((1r,4S)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-aminopropanamide dihydrochloride

compound 890 : 2,6-dichloro-4-(3-(methylsulfonyl)-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-6-yl)phenol hydrochloride

compound 891 : 2-chloro-6-fluoro-4-(3-(methylsulfonyl)-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-6-yl)phenol hydrochloride

compound 895 : 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)quinolin-3-yl)ethanone hydrochloride

compound 896 : 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-3-yl)ethanone hydrochloride

compound 899 : 2,6-dichloro-4-(4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)phenol hydrochloride

compound 900 : 2-chloro-6-fluoro-4-(4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)phenol hydrochloride

compound 901 : 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((6-(4-methylpiperazin-1-yl)pyridin-3-yl)amino)quinolin-3-yl)ethanone hydrochloride

compound 902 : 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((6-(2-(dimethylamino)ethoxy)pyridin-3-yl)amino)quinolin-3-yl)ethanone hydrochloride

compound 903 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-7-fluoroquinolin-3-yl)ethanone hydrochloride

compound 904 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-7-fluoroquinolin-3-yl)ethanone hydrochloride

compound 907 : N-(1R,4R)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-amino-3-methylbutanamide dihydrochloride

compound 908 : 1-(4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-6-(pyridin-4-yl)quinolin-3-yl)ethanone hydrochloride

compound 909 : 4-(4-((6-(3-aminopiperidin-1-yl)pyridin-3-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)-2-chloro-6-fluorophenol trihydrochloride

compound 910 : 1-(4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-6-(1H-indazol-5-yl)quinolin-3-yl)ethanone hydrochloride

compound 911 : 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride

compound 912 : 1-(4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-6-(1H-pyrazol-4-yl)quinolin-3-yl)ethanone hydrochloride

compound 913 : 4-(4-((6-(3-aminopiperidin-1-yl)pyridin-3-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)-2,6-dichlorophenol trihydrochloride

compound 914 : (S)-N-((1r,4S)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-amino-3,3-dimethylbutanamide hydrochloride

compound 915 : N-(1R,4R)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-amino-3-methylbutanamide dihydrochloride

compound 916 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)(cyclopentyl)methanone hydrochloride

compound 917 : cyclopentyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)methanone hydrochloride

compound 918 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)-2,2-dimethylpropan-1-one hydrochloride

compound 919 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)-2,2-dimethylpropan-1-one hydrochloride

compound 920 : (S)-N-((1r,4S)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)pyrrolidine-2-carboxamide dihydrochloride

compound 921 : (S)-N-((1r,4S)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)pyrrolidine-2-carboxamide dihydrochloride

compound 922 : (S)-N-((1r,4S)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-amino-3,3-dimethylbutanamide hydrochloride

compound 923 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-7-fluoro-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride

compound 924 : (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-3-yl)(cyclopentyl)methanone hydrochloride

compound 925 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-7-fluoro-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride

compound 926 : 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-7-fluoro-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride

compound 927 : cyclopentyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-3-yl)methanone hydrochloride

compound 928 : 2-amino-N-(1R,4R)-4-((6-(3,5-dichloro-4-hydroxyphenyl)-3-pivaloylquinolin-4-yl)amino)cyclohexyl)propanamide hydrochloride

compound 929 : 1-(4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-6-(6-hydroxynaphthalen-2-yl)quinolin-3-yl)ethanone hydrochloride

compound 930 : 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)quinolin-3-yl)-2,2-dimethylpropan-1-one hydrochloride

compound 931 : 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)quinolin-3-yl)-2,2-dimethylpropan-1-one hydrochloride

compound 932 : 2-amino-N-(1R,4R)-4-((6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-pivaloylquinolin-4-yl)amino)cyclohexyl)propanamide hydrochloride

compound 934 : (S)-1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxy phenyl)quinolin-3-yl)propan-1-one trihydrochloride

compound 935 : 1-(4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)-6-(4-hydroxy phenyl)quinolin-3-yl)ethanone dihydrochloride

compound 936 : (4-((trans)-4-aminocyclohexylamino)-6- (3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl) (cyclopropyl)methanone hydrochloride

compound 937 : 1-(4-((trans)-4-aminocyclohexylamino) -6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl) -2-methylpropan-1-one dihydrochloride

compound 938 : 1-(4-((trans)-4-aminocyclohexylamino)-6-(3,5-difluoro-4-hydroxyphenyl) quinolin-3-yl)-2- methylpropan-1-one hydrochloride

compound 939 : 1-(4-((trans)-4-aminocyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)ethanone hydrochloride

compound 940 : 1-(4-((trans)-4-aminocyclohexylamino)-6- (3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl) ethanone hydrochloride

compound 941 : cyclopropyl(6-(3,5-dichloro-4- hydroxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl)methanone dihydrobromide

compound 942 : 1-(6-(3,5-dichloro-4- hydroxyphenyl)-4-(4- ((dimethylamino)methyl) phenylamino)quinolin-3-yl) ethanone dihydrobromide

compound 943 : 1-(6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl) ethanone dihydrochloride

compound 944 : 1-(6-(3,5-dichloro-4- hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl) ethanone dihydrochloride

compound 945 : 5-(3-acetyl-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-6-yl)pyridin-2(1H)-one hydrochloride

Of these, preferable compounds are as follow;

Compound Nos:

55, 81, 96, 108, 116, 119, 133, 155, 156, 157(a), 157(b), 160, 165, 177, 179, 180, 181, 185(a), 185(b), 187, 192, 193, 201, 205, 212, 213, 214, 215, 219, 225(a), 225(b), 240, 243, 245, 246, 249, 250, 255, 256, 258, 259, 262, 263, 264, 266, 267, 269, 270, 276, 279, 280, 283, 284, 294, 295, 303, 305, 307, 309, 311, 313, 314, 315, 316, 318, 321, 323, 324, 325, 327, 332, 334, 335, 336, 339, 342, 343, 345, 347, 348, 349, 350, 351, 353, 356, 366, 374, 378, 379, 396, 397, 400, 409, 415, 416, 421, 425, 425, 447, 487, 493, 494, 495, 496, 497, 501, 502, 504, 505, 507, 508, 510, 511, 513, 517, 518, 519, 520, 523, 524, 527, 529, 530, 531, 532, 535, 537, 541, 542, 543, 548,

549, 554, 556, 558, 561, 562, 568, 570, 570, 571, 572, 573, 574, 575, 576, 577, 582, 584, 585, 587, 588, 592, 593, 594, 597, 598, 600, 601, 602, 604, 605, 608, 610, 613, 614, 615, 620, 623, 624, 626, 627, 628, 629, 631, 632, 634, 638, 639, 641, 644, 646, 647, 648, 649, 650, 651, 652, 655, 657, 658, 660, 661, 666, 667, 673, 681, 685, 693, 698, 699, 702, 703, 705, 706, 707, 709, 710, 711, 714, 715, 716, 720, 723, 724, 725, 729, 732, 733, 739, 740, 741, 742, 744, 745, 747, 748, 753, 754, 757, 758, 760, 761, 762, 763, 765, 766, 767, 768, 770, 771, 772, 773, 774, 775, 776, 777, 783, 785, 788, 789, 790, 792, 794, 797, 798, 799, 800, 801, 802, 804, 806, 807, 810, 812, 813, 814, 815, 817, 818, 824, 825, 829, 836, 843, 845, 846, 852, 864, 876, 878, 881, 886, 907, 909, 913, 915, 920, 921, 934, 936, 937, 938, 939, 940, 941, 942, 943 and 944.

(24) A pharmaceutical composition comprising as an active ingredient a compound or a pharmaceutically acceptable salt thereof of any one of the above-mentioned (1) to (23).

(25) An MELK inhibitor comprising as an active ingredient a compound or a pharmaceutically acceptable salt thereof of any one of the above-mentioned (1) to (23).

(26) An MELK-expression modulating agent comprising as an active ingredient a compound or a pharmaceutically acceptable salt thereof of any one of the above-mentioned (1) to (23).

(27) An antitumor agent comprising as an active ingredient a compound or a pharmaceutically acceptable salt thereof of any one of the above-mentioned (1) to (23).

(28) A therapeutic and/or preventive agent for a disease that involves overexpression of MELK, comprising as an active ingredient a compound or a pharmaceutically acceptable salt thereof of any one of the above-mentioned (1) to (23).

(29) The therapeutic and/or preventive agent of the above-mentioned (28), wherein the disease is cancer.

(30) The therapeutic and/or preventive agent of the above-mentioned (29), wherein the cancer is selected from the group consisting of breast cancer, lung cancer, bladder cancer, lymphoma, and uterine cancer.

(31) A method for treating and/or preventing a disease that involves overexpression of MELK, wherein an effective amount of a compound or a pharmaceutically acceptable salt thereof of the above-mentioned (1) to (23) is administered to a subject in need thereof.

(32) A compound or a pharmaceutically acceptable salt thereof any one of the above-mentioned (1) to (23) for use in a treatment and/or prevention of a disease that involves overexpression of MELK.

(33) Use of a compound or a pharmaceutically acceptable salt thereof of any one of the above-mentioned (1) to (23) in the manufacture of a therapeutic and/or preventive agent for a disease that involves overexpression of MELK.

Accordingly, it is an object of the present invention to provide a compound for inhibiting MELK activity.

It is another object of the present invention to provide an inhibitor having high

inhibitory activity against MELK.

It is still another object of the present invention to provide a method for preparing the compound.

It is a further object of the present invention to provide a pharmaceutical composition including the compound, a pharmaceutically acceptable salt, hydrate, solvate, or isomer thereof.

Description of Embodiments

Definition

Hereinafter, a compound represented by formula (I) will be referred to as compound (I). The same applies to the compounds represented by the other formula numbers. It must be noted that as used herein and in the appended claims, the singular forms "a", "an", and "the" include plural reference unless the context clearly dictates otherwise. Thus, for example, reference to a "group" is a reference to one or more groups.

In the definitions of each of the groups of formulas (I), (IA), and (IB),

The "$C_1$-$C_6$ alkyl", and the "$C_1$-$C_6$ alkyl portion" of "$C_1$-$C_6$ alkoxy", "$C_1$-$C_6$ alkylsulfinyl", and "$C_1$-$C_6$ alkylsulfonyl" mean a straight-chain or branched-chain "monovalent alkyl group (a group formed by removing one hydrogen atom from an alkane)" having one to six carbon atoms. Specifically, examples of the "$C_1$-$C_6$ alkyl" and the "$C_1$-$C_6$ alkyl portion" include methyl, ethyl, propyl, isopropyl, butyl, isobutyl, sec-butyl, tert-butyl, pentyl, 1-methylbutyl, 1-ethylpropyl, 2-methylbutyl, isopentyl, tert-pentyl, 1,2-dimethylpropyl, neopentyl, hexyl, 1-methylpentyl, 1-ethylbutyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, isohexyl, 1,1-dimethylbutyl, 1,2-dimethylbutyl, 1,3-dimethylbutyl, 1-isopropylpropyl, 1-ethyl-1-methylpropyl, 2,3-dimethylbutyl, 3,3-dimethylbutyl, 2,2-dimethylbutyl, 2-ethylbutyl, and 3-ethylbutyl, but are not limited thereto. In particular, for $R^5$ or $R^{5A}$, methyl, ethyl, propyl, isopropyl, isobutyl, or tert-butyl is preferred, and methyl, ethyl, propyl, isopropyl, or isobutyl is most preferred.

Hereinbelow, in this specification, the $C_1$-$C_6$ alkyl portion in each group has the same definition as the aforementioned "$C_1$-$C_6$ alkyl portion" unless otherwise noted.

Specific examples of "$C_1$-$C_6$ alkoxy" include methoxy, ethoxy, propoxy, isopropoxy, isobutyloxy, tert-butyloxy, butoxy, pentyloxy, and hexyloxy, but are not limited thereto. In particular, for $R^5$, ethoxy is preferred. In particular, for $R^4$, methoxy is preferred.

"$C_1$-$C_6$ alkoxycarbonyl" refers to a monovalent group in which the "$C_1$-$C_6$ alkoxy" binds to a carbonyl.

Preferred examples of "$C_1$-$C_6$ alkylsulfonyl" include methylsulfonyl, ethylsulfonyl, isopropylsulfonyl, and such, but are not limited thereto. In particular, methylsulfonyl is most preferred.

Preferred examples of "$C_1$-$C_6$ alkylsulfinyl" include methylsulfinyl, ethylsulfinyl,

isopropylsulfinyl, and such, but are not limited thereto. In particular, methylsulfinyl is most preferred.

The term "halogen" means each of the fluorine, chlorine, bromine, and iodine atoms.

The term "halogenated $C_1$-$C_6$ alkyl" refers to "$C_1$-$C_6$ alkyl" substituted by the above-defined "halogen", wherein the $C_1$-$C_6$ alkyl has the same meaning as defined above. Preferred examples of "halogenated $C_1$-$C_6$ alkyl" trifluoromethyl and such, but are not limited thereto.

The term "$C_3$-$C_{10}$ cycloalkyl" refers to a saturated monocyclic hydrocarbon group having three to eight carbon atoms, and a bridged cyclic hydrocarbon group having four to ten carbon atoms which is formed when two or more saturated monocyclic hydrocarbons share two or more carbon atoms. Specifically, examples of "$C_3$-$C_{10}$ cycloalkyl" include saturated monocyclic hydrocarbon groups such as cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl, and cyclooctyl, and bridged cyclic hydrocarbon groups such as adamantyl, but are not limited thereto. In particular, for $R^5$ or $R^{5A}$, cyclopropyl or cyclopentyl is preferred, and cyclopropyl is most preferred. In particular, for $R^{10}$ or $R^{10A}$, cyclohexyl or adamantyl is preferred.

The term "$C_3$-$C_8$ cycloalkenyl" refers to an unsaturated monocyclic hydrocarbon group having three to eight carbon atoms. Specific examples include cyclopropenyl, cyclobutenyl, cyclopentenyl, cyclohexenyl, cycloheptenyl, and cyclooctenyl, but are not limited thereto. In particular, cyclohexenyl is preferred.

The term "aryl" refers to an aromatic hydrocarbon group having six to 14 carbon atoms, and a bicyclic or tricyclic group in which an aromatic hydrocarbon group and a three- to eight-membered cyclic hydrocarbon are condensed. Specific examples include phenyl, 1-naphthyl, 2-naphthyl, 1-anthryl, 2-anthryl, 9-anthryl, and 2,3-dihydro-1H-indenyl but are not limited thereto. In particular, phenyl or 2,3-dihydro-1H-indenyl is preferred.

The term "heterocyclic group" refers to an aromatic heterocyclic group and/or an aliphatic heterocyclic group.

The term "aromatic heterocyclic group" refers to a five-membered or six-membered monocyclic aromatic heterocyclic group comprising at least one heteroatom, preferably one to three heteroatoms, selected from a nitrogen atom, an oxygen atom, or a sulfur atom; and a bicyclic or tricyclic condensed aromatic heterocyclic group comprising at least one atom, preferably one to three atoms, selected from a nitrogen atom, an oxygen atom, or a sulfur atom formed by fusion of four- to eight-membered rings. Specific examples include furyl, thienyl, pyrrolyl, imidazolyl, pyrazolyl, oxazolyl, isoxazolyl, oxadiazolyl, thiazolyl, isothiazolyl, thiadiazolyl, triazolyl, tetrazolyl, pyridyl, pyridazinyl, pyrimidinyl, pyrazinyl, triazinyl, benzofuranyl, benzothiophenyl, benzooxazolyl, benzothiazolyl, isoindolyl, indolyl, 1H-indazolyl, benzimidazolyl, benzotriazolyl, oxazolopyrimidinyl, thiazolopyrimidinyl, pyrrolopyridinyl,

pyrrolopyrimidinyl, imidazopyridinyl, purinyl, quinolinyl, isoquinolinyl, cinnolinyl, phthalazinyl, quinazolinyl, quinoxalinyl, naphthyridinyl, pyridopyrimidinyl, [1,2,4] triazolo[1,5-a]pyridyl, and pyrrolo[2,3-b]pyridyl, but are not limited thereto. Particularly, thienyl, pyrrolyl, imidazolyl, isoxazolyl, pyridyl, pyrimidinyl, pyrazolyl, 1H-indazolyl, benzimidazolyl, [1,2,4]triazolo[1,5-a]pyridyl, or pyrrolo[2,3-b]pyridyl is preferred. In particular, for $R^1$, pyridyl or benzimidazolyl is most preferable. In particular, for $R^3$ or $R^{3A}$, thienyl, pyridyl, pyrimidinyl, 1H-indazolyl, or benzimidazolyl is most preferred. In particular, for $R^5$ or $R^{5A}$, thienyl is most preferred. In particular, for $R^{10}$ or $R^{10A}$, pyridyl, pyrimidinyl, pyrazolyl, thienyl or imidazolyl is more preferred and pyridyl, pyrazolyl, or thienyl is most preferred.

The term "aliphatic heterocyclic group" refers to a three- to eight-membered monocyclic aliphatic heterocyclic group comprising at least one heteroatom, preferably one to three atoms, selected from a nitrogen atom, an oxygen atom, and a sulfur atom; a bicyclic or tricyclic condensed aliphatic heterocyclic group comprising at least one atom, preferably one to three atoms, selected from a nitrogen atom, an oxygen atom, and a sulfur atom formed by fusion of three- to eight-membered rings; and a spiro-cyclic or bridged-cyclic aliphatic heterocyclic group comprising at least one heteroatom, preferably one to three atoms, selected from a nitrogen atom, an oxygen atom, and a sulfur atom. A group of an aliphatic heterocyclic condensed with an aryl group or an aromatic heterocyclic is also included in the definition of "aliphatic heterocyclic group".

Specific examples include aziridinyl, azetidinyl, pyrrolidinyl, piperidino, piperidyl, azepanyl, 1,2,5,6-tetrahydropyridyl, 1,2,3,6-tetrahydropyridyl, imidazolidinyl, pyrazolidinyl, piperazinyl, homopiperazinyl, pyrazolinyl, oxiranyl, tetrahydrofuranyl, tetrahydro-2H-pyranyl, 5,6-dihydro-2H-pyranyl, oxazolidinyl, morpholino, morpholinyl, tetrahydrothiophenyl, tetrahydro-2H-thiopyranyl, thioxazolidinyl, thiomorpholinyl, 2H-oxazolyl, 2H-thioxazolyl, dihydroindolyl, dihydroisoindolyl, dihydrobenzofuranyl, benzoimidazolidinyl, 2,3-dihydrobenzimidazolyl, 2,3-dihydrobenzoxazolyl, dihydrobenzothioxazolyl, benzodioxolinyl, tetrahydroquinolyl, tetrahydroisoquinolyl, dihydro-2H-chromanyl, dihydro-1H-chromanyl, dihydro-2H-thiochromanyl, dihydro-1H-thiochromanyl, tetrahydroquinoxalinyl, tetrahydroquinazolinyl, dihydrobenzodioxanyl, oxetanyl, 1,2-dihydropyridyl, 1-azabicyclo[2.2.2]octan-3-yl, 2,5-azabicyclo[2.2.1]heptyl, 8-azabicyclo[3.2.1]octyl, piperidin-4-spiro-3'-pyrrolidin-1-yl, and isoindolyl, but are not limited thereto. In particular, azetidinyl, pyrrolidinyl, piperidino, piperidyl, piperazinyl, morpholino, morpholinyl, 1,2-dihydropyridyl, 1,2,5,6-tetrahydropyridyl, 1-azabicyclo[2.2.2]octan-3-yl, 2,5-azabicyclo[2.2.1]heptyl, 8-azabicyclo[3.2.1]octyl, 2,3-dihydrobenzimidazolyl, or piperidin-4-spiro-3'-pyrrolidin-1-yl is preferred. In particular, for $R^3$ or $R^{3A}$, morpholino, morpholinyl, 1,2-dihydropyridyl, 1-azabicyclo[2.2.2]octan-3-yl, 1,2,5,6-tetrahydropyridyl, or 2,3-dihydrobenzimidazolyl is most preferred. In particular, for $R^{10}$ or $R^{10A}$, piperidyl,

pyrrolidinyl, or piperazinyl is more preferred, and piperidyl or piperazinyl is most preferred.

"Heterocyclic group formed with an adjacent nitrogen atom" refers to a group formed by removing a hydrogen atom on a nitrogen atom in heterocycles of a three- to eight-membered monocyclic heterocyclic group comprising at least one nitrogen atom, preferably one to two atoms (the monocyclic heterocyclic group may contain other nitrogen atoms, oxygen atoms, or sulfur atoms); a bicyclic or tricyclic condensed heterocyclic group comprising at least one nitrogen atom, preferably one to two atoms, formed by fusion of three- to eight-membered rings (the condensed heterocyclic group may contain other nitrogen atoms, oxygen atoms, or sulfur atoms); and a spiro-cyclic heterocyclic group comprising at least one nitrogen atom, preferably one to two atoms (the monocyclic heterocyclic group may contain other nitrogen atoms, oxygen atoms, or sulfur atoms). Specific examples include 1-aziridinyl, 1-azetidinyl, 1-pyrrolidinyl, piperidino, 1-azepanyl, 1-perhydroazepinyl, 1-perhydroazocinyl, 1-pyrrolyl, 1-imidazolidinyl, 1-imidazolyl, 1-pyrazolidinyl, 1-pyrazolinyl, 1-pyrazolyl, 1-piperadinyl, 1-homopiperadinyl, 1-oxazolidinyl, morpholino, thiomorpholino, 1-dihydroindolyl, 2-dihydroisoindolyl, 1-indolyl, 2-isoindolyl, 1-tetrahydroquinolyl, 2-tetrahydroisoquinolyl, and piperidin-4-spiro-3'-pyrrolidin-1-yl, but are not limited thereto. In particular, piperidino, 1-piperazinyl, and piperidin-4-spiro-3'-pyrrolidin-1-yl are preferred.

"Aromatic heterocyclic-($C_1$-$C_6$ alkylenyl)" and "aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl)" refer to a monovalent group in which an aromatic heterocyclic or an aliphatic heterocyclic binds to a $C_1$-$C_6$ alkylene portion. The "$C_1$-$C_6$ alkylene portion" of "aromatic heterocyclic-($C_1$-$C_6$ alkylenyl)" and "aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl)" means a straight-chain or branched-chain "divalent alkyl group (a group formed by removing two hydrogen atoms from an alkane)" having one to six carbon atoms. Specific examples include groups formed by removing a single hydrogen atom from each of the groups indicated as examples for the aforementioned "$C_1$-$C_6$ alkyl". The "aromatic heterocyclic group portion" of aromatic heterocyclic-($C_1$-$C_6$ alkylenyl) has the same meaning as the aforementioned aromatic heterocyclic group, and specific examples include groups indicated as examples for the aforementioned aromatic heterocyclic group. The "aliphatic heterocyclic group portion" of aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl) has the same meaning as the aforementioned aliphatic heterocyclic group, and specific examples include groups indicated as examples for the aforementioned aliphatic heterocyclic group.

Hereinbelow, in this specification, the "-($C_1$-$C_6$ alkylenyl)" in each group has the same definition as the aforementioned "-($C_1$-$C_6$ alkylenyl)" unless otherwise noted.

Preferred examples of "aromatic heterocyclic-($C_1$-$C_6$ alkylenyl)" include aromatic heterocyclic methyl, aromatic heterocyclic ethyl, and aromatic heterocyclic propyl, and more preferred examples include imidazolylmethyl, imidazolylethyl, and imidazolylpropyl, and most preferred examples include imidazolylethyl, but are not limited thereto.

Preferred examples of "aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl)" include aliphatic heterocyclic methyl, aliphatic heterocyclic ethyl, and aliphatic heterocyclic propyl, and more preferred examples include morpholinomethyl, morpholinoethyl, morpholinopropyl, piperadinylmethyl, piperadinylethyl, piperadinylpropyl, piperidylmethyl, piperidylethyl, piperidylpropyl, pyrrolidinylmethyl, pyrrolidinylethyl, and pyrrolidinylpropyl and most preferred examples include morpholinopropyl, pyrrolidinylmethyl, piperadinylmethyl, piperadinylethyl, and piperidylmethyl, but are not limited thereto.

"Aromatic heterocyclic-($C_1$-$C_6$ alkylenyl)amino" and "aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl)amino" refer to a group in which a hydrogen atom of an amino group is replaced with the aforementioned "aromatic heterocyclic-($C_1$-$C_6$ alkylenyl)" or "aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl)".

"Aliphatic heterocyclic-amino" refers to a group in which a hydrogen atom of an amino group is replaced with the aforementioned aliphatic heterocyclic group.

"$C_1$-$C_6$ aminoalkyl" refers to a group in which any hydrogen atom of the aforementioned alkyl group is replaced with an amino group.

"$C_1$-$C_6$ alkylamino" and "di($C_1$-$C_6$ alkyl)amino" refer to a group in which one and two hydrogen atoms, respectively of an amino group is/are replaced with the aforementioned $C_1$-$C_6$ alkyl. Herein, a hydrogen atom in the $C_1$-$C_6$ alkyl portion of the "$C_1$-$C_6$ alkylamino" and "di($C_1$-$C_6$ alkyl)amino" can be a deuterium.

"$C_2$-$C_7$ alkanoylamino" and "$C_1$-$C_6$ alkylsulfonylamino" refer to a group in which one hydrogen atom of an amino group is replaced with "$C_2$-$C_7$ alkanoyl" and "$C_1$-$C_6$ alkylsulfonyl", respectively.

"$C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl)", "di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)", and "$C_2$-$C_7$ alkanoylamino-($C_1$-$C_6$ alkylenyl)" refer to a group in which "$C_1$-$C_6$ alkylamino", "di($C_1$-$C_6$ alkyl)amino", and "$C_2$-$C_7$ alkanoylamino", respectively bind to "($C_1$-$C_6$ alkylenyl)".

"Di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyloxy)" refers to a group in which "di($C_1$-$C_6$ alkyl)amino" binds to "($C_1$-$C_6$ alkylenyloxy)".

The "$C_1$-$C_6$ alkylene portion" of "$C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl)", "di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)", "$C_2$-$C_7$ alkanoylamino-($C_1$-$C_6$ alkylenyl)", and "di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyloxy)" means a straight-chain or branched-chain "divalent alkyl group (a group formed by removing two hydrogen atoms from an alkane)" having one to six carbon atoms. Specific examples include groups produced by removing a single hydrogen atom from each of the groups indicated as examples for the aforementioned "$C_1$-$C_6$ alkyl".

The "$C_1$-$C_6$ alkyl portion" of "$C_1$-$C_6$ aminoalkyl", "$C_1$-$C_6$ alkylamino", "di($C_1$-$C_6$ alkyl)amino", "$C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl)", "di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)", "$C_2$-$C_7$ alkanoylamino-($C_1$-$C_6$ alkylenyl)", and "di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyloxy)" has the same meaning as the aforementioned $C_1$-$C_6$ alkyl portion, and specific examples include

groups indicated as examples for the aforementioned $C_1$-$C_6$ alkyl portion. The two alkyl portions of di($C_1$-$C_6$ alkyl)amino may be the same or different.

"Di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)carbonyl" refers to a monovalent group in which the aforementioned "di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)" binds to a carbonyl.

"Di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)aminocarbonyl" refers to a monovalent group in which a group in which one hydrogen atom of an amino is replaced with the aforementioned "di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)" binds to a carbonyl.

"$C_1$-$C_6$ aminoalkylcarbonyl" refers to a monovalent group in which the aforementioned "$C_1$-$C_6$ aminoalkyl" binds to a carbonyl.

"$C_1$-$C_6$ aminoalkylcarbonylamino" refers to a monovalent group in which one hydrogen atom of an amino is replaced with the aforementioned "$C_1$-$C_6$ aminoalkylcarbonyl".

"Di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)carbonyl" refers to a monovalent group in which the aforementioned "di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)" binds to a carbonyl.

"Di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkyl)carbonylamino" refers to a monovalent group in which one hydrogen atom of an amino group is replaced with the aforementioned "di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkyl)carbonyl".

"Aliphatic heterocyclic group-carbonyl" refers to a monovalent group in which the aforementioned "aliphatic heterocyclic group" binds to a carbonyl.

"Aliphatic heterocyclic group-carbonylamino" refers to a monovalent group in which one hydrogen atom of an amino group is replaced with the aforementioned "aliphatic heterocyclic group-carbonyl".

"Di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)amino" refers to a monovalent group in which one hydrogen atom of an amino group is replaced with the aforementioned "di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)".

"$C_1$-$C_6$ hydroxyalkyl" refers to a group in which any hydrogen atom of an alkyl group is replaced with a hydroxy group.

"$C_1$-$C_6$ aminoalkyloxy" refers to a monovalent group in which a hydrogen atom of a hydroxy group is replaced with the aforementioned "$C_1$-$C_6$ aminoalkyl".

Preferred examples of "$C_1$-$C_6$ aminoalkyl" include aminomethyl, aminoethyl, aminopropyl, 1-amino-1-methylethyl, and 3-amino-2-methylpropyl.

Preferred examples of "$C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl)" include methylaminomethyl, methylaminoethyl, ethylaminoethyl, and ethylaminopropyl.

Preferred examples of "di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)" include dimethylaminomethyl, (methyl)(ethyl)aminomethyl, diethylaminomethyl, de(t-butyl)aminomethyl, dimethylaminoethyl, diethylaminoethyl, dimethylaminopropyl, and diethylaminopropyl.

Preferred examples of "$C_2$-$C_7$ alkanoylamino-($C_1$-$C_6$ alkylenyl)" include

acetylaminomethyl, acetylaminoethyl, acetylaminopropyl, and 3-(acetylamino)-2-methylpropyl.

Preferred examples of "di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyloxy)" include di($C_1$-$C_6$ alkyl)aminomethyloxy, di($C_1$-$C_6$ alkyl)aminoethyloxy, and di($C_1$-$C_6$ alkyl)aminopropyloxy, and more preferred examples include dimethylaminoethyloxy and dimethylaminopropyloxy.

Substituents of the optionally substituted $C_1$-$C_6$ alkyl, the optionally substituted $C_1$-$C_6$ alkoxy, the optionally substituted $C_1$-$C_6$ alkylsulfinyl, the optionally substituted $C_1$-$C_6$ alkylsulfonyl, the optionally substituted $C_2$-$C_7$ alkanoylamino-($C_1$-$C_6$ alkylenyl), the optionally substituted $C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl), and the optionally substituted di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl) may be the same or different, and may be one to an allowable number of substituents for example, preferably one to three substituents. Specific examples include halogen, hydroxy, cyano, $C_1$-$C_6$ alkoxy, trifluoromethoxy, amino, $C_1$-$C_6$ alkylamino, di($C_1$-$C_6$ alkyl)amino, $C_1$-$C_6$ alkylsulfonylamino, carbamoyl, sulfamoyl, benzylureide, ($C_1$-$C_6$ alkyl)ureide, $C_2$-$C_7$ alkanoylamino, aliphatic heterocyclic group which may be substituted with $C_1$-$C_6$ alkyl (the $C_1$-$C_6$ alkyl has the same meaning as the aforementioned $C_1$-$C_6$ alkyl), dimethylaminopropylaminocarbonyl, aminocyclohexylaminocarbonyl, oxo, and aliphatic heterocyclic-carbonyl which may be substituted with $C_1$-$C_6$ alkyl (the $C_1$-$C_6$ alkyl has the same meaning as the aforementioned $C_1$-$C_6$ alkyl) but are not limited thereto.

Substituents of the optionally substituted $C_3$-$C_{10}$ cycloalkyl, the optionally substituted $C_3$-$C_8$ cycloalkenyl, the optionally substituted aryl, the optionally substituted aromatic heterocyclic group, the optionally substituted aliphatic heterocyclic group, the optionally substituted aromatic heterocyclic-($C_1$-$C_6$ alkylenyl), the optionally substituted aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl), the optionally substituted heterocyclic group formed with an adjacent nitrogen atom, and the optionally substituted di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyloxy) may be the same or different, and may be one to an allowable number of substituents for example, preferably one to three substituents. Specific examples include

halogen,
hydroxy,
cyano,
$C_1$-$C_6$ alkyl,
$C_1$-$C_6$ alkoxy,
carboxyl,
$C_1$-$C_6$ alkoxycarbonyl,
trifluoromethoxy,
difluoromethoxy,
trifluoromethyl,
difluoromethyl,
amino,

$C_1$-$C_6$ alkylamino (wherein, $C_1$-$C_6$ alkyl may have hydroxy as a substituent),
di($C_1$-$C_6$ alkyl)amino,
diallylamino,
$C_1$-$C_6$ alkylsulfonylamino,
$C_2$-$C_7$ alkanoylamino,
carbamoyl,
sulfamoyl,
benzylureide,
($C_1$-$C_6$ alkyl)ureide,
$C_1$-$C_6$ hydroxyalkyl,
$C_1$-$C_6$ aminoalkyl,
$C_1$-$C_6$ aminoalkylenyloxy,
$C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl) (wherein, $C_1$-$C_6$ alkyl may have halogen as a substituent),
di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl) (wherein, either $C_1$-$C_6$ alkyl or $C_1$-$C_6$ alkylenyl may have hydroxy or cyano as a substituent, and wherein hydrogen atom of $C_1$-$C_6$ alkyl may be substituted with deuterium atom),
di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)oxy,
di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)amino,
di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)carbonyl,
di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)carbonylamino,
di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)aminocarbonyl,
aliphatic heterocyclic group (wherein, the aliphatic heterocyclic group may have $C_1$-$C_6$ alkyl, amino, hydroxy, halogen, di($C_1$-$C_6$ alkyl)amino, $C_1$-$C_6$ alkylamino, or $C_1$-$C_6$ alkoxy as a substituent),
aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl) (wherein, the aliphatic heterocyclic group may have $C_1$-$C_6$ alkyl, amino, hydroxy, $C_1$-$C_6$ hydroxyalkyl, $C_1$-$C_6$ alkoxy, $C_1$-$C_6$ alkylamino, di($C_1$-$C_6$ alkyl)amino, or halogen as a substituent),
an aliphatic heterocyclic-carbonyl (wherein, the aliphatic heterocyclic may have $C_1$-$C_6$ alkyl as a substituent),
an aliphatic heterocyclic-carbonylamino (wherein, the aliphatic heterocyclic may have $C_1$-$C_6$ alkyl as a substituent),
an aliphatic heterocyclic-amino (wherein, the aliphatic heterocyclic may have $C_1$-$C_6$ alkyl or amino as a substituent),
aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl)amino,
aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl)oxy,
aromatic heterocyclic-($C_1$-$C_6$ alkylenyl),

aliphatic heterocyclic-sulfonyl which may be substituted with $C_1$-$C_6$ alkyl,
$C_1$-$C_6$ aminoalkylcarbonylamino,
hydroxyphenyl,
dimethylaminocarbonyl,
aminocyclohexylaminocarbonyl,
methylpiperazinylphosphonyl,
$C_3$-$C_8$ cycloalkyl (wherein, the cycloalkyl may have amino, $C_1$-$C_6$ alkylamino, or $C_1$-$C_6$ aminoalkyl as a substituent), and
oxo, but are not limited thereto.

In particular, substituents selected from Substituent Group A or B as more preferred substituents in formula (I) are the following.

Substituent Group A: a halogen;

Substituent Group B:

a halogen,
a hydroxy,
a cyano,
a $C_1$-$C_6$ alkyl,
a $C_1$-$C_6$ alkoxy,
a trifluoromethoxy,
an amino,
a $C_1$-$C_6$ alkylamino,
a di($C_1$-$C_6$ alkyl)amino,
a $C_1$-$C_6$ alkylsulfonylamino,
a $C_1$-$C_6$ aminoalkyl,
an aliphatic heterocyclic group (wherein, the aliphatic heterocyclic group may have a $C_1$-$C_6$ alkyl, an amino, a $C_1$-$C_6$ alkylamino, or a $C_1$-$C_6$ alkoxy as a substituent),
an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl) (wherein, the aliphatic heterocyclic may have a $C_1$-$C_6$ alkyl, an amino, a hydroxy, a $C_1$-$C_6$ hydroxyalkyl, a $C_1$-$C_6$ alkoxy, or a halogen as a substituent),
an aliphatic heterocyclic-amino (wherein, the aliphatic heterocyclic may have a $C_1$-$C_6$ alkyl or an amino as a substituent),
a $C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl),
a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl) (wherein, either $C_1$-$C_6$ alkyl or $C_1$-$C_6$ alkylenyl may have hydroxy or cyano as a substituent, and wherein hydrogen atom of $C_1$-$C_6$ alkyl may be substituted with deuterium atom),
a carbamoyl,
a sulfamoyl,

a ($C_1$-$C_6$ alkyl)ureide,
a benzylureide,
a dimethylaminopropylaminocarbonyl,
an aminocyclohexylaminocarbonyl,
a $C_1$-$C_6$ aminoalkylcarbonylamino,
a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)carbonylamino,
a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)oxy,
a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)amino,
an aliphatic heterocyclic-carbonylamino,
a $C_2$-$C_7$ alkanoylamino,
a $C_1$-$C_6$ aminoalkylenyloxy,
a cyclohexyl (wherein, the cyclohexyl may have an amino or a $C_1$-$C_6$ aminoalkyl as a substituent),
and an oxo.

Furthermore, substituents selected from Substituent Groups C to I as more preferred substituents in formulas (IA) and (IB) are the following.

Substituent Group C: a halogen, a hydroxy, a $C_1$-$C_6$ alkoxy, and a di($C_1$-$C_6$ alkyl) amino;

Substituent Group D: a hydroxy, a $C_1$-$C_6$ alkyl, a $C_1$-$C_6$ aminoalkyl, an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl) (wherein, the aliphatic heterocyclic may have an amino, a hydroxy, a $C_1$-$C_6$ hydroxyalkyl, a $C_1$-$C_6$ alkoxy, or a halogen as a substituent), a $C_1$-$C_6$ alkylamino-( $C_1$-$C_6$ alkylenyl), a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl) (wherein, either $C_1$-$C_6$ alkyl may have a hydroxy or a cyano as a substituent, and wherein hydrogen atom of $C_1$-$C_6$ alkyl may be substituted with deuterium atom), an amino, a $C_1$-$C_6$ alkylamino, a di($C_1$-$C_6$ alkyl)amino, a $C_1$-$C_6$ aminoalkylcarbonylamino, a di($C_1$-$C_6$ alkyl)amino($C_1$-$C_6$ alkylenyl)carbonylamino, an aliphatic heterocyclic group (wherein, the aliphatic heterocyclic group may have a $C_1$-$C_6$ alkoxy as a substituent), and an aliphatic heterocyclic-carbonylamino;

Substituent Group E: a halogen, a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl) (wherein, the $C_1$-$C_6$ alkylenyl may have a hydroxy as a substituent), an amino, a $C_2$-$C_7$ alkanoylamino, a di($C_1$-$C_6$ alkyl)amino, a $C_1$-$C_6$ aminoalkyl, and an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl) (wherein, the aliphatic heterocyclic may have a $C_1$-$C_6$ alkyl as a substituent);

Substituent Group F: a carbamoyl, an amino, a $C_1$-$C_6$ aminoalkyl, a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl), a $C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl), an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl), and an aliphatic heterocyclic group which may be substituted with a $C_1$-$C_6$ alkyl;

Substituent Group G: a halogen, a hydroxy, a cyano, a $C_1$-$C_6$ alkyl, a $C_1$-$C_6$ alkoxy, a trifluoromethoxy, a $C_1$-$C_6$ aminoalkyl, a $C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl), a di($C_1$-$C_6$

alkyl)amino-($C_1$-$C_6$ alkylenyl), an amino, a $C_1$-$C_6$ alkylsulfonylamino, a carbamoyl, a sulfamoyl, a ($C_1$-$C_6$ alkyl)ureide, a benzylureide, and an aliphatic heterocyclic group;

Substituent Group H: a halogen, a cyano, a $C_1$-$C_6$ alkyl, a $C_1$-$C_6$ alkoxy, an amino, a carbamoyl, a dimethylaminopropylaminocarbonyl, and an aminocyclohexylaminocarbonyl;

Substituent Group I: an aliphatic heterocyclic group (wherein, the aliphatic heterocyclic group may have a $C_1$-$C_6$ alkyl, an amino group, or a $C_1$-$C_6$ alkylamino as a substituent); an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl); an aliphatic heterocyclic-amino (wherein, the aliphatic heterocyclic may have a $C_1$-$C_6$ alkyl or an amino as a substituent); a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl); a $C_1$-$C_6$ aminoalkylenyloxy; a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)oxy; a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)amino; a cyclohexyl (wherein, the cyclohexyl may have an amino or a $C_1$-$C_6$ aminoalkyl as a substituent).

The "$C_1$-$C_6$ alkyl portion" of a ($C_1$-$C_6$ alkyl)ureide, a $C_1$-$C_6$ hydroxyalkyl, a $C_1$-$C_6$ alkylamino, a di($C_1$-$C_6$ alkyl)amino, a $C_2$-$C_7$ alkanoylamino, and a $C_1$-$C_6$ alkylsulfonylamino of each substituent exemplified herein has the same meaning as the aforementioned $C_1$-$C_6$ alkyl portion, and specific examples include the groups and such indicated as examples for the aforementioned $C_1$-$C_6$ alkyl portion. The two alkyl portions of di($C_1$-$C_6$ alkyl)amino may be the same or different.

Preferred examples of "($C_1$-$C_6$ alkyl)ureide" include methylureide and ethylureide, but are not limited thereto.

Preferred examples of "$C_1$-$C_6$ hydroxyalkyl" include hydroxymethyl and hydroxyethyl, but are not limited thereto.

Preferred examples of "$C_1$-$C_6$ alkylsulfonylamino" include methylsulfonylamino, ethylsulfonylamino, and isopropylsulfonylamino, but are not limited thereto.

Preferred examples of "$C_1$-$C_6$ alkylamino" include methylamino and ethylamino, but are not limited thereto.

Preferred examples of "di($C_1$-$C_6$ alkyl)amino" include dimethylamino and diethylamino, but are not limited thereto.

Specific examples of "$C_2$-$C_7$ alkanoylamino" include acetylamino, propionylamino, butyrylamino, isobutyrylamino, valerylamino, isovalerylamino, and hexanoylamino, but are not limited thereto. In particular, acetylamino is preferred.

In addition, more preferred examples among each of the Substituent Groups are shown below.

As Substituent C, a dimethylamino is most preferred.

As Substituent D, a methyl, hydroxy, an aminomethyl, a dimethylaminomethyl, $(CD_3)_2NCH_2$- (wherein D means deuterium atom), an ethylmethylaminomethyl, a diethylaminomethyl, a di-tert-butylaminomethyl, a dimethylaminoethyl, an amino, a methylamino, a dimethylamino, a diethylamino, a methylaminomethyl, a

cyanomethyl(methyl)aminomethyl, a 2-hydroxyethyl(methyl)aminomethyl, a pyrrolidinyl, a methoxypyrrolidinyl, a pyrrolidinylmethyl, a pyrrolidinylethyl, a piperazinylmethyl, a fluoropyrrolidinylmethyl, a hydroxypyrrolidinylmethyl, a hydroxymethylpyrrolidinylmethyl, a methoxypyrrolidinylmethyl, an aminopiperidinylmethyl, a dimethylaminomethylcarbonylamino, a 1-aminoethylcarbonylamino, a 1-aminoisobutylcarbonylamino, or a pyrrolidinylcarbonylamino is most preferred.

As Substituent E, a halogen, an aminomethyl, a 1-amino-1-methylethyl, a 2-(dimethylamino)-1-hydroxyethyl, a dimethylaminomethyl, a dimethylaminoethyl, an acetylamino, a dimethylamino, a methylpiperazinylmethyl, a pyrrolidinylmethyl, a pyrrolidinylethyl, or a methylpiperazinylethyl is more preferred, and a dimethylaminomethyl is most preferred.

As Substituent F, a carbamoyl, an amino, an aminomethyl, a methylaminomethyl, a dimethylaminomethyl, a 1-(dimethylamino)ethyl, a pyrrolidinylmethyl, a pyrrolidinylethyl, a morpholino, a morpholinomethyl, or a 4-methylpiperazinyl is preferred, and a dimethylaminomethyl, a 1-(dimethylamino)ethyl, a pyrrolidinylmethyl, a morpholinomethyl, or a 4-methylpiperazinyl is most preferred.

As Substituent G, a halogen, a hydroxy, a cyano, a methyl, a methoxy, an ethoxy, a trifluoromethoxy, an amino, a methylsulfonylamino, a carbamoyl, a sulfamoyl, a dimethylaminomethyl, a methylureide, a benzylureide, or a piperazinyl is more preferred, and a halogen, a hydroxy, a methoxy, an ethoxy, or a trifluoromethoxy is most preferred.

As Substituent H, a halogen, a cyano, a methyl, a methoxy, an amino, a carbamoyl, or a dimethylaminopropylaminocarbonyl, or an aminocyclohexylaminocarbonyl is preferred, and a cyano is most preferred.

As Substituent I, a dimethylaminomethyl, a piperazinyl, a methylpiperazinyl, a piperidyl, methylpiperidyl, an aminopiperidyl, a methylaminopiperidyl, a methylpyrrolidinyl, a pyrrolidinylmethyl, an aminopyrrolidinyl, a methylaminopyrrolidinyl, a dimethylaminopyrrolidinyl, a piperidylamino, a pyrrolidinylamino, an aminocyclohexyl, a methylaminocyclohexyl, a 2-aminoethoxy, a 2-(dimethylamino)ethoxy, a 2-(dimethylamino)ethylamino, a 2-pyrrolidinylethyl, or a dimethylaminoethyloxy is most preferred.

Pharmaceutically acceptable salts of compound (I) mean, for example, pharmaceutically acceptable acid-added salts, amino acid-added salts, or such. Specific examples of the pharmaceutically acceptable acid-added salts of compound (I) include inorganic acid salts such as hydrochloride, sulfate, and phosphate, organic acid salts such as acetate, maleate, fumarate, citrate, and such, and examples of pharmaceutically acceptable amino acid-added salts include addition salts such as of lysine, glycine, phenylalanine, asparagine acid, or glutamic acid.

Examples of diseases involving overexpression of MELK, which may be treated and/or

prevented by pharmaceutical compositions comprising as an active ingredient a compound or a pharmaceutically acceptable salt thereof of the present invention, include cancer, breast cancer, bladder cancer, cervical cancer, cholangiocellular carcinoma, chronic myeloid leukemia (CML), colorectal cancer, endometriosis, esophagus cancer, gastric cancer, liver cancer, non-small cell lung cancer (NSCLC), lymphoma, osteosarcoma, ovarian cancer, pancreatic cancer, prostate cancer, renal carcinoma and small cell lung cancer (SCC), but are not limited thereto. Examples of the cancer which may be treated and/or prevented include breast cancer, bladder cancer, cervical cancer, cholangiocellular carcinoma, CML, colorectal cancer, endometriosis, esophagus cancer, gastric cancer, liver cancer, NSCLC, lymphoma, osteosarcoma, ovarian cancer, pancreatic cancer, prostate cancer, renal carcinoma and SCC, but are not limited thereto.

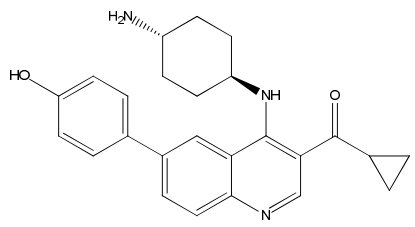
Compound (I) includes compounds which may have stereoisomers such as regioisomers, geometrical isomers, optical isomers, and tautomers, and all possible isomers including them and mixtures thereof are included in the present invention.

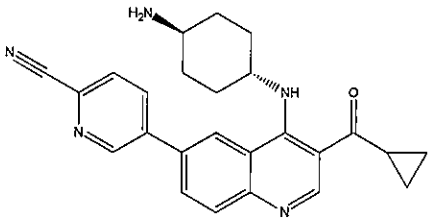
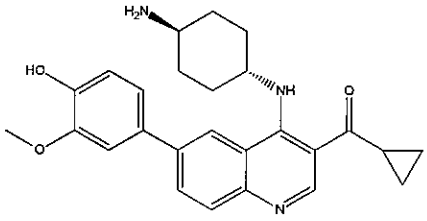
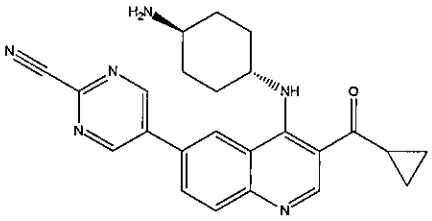
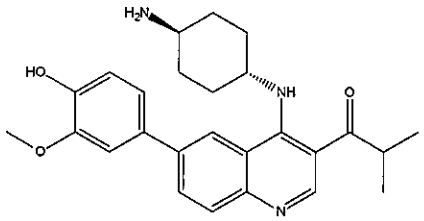
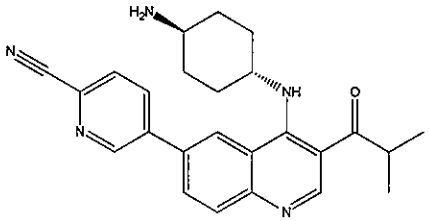
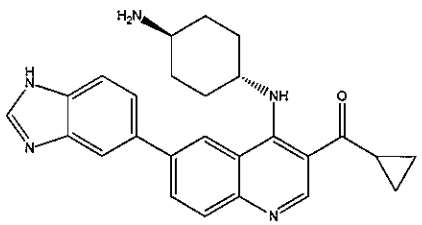
When a salt of compound (I) is to be obtained, if compound (I) is obtained in the form of a salt, it may be purified as it is, and if it is obtained in a free form, compound (I) can be isolated and purified by dissolving or suspending it in an appropriate solvent, and adding an acid or amino acid to form a salt.

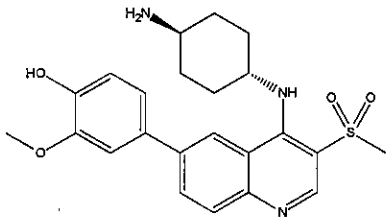
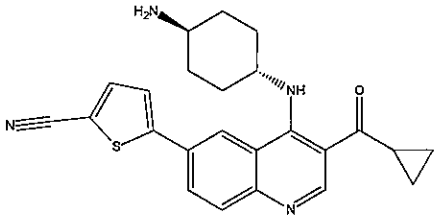
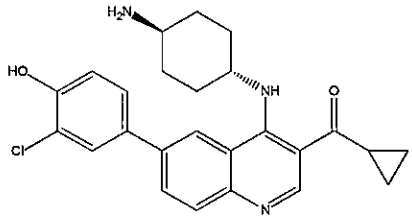
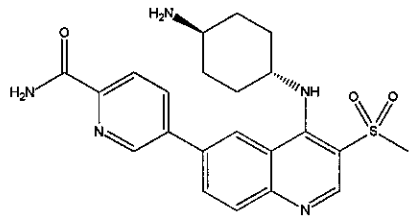
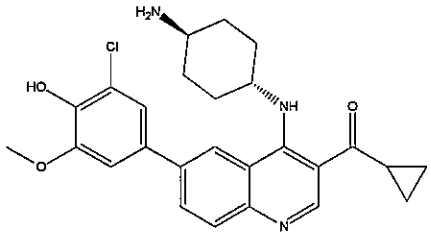
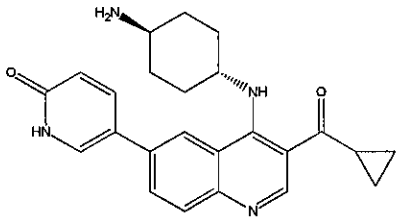
Furthermore, compound (I) and pharmaceutically acceptable salts thereof may exist in a form of adducts with water or various other solvents, and these adducts are also included in the present invention.

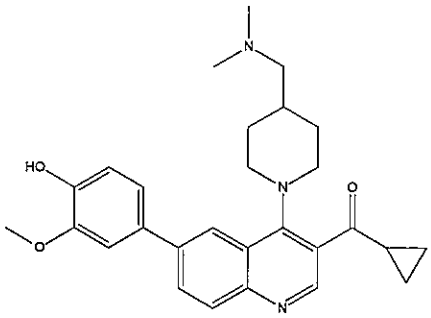
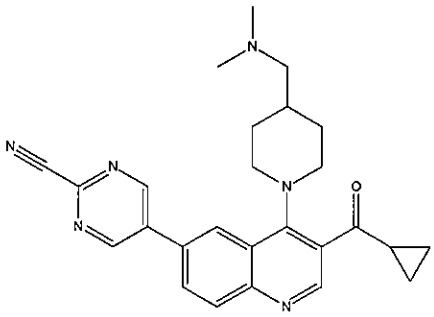
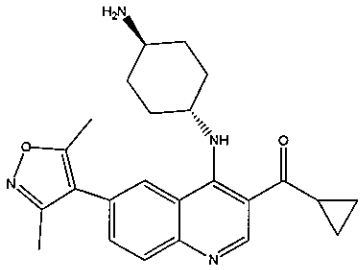
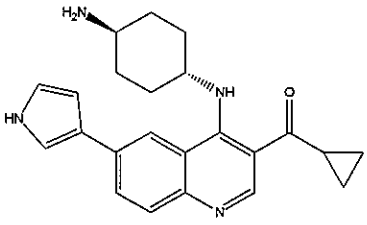
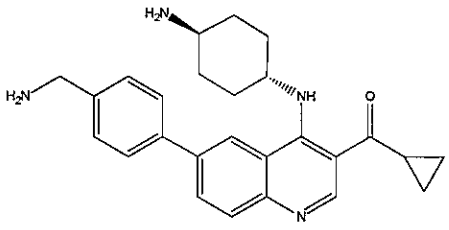
Specific examples of Compound (I) of the present invention are shown in Table 1. However, compounds of the present invention are not limited thereto. (Example No. corresponds to above mentioned compound number.)

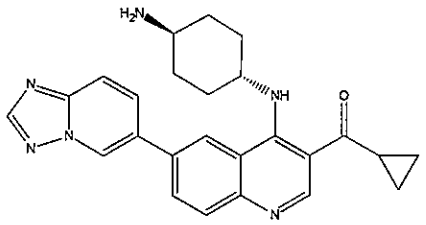
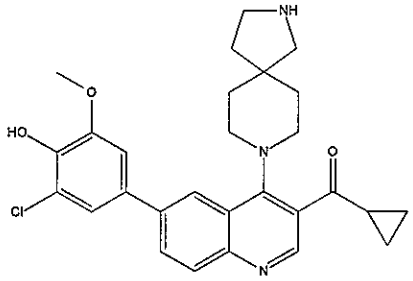
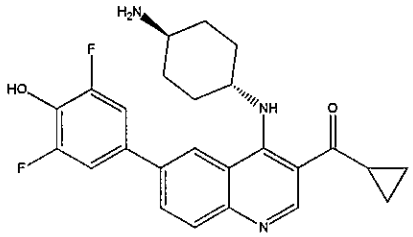
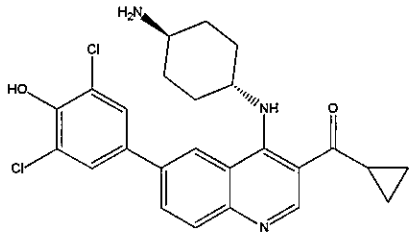
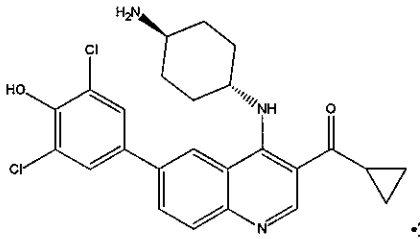
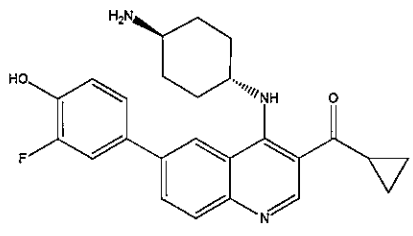
Table 1

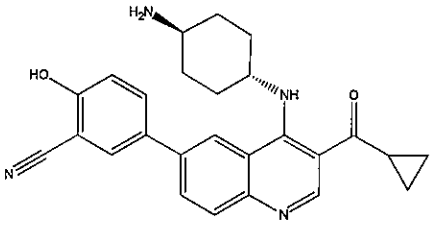
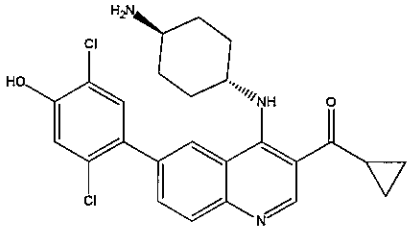
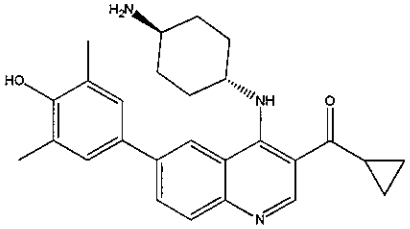
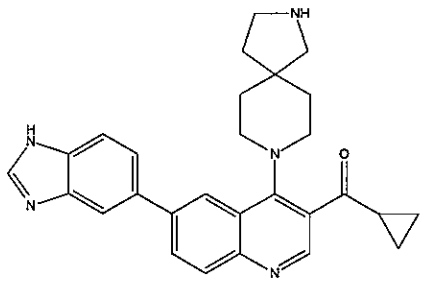
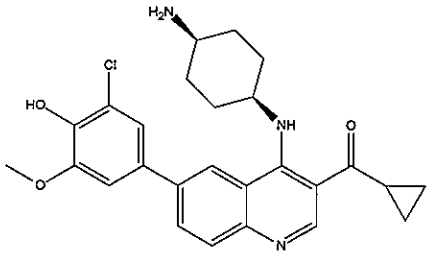
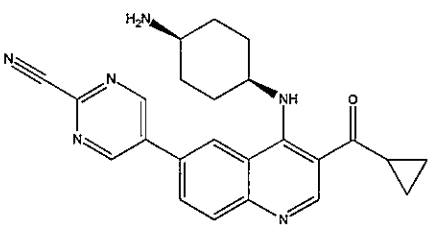
| No. | Structure | Compound Name | ESI MS (*m/z*) |
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| 55 |  | (4-((trans)-4-aminocyclohexylamino)-6-(4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 402 |

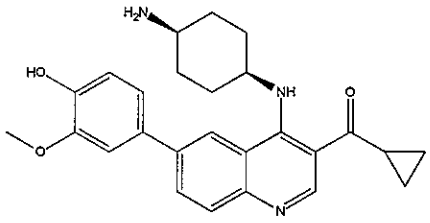
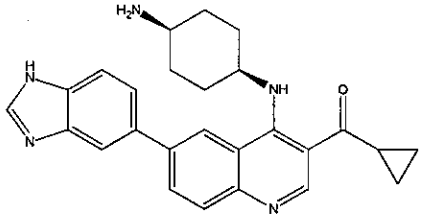
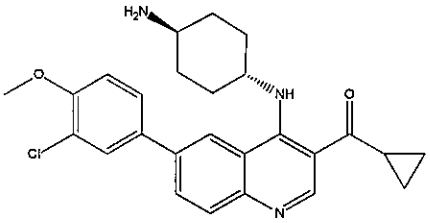
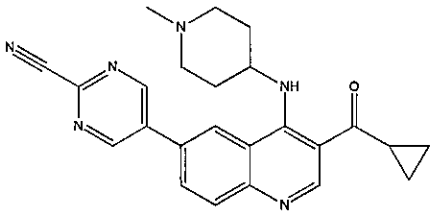
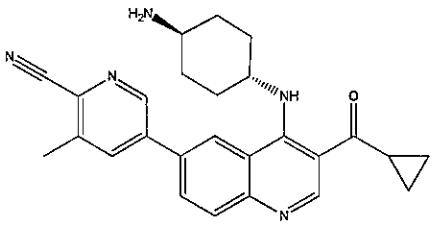
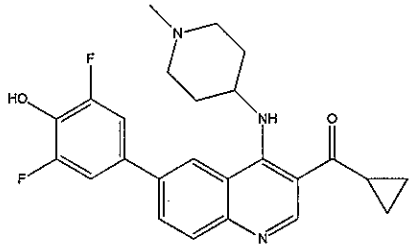
| | | | |
|---|---|---|---|
| 76 |  | 5-(4-((trans)-4-aminocyclohexylamino)-3- (cyclopropanecarbonyl) quinolin-6-yl)picolinonitrile | 411 |
| 81 |  | (4-((trans)-4-aminocyclohexylamino )-6- (4-hydroxy-3-methoxyphenyl) quinolin-3-yl)(cyclopropyl) methanone | 432 |
| 96 |  | 5-(4-((trans)-4-aminocyclohexylamino)-3- (cyclopropanecarbonyl)quinolin -6-yl)pyrimidine-2-carbonitrile | 412 |
| 107 |  | 1-(4-((trans)-4-aminocyclohexylamino)-6- (4-hydroxy-3-methoxyphenyl) quinolin-3-yl)-2-methylpropan -1-one | 434 |
| 108 |  | 5-(4-((trans)-4-aminocyclohexylamino) -3-isobutyrylquinolin-6-yl) picolinonitrile | 414 |
| 116 |  | (4-((trans)-4-aminocyclohexylamino )-6- (1H-benzo[d]imidazol-5-yl) quinolin-3-yl)(cyclopropyl) methanone | 426 |

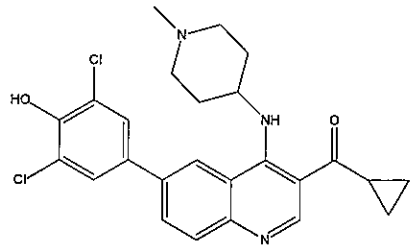
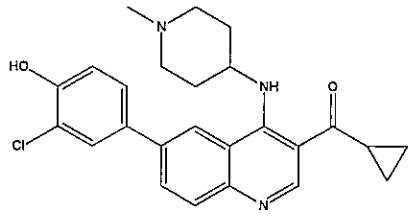
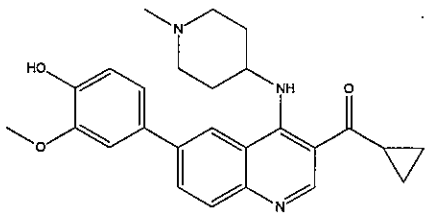
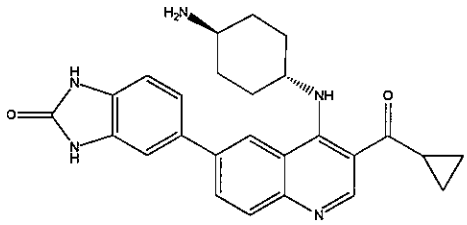
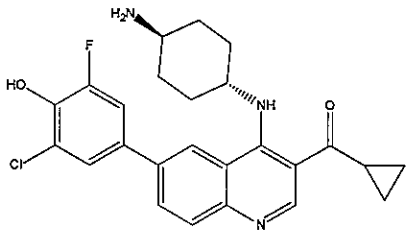
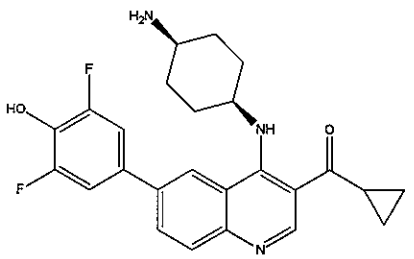
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|---|---|---|---|
| 118 |  | 4-(4-((trans)-4-aminocyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl)-2-methoxyphenol | 442 |
| 119 |  | 5-(4-((trans)-4-aminocyclohexylamino)-3-(cyclopropanecarbonyl)quinolin-6-yl)thiophene-2-carbonitrile | 417 |
| 124 |  | (4-((trans)-4-aminocyclohexylamino)-6- (3-chloro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl) methanone | 436 |
| 125 |  | 5-(4-((trans)-4-aminocyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl) picolinamide | 440 |
| 126 |  | (4-((trans)-4-aminocyclohexylamino)-6- (3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl) (cyclopropyl)methanone | 466 |
| 132 |  | 5-(4-((trans)-4-aminocyclohexylamino)-3-(cyclopropanecarbonyl)quinolin-6-yl)pyridin-2(1H)-one | 402 |

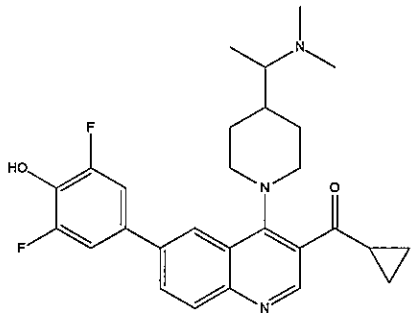
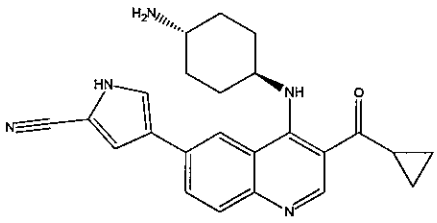
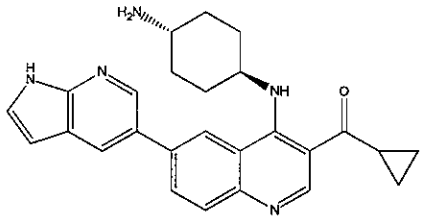
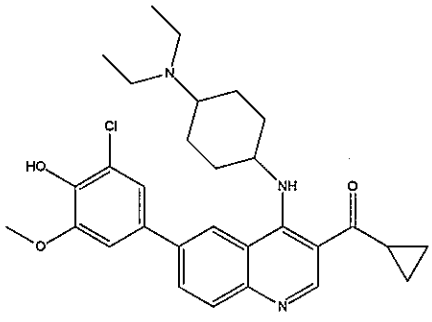
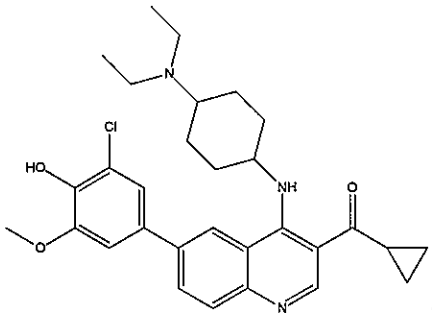
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| 133 |  | cyclopropyl(4-(4-((dimethylamino) methyl)piperidin-1-yl)-6- (4-hydroxy-3-methoxyphenyl) quinolin-3-yl)methanone | 460 |
| 136 |  | 5-(3-(cyclopropanecarbonyl)-4- (4-((dimethylamino)methyl) piperidin-1-yl)quinolin-6-yl) pyrimidine-2-carbonitrile | 441 |
| 143 |  | (4-((trans)-4-aminocyclohexylamino )-6- (3,5-dimethylisoxazol-4-yl) quinolin-3-yl)(cyclopropyl) methanone | 405 |
| 144 |  | (4-((trans)-4-aminocyclohexylamino )-6- (1H-pyrrol-3-yl)quinolin-3-yl) (cyclopropyl)methanone | 374 |
| 147 |  | (4-((trans)-4-aminocyclohexylamino )-6- (4-(aminomethyl)phenyl) quinolin-3-yl)(cyclopropyl) methanone | 415 |

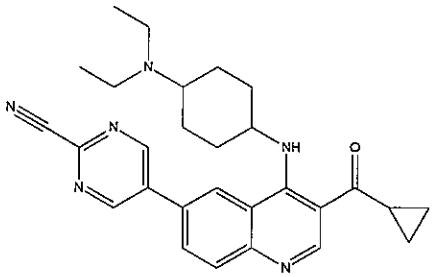
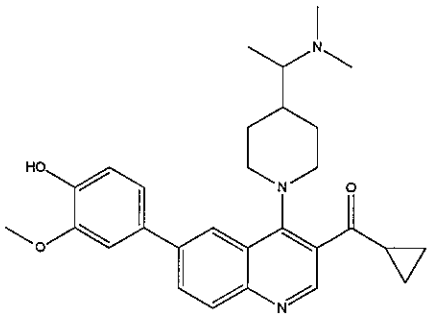
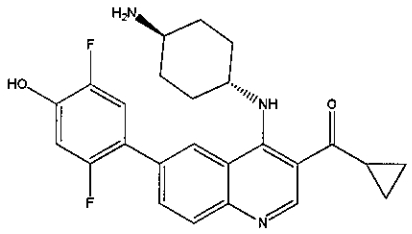
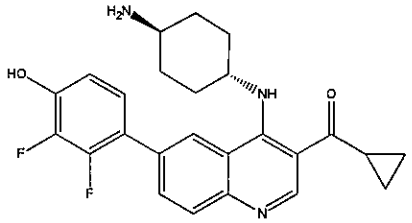
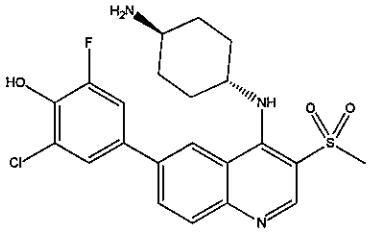
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| 148 |  | (6-([1,2,4]triazolo[1,5-a]pyridin -6-yl)-4-((trans)-4-aminocyclohexyl amino)quinolin -3-yl)(cyclopropyl)methanone | 427 |
| 155 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(2,8-diazaspiro[4.5]decan-8-yl) quinolin-3-yl)(cyclopropyl) methanone | 492 |
| 156 |  | (4-((trans)-4-aminocyclohexylamino )-6- (3,5-difluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl) methanone | 437 |
| 157( a) |  ·HCl | (4-((trans)-4-aminocyclohexylamino )-6- (3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl) methanone hydrochloride | 470 |
| 157( b) |  ·2HCl | (4-((trans)-4-aminocyclohexylamino )-6- (3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl) methanone dihydrochloride | 470 |
| 158 |  | (4-((trans)-4-aminocyclohexylamino )-6- (3-fluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl) methanone | 419 |

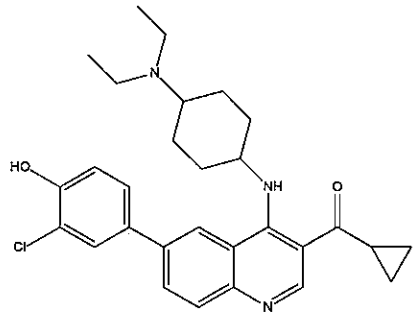
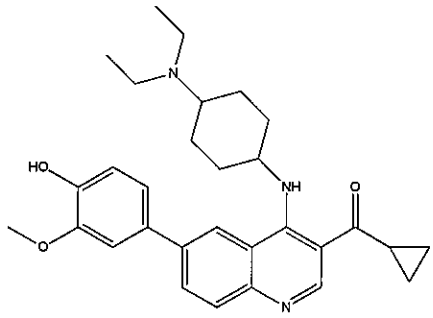
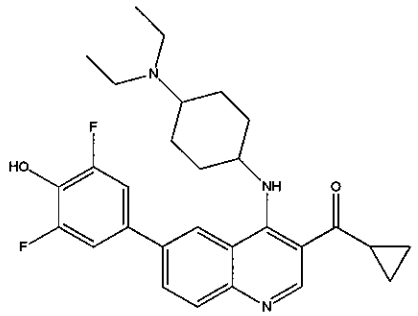
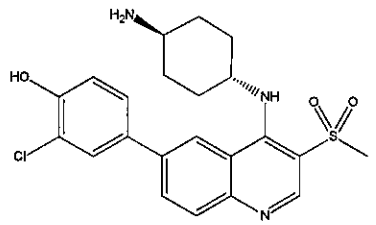
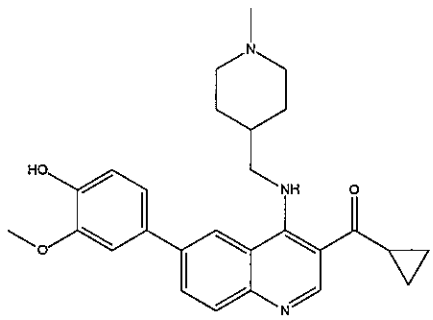
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| 159 |  | 5-(4-((trans)-4-aminocyclohexylamino)-3-(cyclopropanecarbonyl)quinolin-6-yl)-2-hydroxybenzonitrile | 427 |
| 160 |  | (4-((trans)-4-aminocyclohexylamino)-6- (2,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl) methanone | 470 |
| 161 |  | (4-((trans)-4-aminocyclohexylamino)-6- (4-hydroxy-3,5-dimethylphenyl) quinolin-3-yl)(cyclopropyl) methanone | 430 |
| 162 |  | (6-(1H-benzo[d]imidazol-5-yl)-4-(2,8-diazaspiro[4.5]decan-8-yl) quinolin-3-yl)(cyclopropyl) methanone | 452 |
| 163 |  | (4-((cis)-4-aminocyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl) methanone | 466 |
| 164 |  | 5-(4-((cis)-4-aminocyclohexylamino)-3-(cyclopropanecarbonyl)quinolin-6-yl) pyrimidine-2-carbonitrile | 412 |

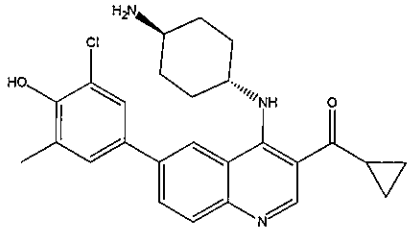
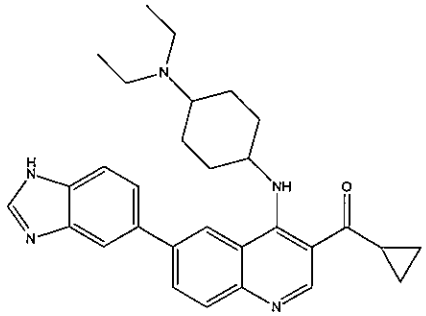
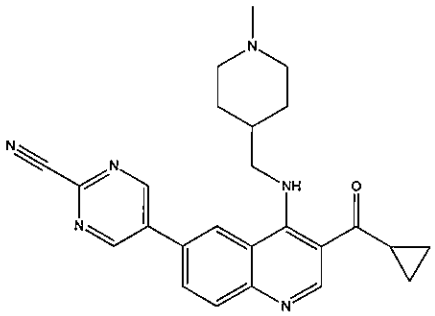
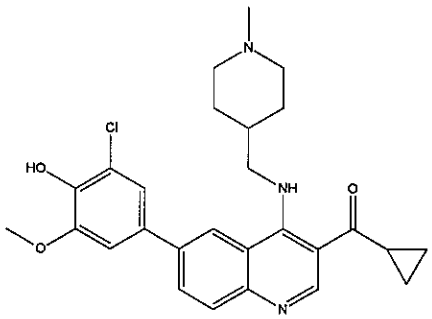
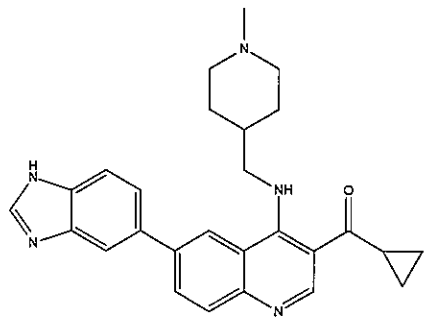
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| 165 |  | (4-((cis)-4-aminocyclohexylamino)-6-(4-hydroxy-3-methoxyphenyl)quinolin -3-yl)(cyclopropyl)methanone | 432 |
| 166 |  | (4-((cis)-4-aminocyclohexylamino)-6- (1H-benzo[d]imidazol-5-yl) quinolin-3-yl)(cyclopropyl) methanone | 426 |
| 169 |  | (4-((trans)-4-aminocyclohexylamino )-6- (3-chloro-4-methoxyphenyl) quinolin-3-yl)(cyclopropyl) methanone | 450 |
| 170 |  | 5-(3-(cyclopropanecarbonyl)-4-(1-methylpiperidin-4-ylamino) quinolin-6-yl)pyrimidine-2-carbonitrile | 412 |
| 172 |  | 5-(4-((trans)-4-aminocyclohexylamino)-3-(cyclopropanecarbonyl)quinolin -6-yl)-3-methylpicolinonitrile | 426 |
| 174 |  | cyclopropyl(6-(3,5-difluoro -4-hydroxyphenyl)-4-(1-methylpiperidin-4-ylamino) quinolin-3-yl)methanone | 437 |

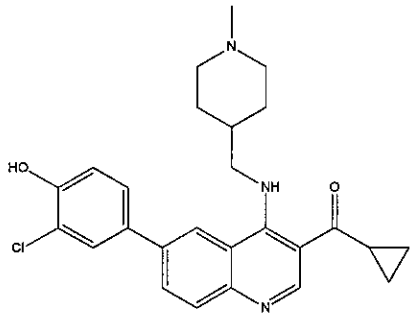
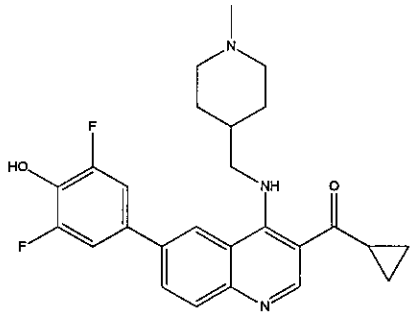
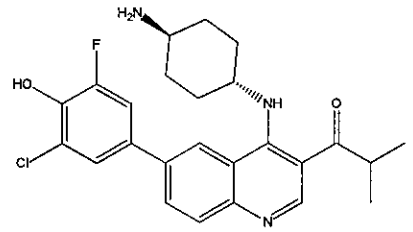
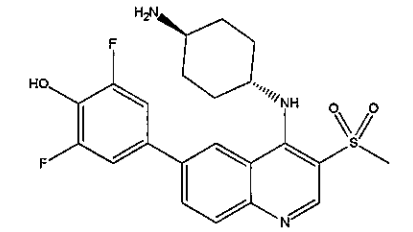
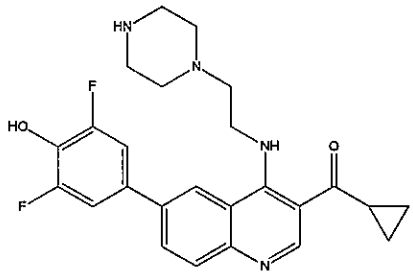
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|---|---|---|---|
| 175 |  | cyclopropyl(6-(3,5-dichloro -4-hydroxyphenyl)-4- (1-methylpiperidin-4-ylamino) quinolin-3-yl)methanone | 470 |
| 176 |  | (6-(3-chloro-4-hydroxyphenyl)-4- (1-methylpiperidin-4-ylamino) quinolin-3-yl)(cyclopropyl) methanone | 436 |
| 177 |  | cyclopropyl(6-(4-hydroxy -3-methoxyphenyl)-4- (1-methylpiperidin-4-ylamino) quinolin-3-yl)methanone | 432 |
| 178 |  | 5-(4-((trans)-4-aminocyclohexylami no)-3- (cyclopropanecarbonyl)quinolin -6-yl)-1H-benzo[d]imidazol -2(3H)-one | 442 |
| 179 |  | (4-((trans)-4-aminocyclohexylamino )-6- (3-chloro-5-fluoro-4- hydroxyphenyl)quinolin-3-yl) (cyclopropyl)methanone | 454 |
| 180 |  | (4-((cis)-4-aminocyclohexylamino)- 6- (3,5-difluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl) methanone | 437 |

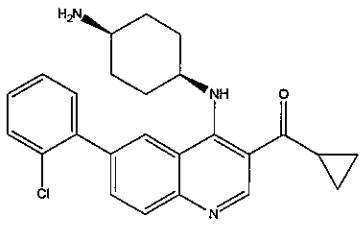
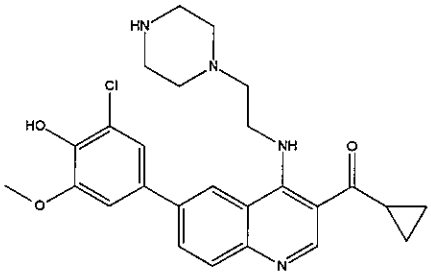
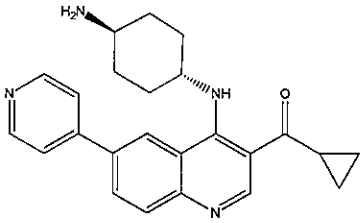
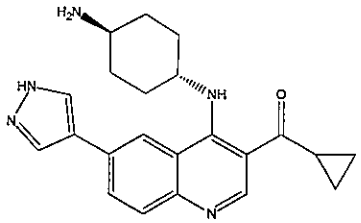
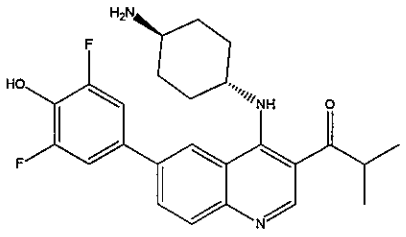
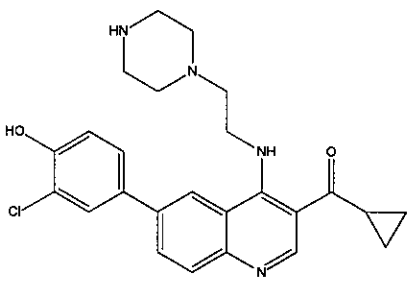
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| 181 |  | cyclopropyl(6-(3,5-difluoro-4-hydroxyphenyl)-4-(4-(1-(dimethylamino)ethyl) piperidin-1-yl)quinolin-3-yl) methanone | 480 |
| 182 |  | 4-(4-((trans)-4-aminocyclohexylamino)-3-(cyclopropanecarbonyl)quinolin-6-yl)-1H-pyrrole-2-carbonitrile | 399 |
| 183 |  | (4-((trans)-4-aminocyclohexylamino)-6- (1H-pyrrolo[2,3-b]pyridin-5-yl) quinolin-3-yl)(cyclopropyl) methanone | 426 |
| 185(a) |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(diethylamino)cyclohexylamino) quinolin-3-yl)(cyclopropyl) methanone hydrochloride | 522 |
| 185(b) |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(diethylamino) cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone dihydrochloride | 522 |

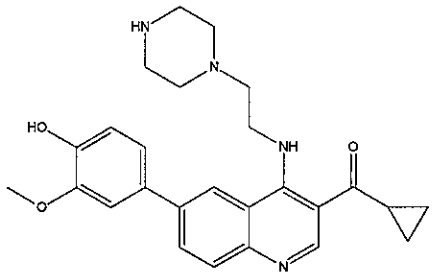
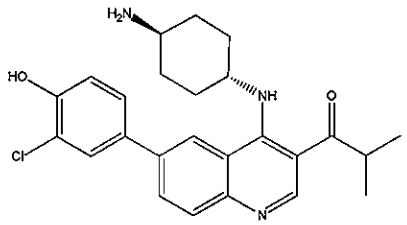
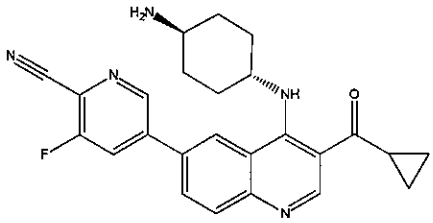
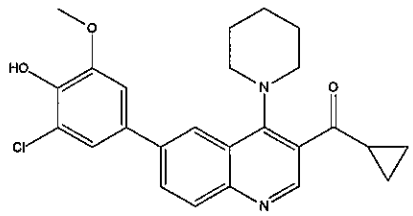
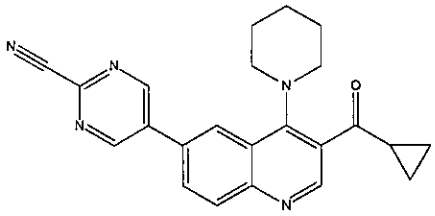
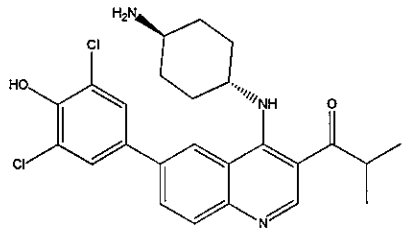
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|---|---|---|---|
| 186 |  | 5-(3-(cyclopropanecarbonyl)-4-(4-(diethylamino) cyclohexylamino)quinolin-6-yl) pyrimidine-2-carbonitrile | 469 |
| 187 |  | cyclopropyl(4-(4-(1-(dimethylamino)ethyl)piperidin -1-yl)-6-(4-hydroxy -3-methoxyphenyl)quinolin-3-yl) methanone | 474 |
| 189 |  | (4-((trans)-4-aminocyclohexylamino )-6- (2,5-difluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl) methanone | 437 |
| 190 |  | (4-((trans)-4-aminocyclohexylamino )-6- (2,3-difluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl) methanone | 437 |
| 191 |  | 4-(4-((trans)-4-aminocyclohexylami no)-3-(methylsulfonyl)quinolin-6-yl) -2-chloro-6-fluorophenol | 464 |

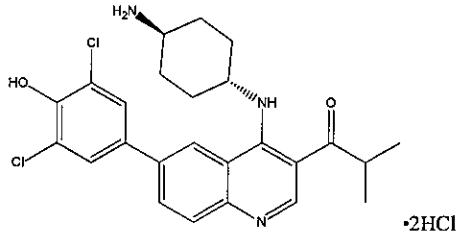
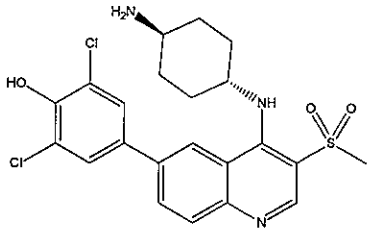
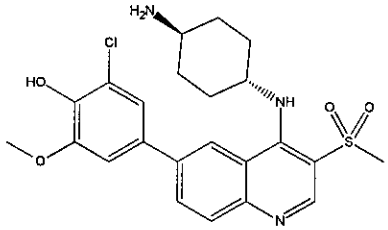
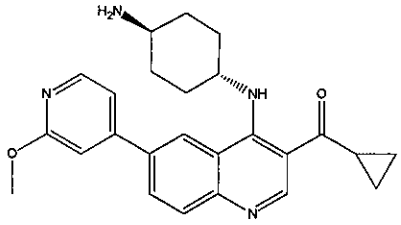
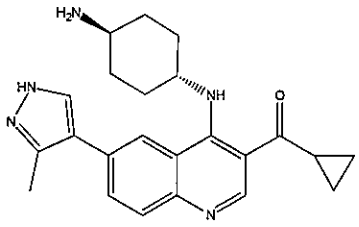
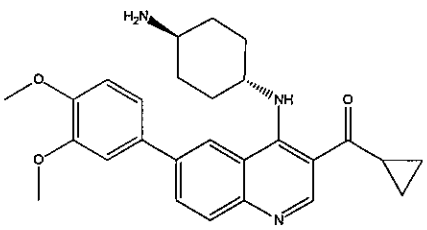
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|---|---|---|---|
| 192 |  | (6-(3-chloro-4-hydroxyphenyl) -4-(4-(diethylamino) cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone | 492 |
| 193 |  | cyclopropyl(4-(4-(diethylamino) cyclohexylamino)-6-(4-hydroxy-3-methoxyphenyl)quinolin-3-yl) methanone | 488 |
| 194 |  | cyclopropyl(4-(4-(diethylamino) cyclohexylamino)-6-(3,5-difluoro-4-hydroxyphenyl)quinolin-3-yl) methanone | 494 |
| 195 |  | 4-(4-((trans)-4-aminocyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl) -2-chlorophenol | 446 |
| 196 |  | cyclopropyl(6-(4-hydroxy-3-methoxyphenyl)-4-((1-methylpiperidin-4-yl) methylamino)quinolin-3-yl) methanone | 446 |

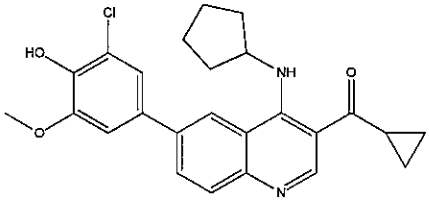
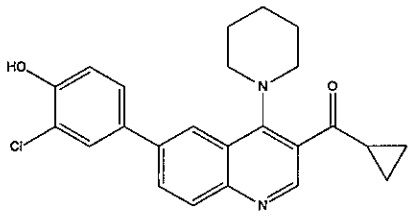
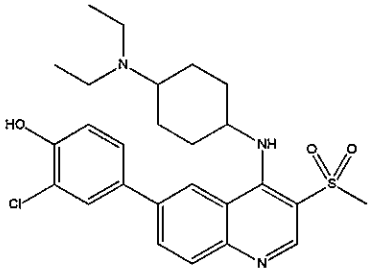
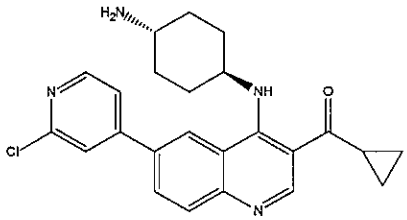
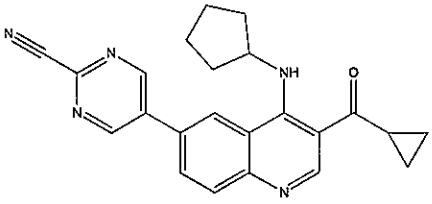
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| 197 |  | (4-((trans)-4-aminocyclohexylamino)-6- (3-chloro-4-hydroxy-5-methylphenyl)quinolin-3-yl) (cyclopropyl)methanone | 450 |
| 199 |  | (6-(1H-benzo[d]imidazol-5-yl)-4-(4-(diethylamino) cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone | 482 |
| 200 |  | 5-(3-(cyclopropanecarbonyl)-4-((1-methylpiperidin-4-yl) methylamino)quinolin-6-yl) pyrimidine-2-carbonitrile | 427 |
| 201 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1-methylpiperidin-4-yl) methylamino)quinolin-3-yl) (cyclopropyl)methanone | 480 |
| 202 |  | (6-(1H-benzo[d]imidazol-5-yl)-4-((1-methylpiperidin-4-yl) methylamino)quinolin-3-yl) (cyclopropyl)methanone | 440 |

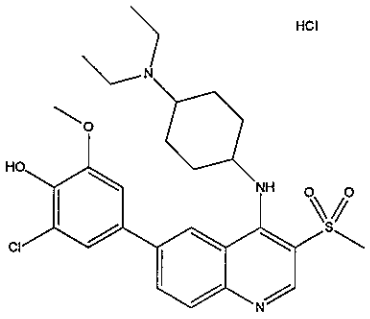
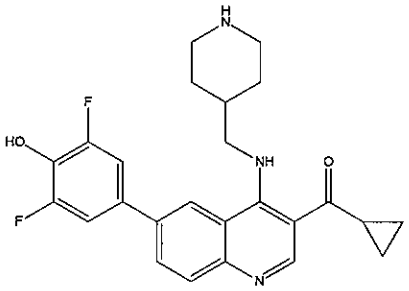
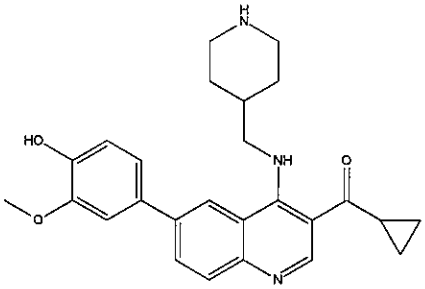
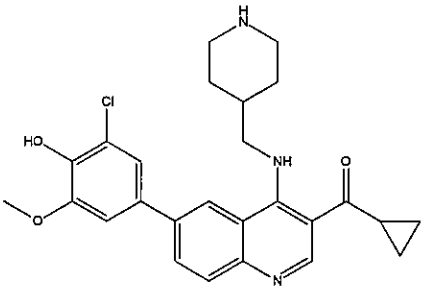
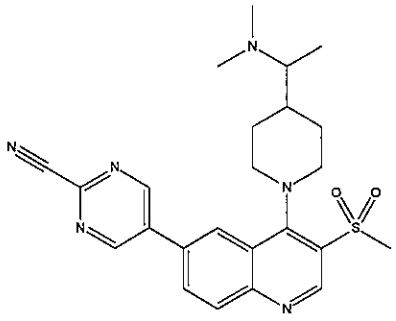
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| 203 |  | (6-(3-chloro-4-hydroxyphenyl)-4-((1-methylpiperidin-4-yl) methylamino)quinolin-3-yl) (cyclopropyl)methanone | 450 |
| 204 |  | cyclopropyl(6-(3,5-difluoro-4-hydroxyphenyl)-4-((1-methylpiperidin-4-yl) methylamino)quinolin-3-yl) methanone | 452 |
| 205 |  | 1-(4-((trans)-4-aminocyclohexylamino) -6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl) -2-methylpropan-1-one | 456 |
| 207 |  | 4-(4-((trans)-4-aminocyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl) -2,6-difluorophenol | 447 |
| 208 |  | Cyclopropy l(6-(3,5-difluoro-4-hydroxyphenyl) -4-(2-(piperazin-1-yl)ethylamino) quinolin-3-yl)methanone | 452 |

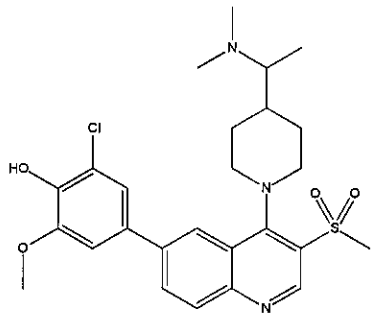
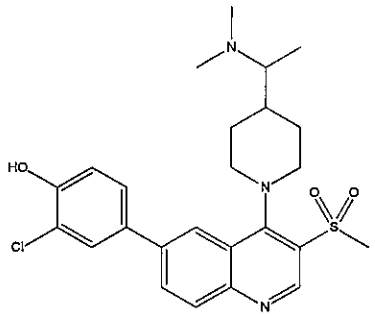
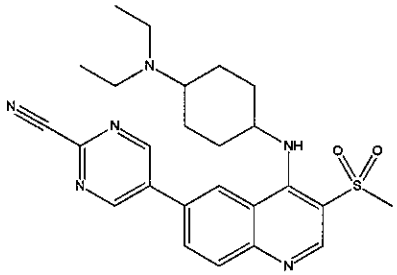
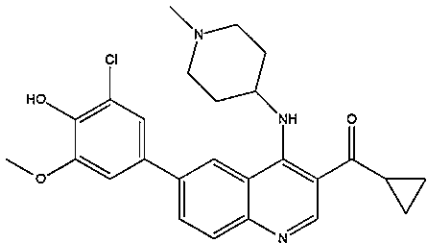
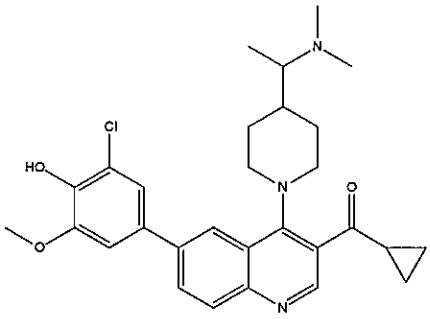
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| 209 |  | (4-((cis)-4-aminocyclohexylamino)-6- (2-chlorophenyl)quinolin-3-yl) (cyclopropyl)methanone | 420 |
| 210 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(2-(piperazin-1-yl)ethylamino) quinolin-3-yl)(cyclopropyl) methanone | 481 |
| 212 |  | (4-((trans)-4-aminocyclohexylamino )-6- (pyridin-4-yl)quinolin-3-yl) (cyclopropyl)methanone | 386 |
| 213 |  | (4-((trans)-4-aminocyclohexylamino )-6- (1H-pyrazol-4-yl)quinolin-3-yl) (cyclopropyl)methanone | 375 |
| 214 |  | 1-(4-((trans)-4-aminocyclohexylamino)-6-(3,5-difluoro-4-hydroxyphenyl) quinolin-3-yl)-2-methylpropan-1-one | 439 |
| 215 |  | (6-(3-chloro-4-hydroxyphenyl)-4-(2-(piperazin-1-yl)ethylamino) quinolin-3-yl)(cyclopropyl) methanone | 451 |

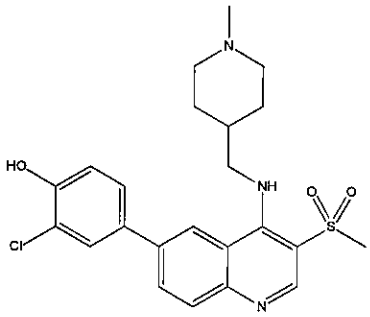
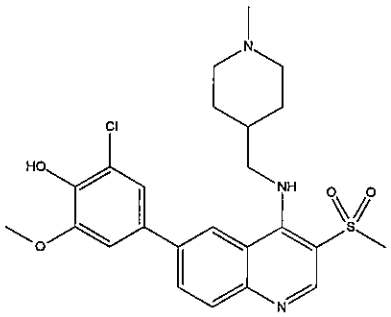
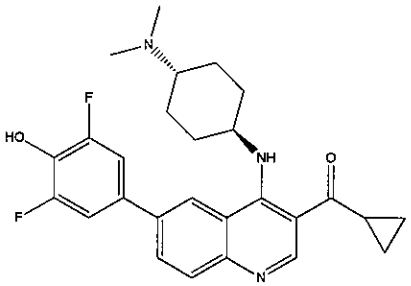
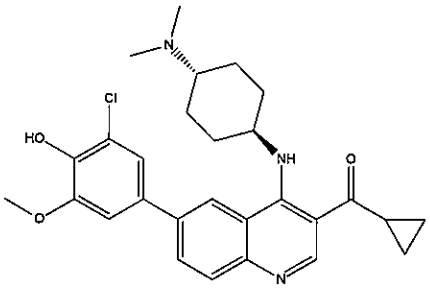
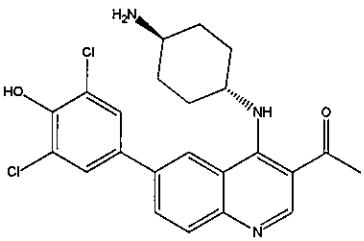
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|---|---|---|---|
| 216 |  | cyclopropyl(6-(4-hydroxy-3 -methoxyphenyl)-4- (2-(piperazin-1-yl)ethylamino) quinolin-3-yl)methanone | 447 |
| 219 |  | 1-(4-((trans)-4-aminocyclohexylami no)-6- (3-chloro-4-hydroxyphenyl) quinolin-3-yl)-2- methylpropan-1-one | 438 |
| 220 |  | 5-(4-((trans)-4-aminocyclohexylami no)-3- (cyclopropanecarbonyl)quinolin -6-yl)-3-fluoropicolinonitrile | 429 |
| 222 |  | (6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(piperidin-1-yl) quinolin-3-yl)(cyclopropyl) methanone | 437 |
| 224 |  | 5-(3-(cyclopropanecarbonyl)-4- (piperidin-1-yl)quinolin-6-yl) pyrimidine-2-carbonitrile | 383 |
| 225( a) |  | 1-(4-((trans)-4-aminocyclohexylami no)-6- (3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)-2- methylpropan-1-one | 472 |

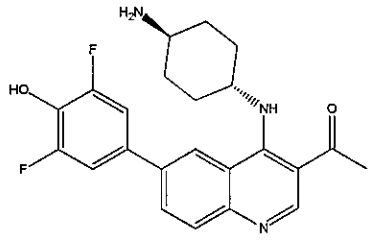
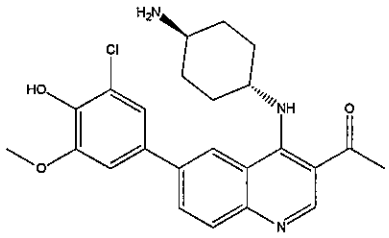
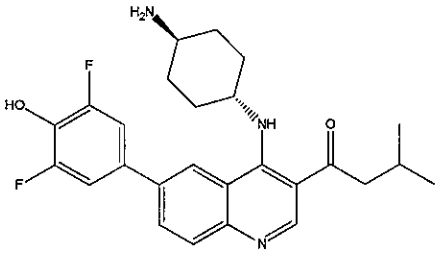
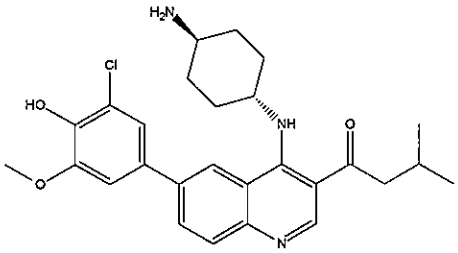
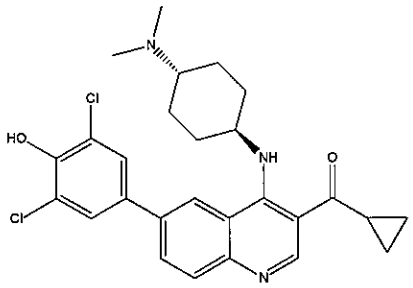
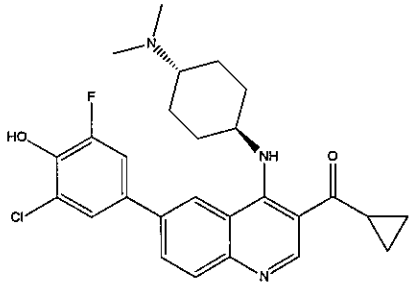
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| 225(b) |  ·2HCl | 1-(4-((trans)-4-aminocyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)-2-methylpropan -1-one dihydrochloride | 472 |
| 226 |  | 4-(4-((trans)-4-aminocyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl) -2,6-dichlorophenol | 480 |
| 227 |  | 4-(4-((trans)-4-aminocyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl) -2-chloro-6-methoxyphenol | 476 |
| 228 |  | (4-((trans)-4-aminocyclohexylamino )-6-(2-methoxypyridin-4-yl)quinolin -3-yl)(cyclopropyl)methanone | 417 |
| 229 |  | (4-((trans)-4-aminocyclohexylamino )-6- (3-methyl-1H-pyrazol-4-yl) quinolin-3-yl)(cyclopropyl) methanone | 389 |
| 230 |  | (4-((trans)-4-aminocyclohexylamino )-6- (3,4-dimethoxyphenyl)quinolin -3-yl)(cyclopropyl)methanone | 446 |

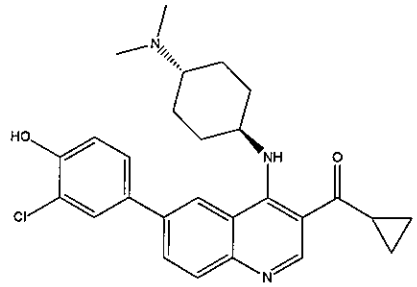
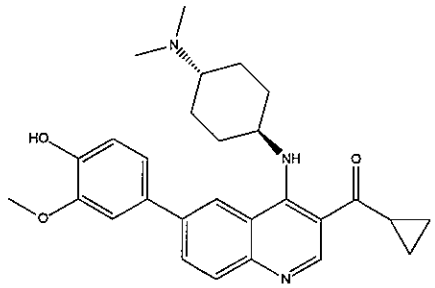
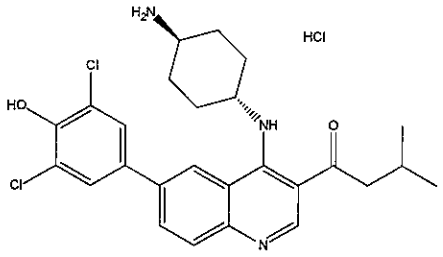
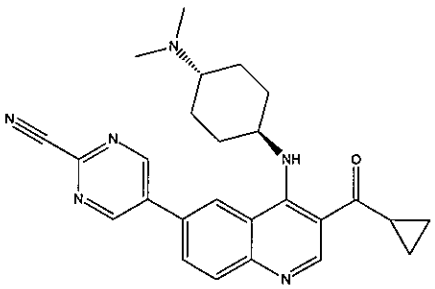
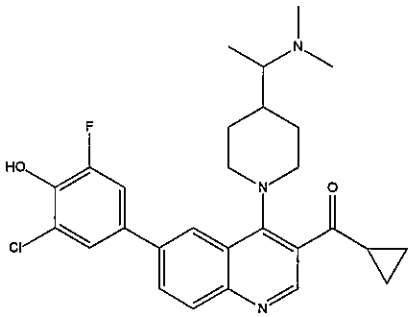
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|---|---|---|---|
| 231 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(cyclopentylamino)quinolin-3-yl)(cyclopropyl)methanone | 437 |
| 233 |  | (6-(3-chloro-4-hydroxyphenyl)-4-(piperidin-1-yl)quinolin-3-yl)(cyclopropyl)methanone | 407 |
| 236 |  | 2-chloro-4-(4-(4-(diethylamino)cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl)phenol | 502 |
| 237 |  | (4-((trans)-4-aminocyclohexylamino)-6- (2-chloropyridin-4-yl)quinolin-3-yl)(cyclopropyl)methanone | 421 |
| 239 |  | 5-(4-(cyclopentylamino)-3-(cyclopropanecarbonyl)quinolin-6-yl)pyrimidine-2-carbonitrile | 383 |

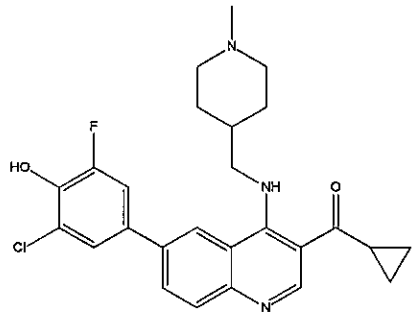
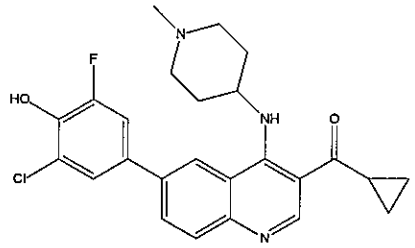
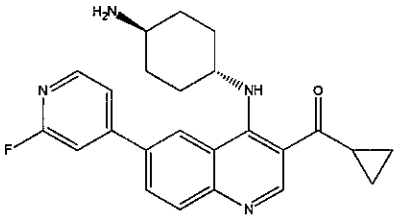
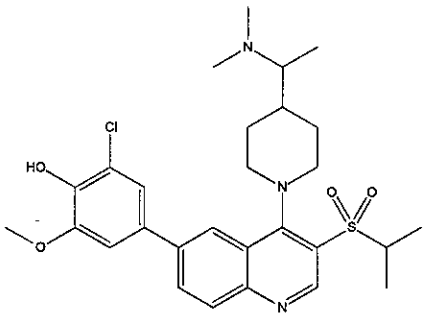
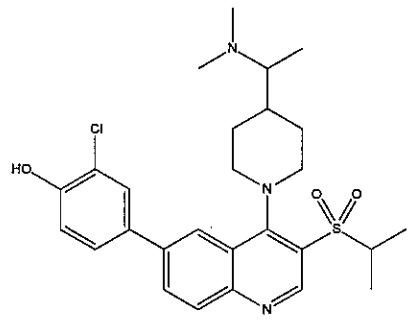
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| 240 |  | 2-chloro-4-(4-(4-(diethylamino) cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl)-6-methoxyphenol dihydrochloride | 532 |
| 241 |  | cyclopropyl(6-(3,5-difluoro-4-hydroxyphenyl)-4-(piperidin -4-ylmethylamino)quinolin-3-yl) methanone | 437 |
| 242 |  | cyclopropyl(6-(4-hydroxy -3-methoxyphenyl)-4-(piperidin -4-ylmethylamino)quinolin-3-yl) methanone | 432 |
| 243 |  | (6-(3-chloro-4-hydroxy -5-methoxyphenyl)-4-(piperidin -4-ylmethylamino)quinolin-3-yl) (cyclopropyl)methanone | 466 |
| 244 |  | 5-(4-(4-(1-(dimethylamino)ethyl) piperidin-1-yl)-3-(methylsulfonyl) quinolin-6-yl)pyrimidine -2-carbonitrile | 465 |

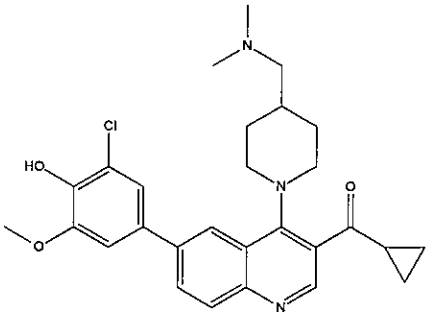
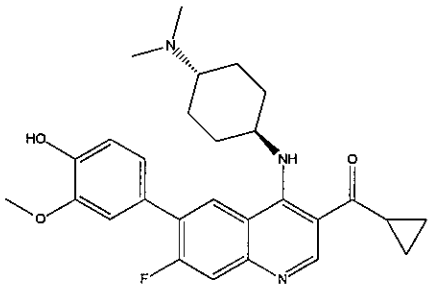
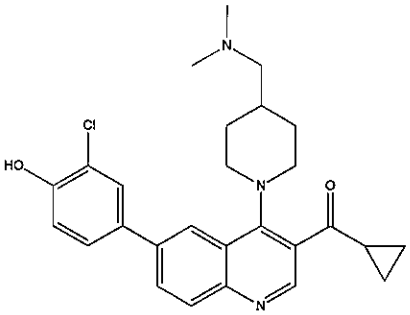
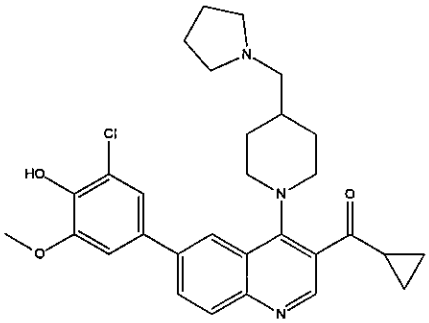
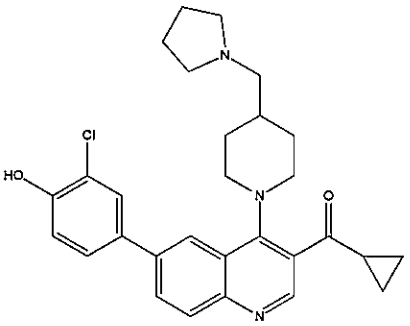
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| 245 |  | 2-chloro-4-(4-(4-(1-(dimethylamino)ethyl)piperidin-1-yl)-3-(methylsulfonyl) quinolin-6-yl)-6-methoxyphenol | 518 |
| 246 |  | 2-chloro-4-(4-(4-(1-(dimethylamino)ethyl)piperidin-1-yl)-3-(methylsulfonyl) quinolin-6-yl)phenol | 488 |
| 247 |  | 5-(4-(4-(diethylamino) cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl) pyrimidine-2-carbonitrile | 479 |
| 249 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1-methylpiperidin-4-ylamino) quinolin-3-yl)(cyclopropyl) methanone | 466 |
| 250 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(1-(dimethylamino)ethyl)piperidin-1-yl)quinolin-3-yl)(cyclopropyl) methanone | 508 |

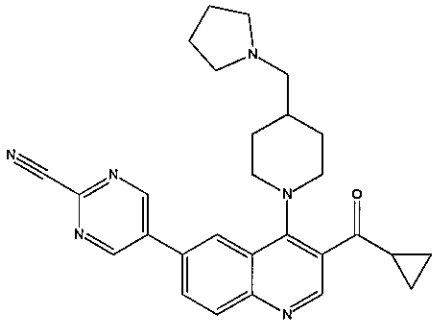
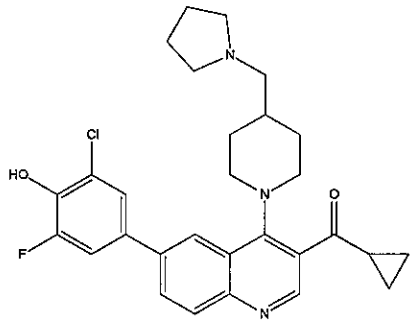
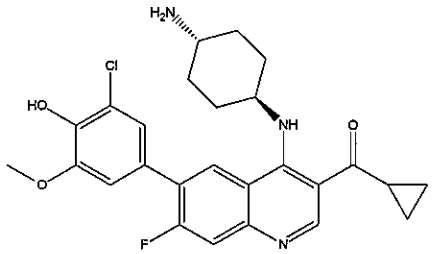
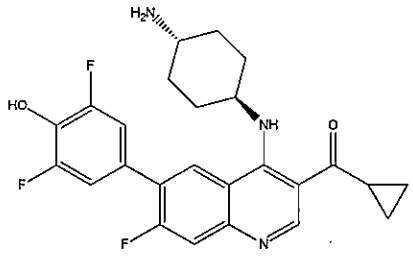
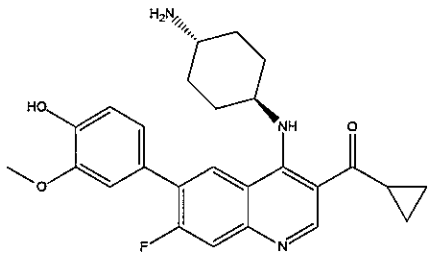
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| 251 |  | 2-chloro-4-(4-((1-methylpiperidin-4-yl)methylamino)-3-(methylsulfonyl)quinolin-6-yl) phenol | 460 |
| 252 |  | 2-chloro-6-methoxy-4-(4-((1-methylpiperidin-4-yl) methylamino)-3-(methylsulfonyl) quinolin-6-yl)phenol | 490 |
| 254 |  | cyclopropyl(6-(3,5-difluoro-4-hydroxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl)methanone | 466 |
| 255 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl)(cyclopropyl) methanone | 494 |
| 256 |  | 1-(4-((trans)-4-aminocyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)ethanone | 444 |

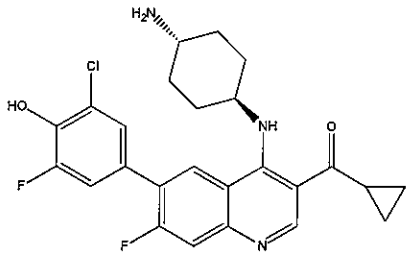
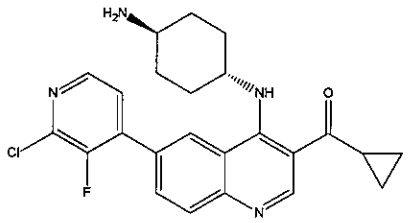
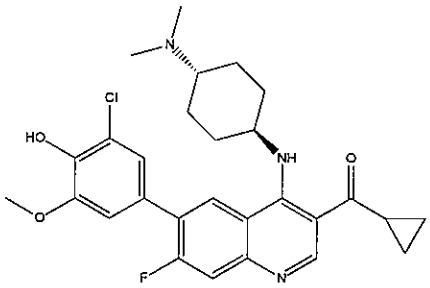
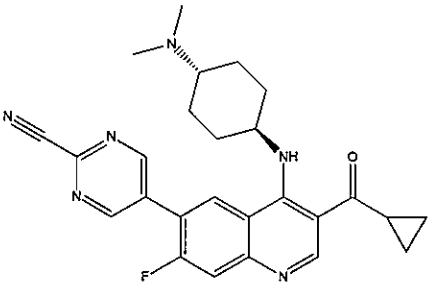
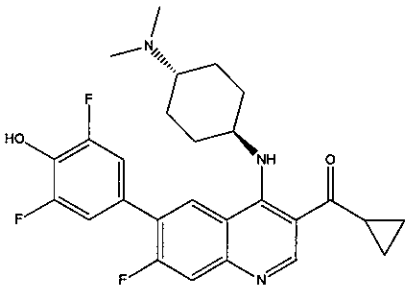
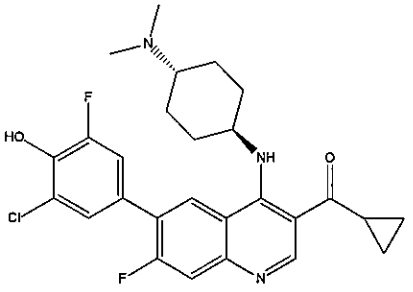
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| 258 |  | 1-(4-((trans)-4-aminocyclohexylamino)-6-(3,5-difluoro-4-hydroxyphenyl) quinolin-3-yl)ethanone | 411 |
| 259 |  | 1-(4-((trans)-4-aminocyclohexylamino)-6- (3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl) ethanone | 440 |
| 261 |  | 1-(4-((trans)-4-aminocyclohexylamino)-6-(3,5-difluoro-4-hydroxyphenyl) quinolin-3-yl)-3- methylbutan-1-one | 454 |
| 262 |  | 1-(4-((trans)-4-aminocyclohexylamino)-6- (3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl) -3-methylbutan-1-one | 482 |
| 263 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl)methanone | 498 |
| 264 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl)(cyclopropyl) methanone | 482 |

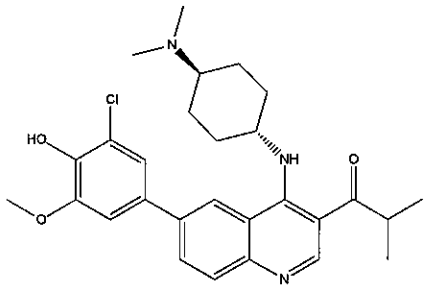
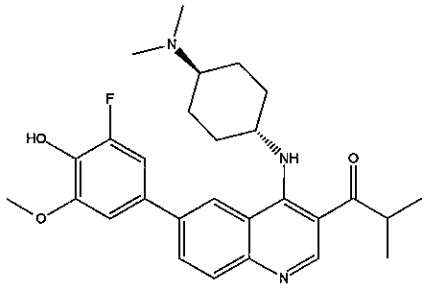
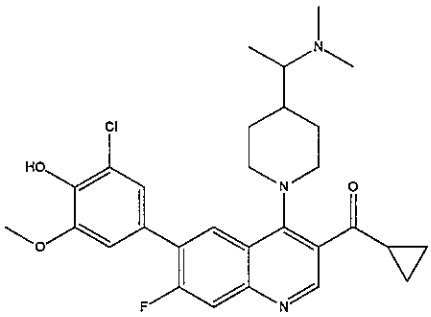
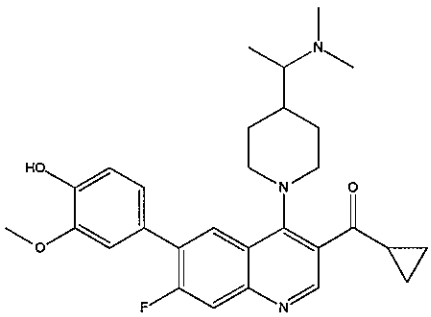
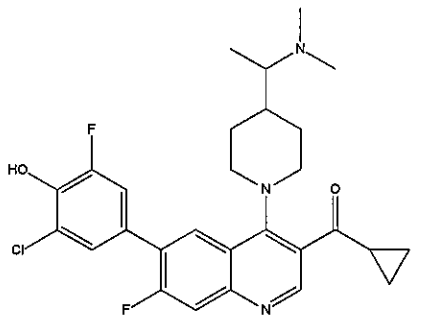
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| 265 |  | (6-(3-chloro-4-hydroxyphenyl)-4-((trans)-4-(dimethylamino) cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone | 464 |
| 266 |  | cyclopropyl(4-((trans)-4-(dimethylamino)cyclohexylamino) -6-(4-hydroxy-3-methoxyphenyl) quinolin-3-yl)methanone | 460 |
| 267 |  | 1-(4-((trans)-4-aminocyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)-3-methylbutan -1-one dihydrochloride | 486 |
| 268 |  | 5-(3-(cyclopropanecarbonyl)-4-((trans)-4-(dimethylamino) cyclohexylamino)quinolin -6-yl)pyrimidine-2-carbonitrile | 441 |
| 269 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(1-(dimethylamino)ethyl)piperidin-1-yl)quinolin-3-yl)(cyclopropyl) methanone | 496 |

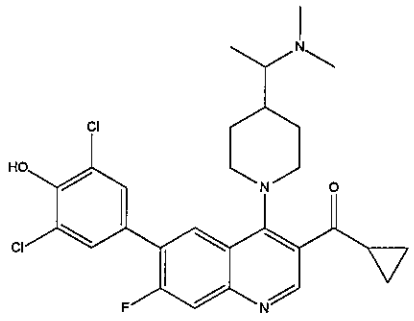
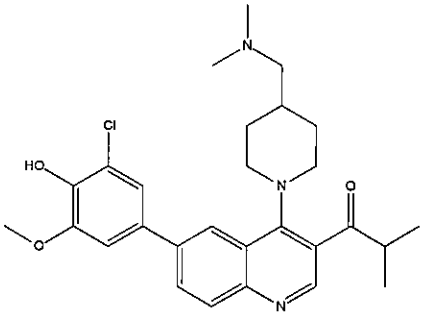
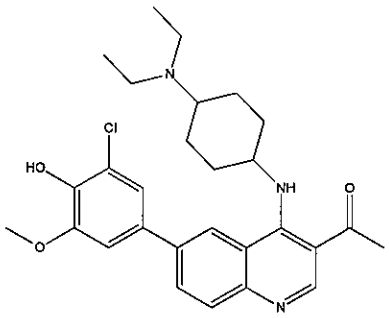
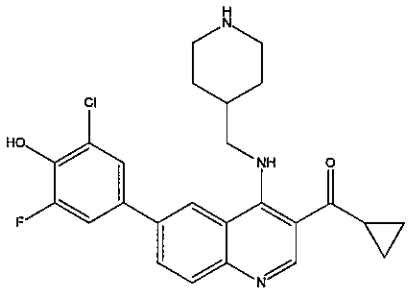
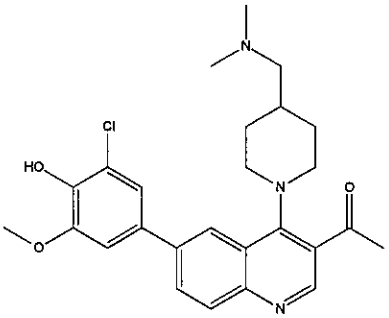
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| 270 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1-methylpiperidin-4-yl) methylamino)quinolin-3-yl) (cyclopropyl)methanone | 468 |
| 271 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-methylpiperidin-4-ylamino) quinolin-3-yl)(cyclopropyl) methanone | 454 |
| 273 |  | (4-((trans)-4-aminocyclohexylamino )-6- (2-fluoropyridin-4-yl)quinolin -3-yl)(cyclopropyl)methanone | 404 |
| 274 |  | 2-chloro-4-(4-(4-(1-(dimethylamino)ethyl)piperidin -1-yl)-3-(isopropylsulfonyl) quinolin-6-yl)-6-methoxyphenol | 546 |
| 275 |  | 2-chloro-4-(4-(4-(1-(dimethylamino)ethyl)piperidin -1-yl)-3-(isopropylsulfonyl) quinolin-6-yl)phenol | 516 |

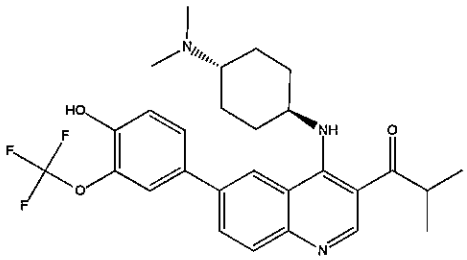
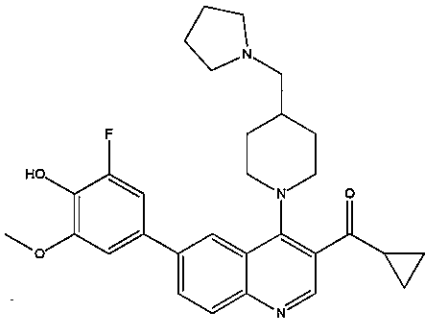
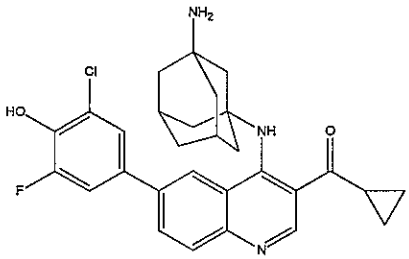
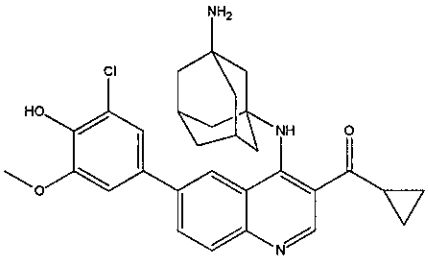
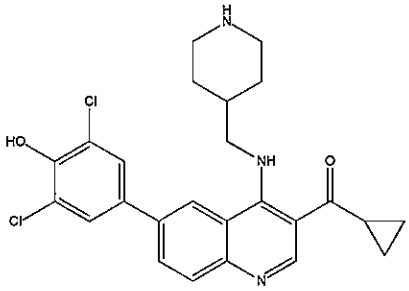
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| 276 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-3-yl)(cyclopropyl) methanone | 494 |
| 278 |  | cyclopropyl(4-((trans)-4-(dimethylamino)cyclohexylamino) -7-fluoro-6-(4-hydroxy-3-methoxyphenyl)quinolin-3-yl) methanone | 478 |
| 279 |  | (6-(3-chloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) (cyclopropyl)methanone | 464 |
| 280 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(pyrrolidin -1-ylmethyl)piperidin-1-yl) quinolin-3-yl)(cyclopropyl) methanone | 520 |
| 281 |  | (6-(3-chloro-4-hydroxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin -1-yl)quinolin-3-yl)(cyclopropyl) methanone | 490 |

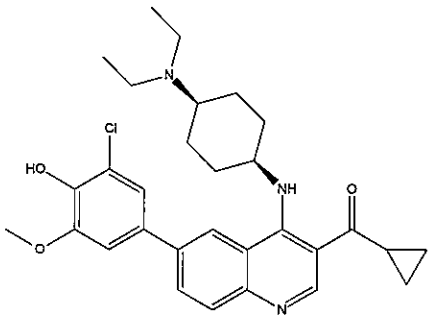
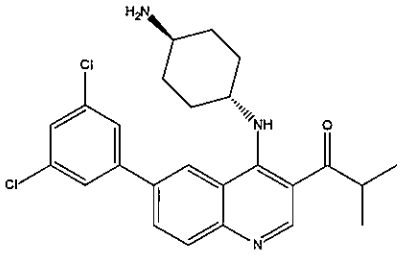
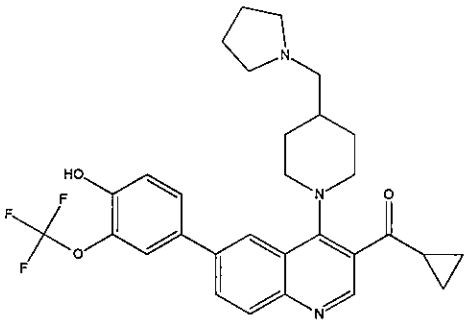
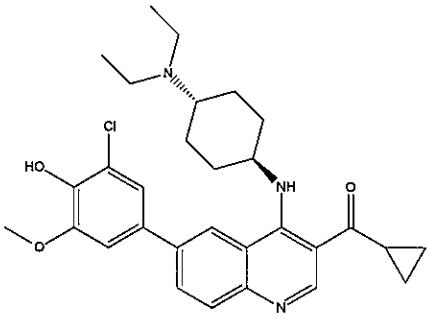
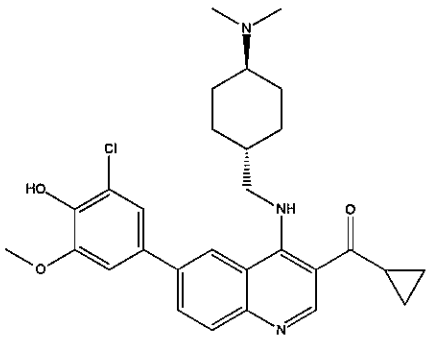
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| 282 |  | 5-(3-(cyclopropanecarbonyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin-1-yl)quinolin-6-yl)pyrimidine-2-carbonitrile | 467 |
| 283 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin-1-yl)quinolin-3-yl)(cyclopropyl)methanone | 508 |
| 284 |  | (4-((trans)-4-aminocyclohexylamino)-6-(3- chloro-4-hydroxy-5-methoxyphenyl)-7-fluoroquinolin-3-yl)(cyclopropyl)methanone | 484 |
| 285 |  | (4-((trans)-4-aminocyclohexylamino)-6-(3,5- difluoro-4-hydroxy phenyl)-7- fluoroquinolin-3-yl) (cyclopropyl) methanone | 455 |
| 286 |  | (4-((trans)-4-aminocyclohexylamino)-7-fluoro-6-(4-hydroxy-3-methoxyphenyl) quinolin-3-yl)(cyclopropyl) methanone | 450 |

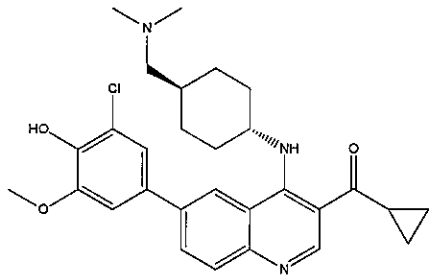
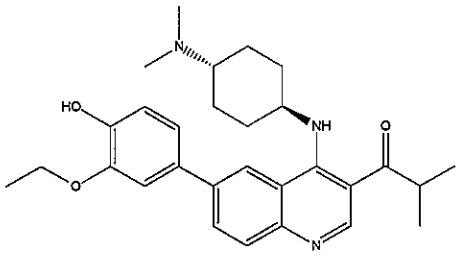
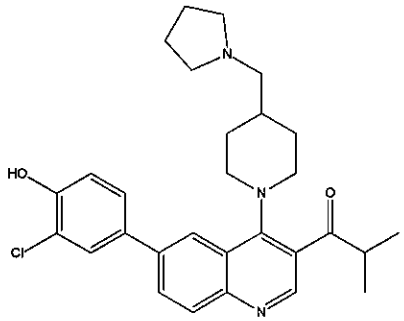
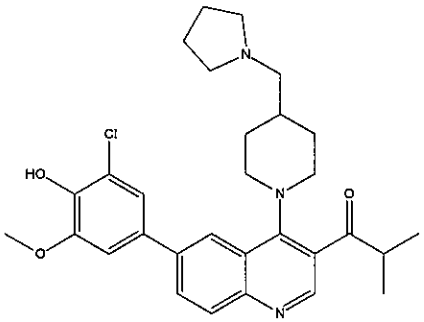
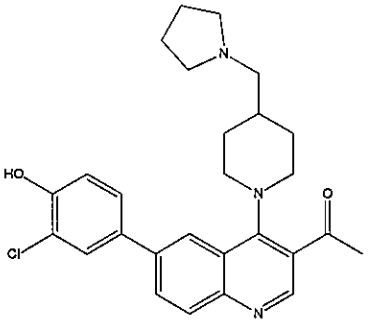
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|---|---|---|---|
| 287 |  | (4-((trans)-4-aminocyclohexylamino )-6-(3- chloro-5-fluoro-4-hydroxy phenyl) -7-fluoroquinolin-3-yl) (cyclopropyl)methanone | 472 |
| 288 |  | (4-((trans)-4-aminocyclohexylamino )-6- (2-chloro-3-fluoropyridin-4-yl) quinolin-3-yl)(cyclopropyl) methanone | 439 |
| 289 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) -7-fluoroquinolin-3-yl) (cyclopropyl)methanone | 512 |
| 290 |  | 5-(3-(cyclopropanecarbonyl)-4-((trans)-4-(dimethylamino) cyclo hexylamino)-7- fluoroquinolin-6-yl) pyrimidine-2- carbonitrile | 459 |
| 294 |  | cyclopropyl(6-(3,5-difluoro-4-hydroxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) -7-fluoroquinolin-3-yl)methanone | 484 |
| 295 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) -7-fluoroquinolin-3-yl) (cyclopropyl)methanone | 500 |

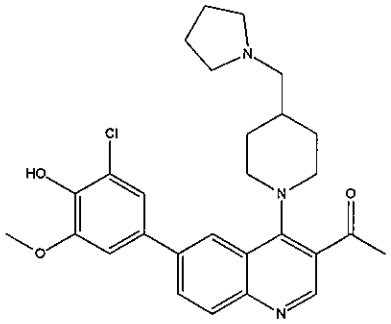
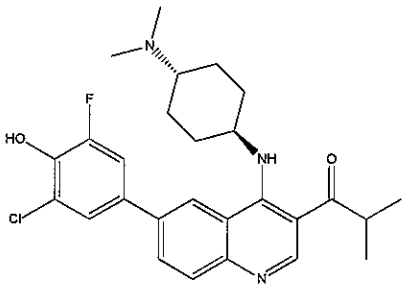
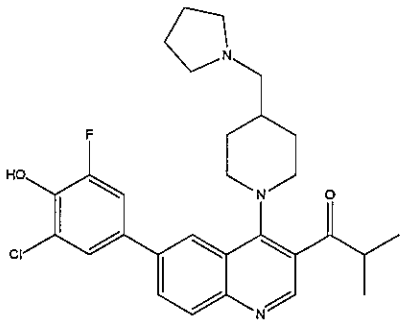
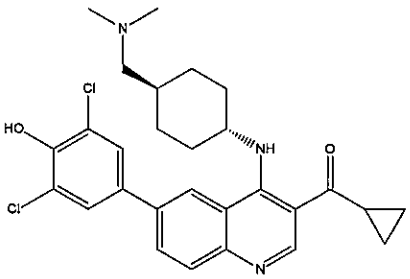
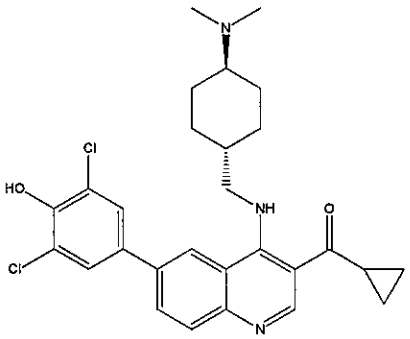
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| 296 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl)-2-methylpropan -1-one | 496 |
| 297 |  | 1-(4-((trans)-4-(dimethylamino) cyclohexylamino)-6-(3-fluoro-4-hydroxy-5-methoxyphenyl) quinolin-3-yl)-2-methylpropan -1-one | 480 |
| 298 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(1-(dimethylamino)ethyl)piperidin -1-yl)-7-fluoroquinolin-3-yl) (cyclopropyl)methanone | 526 |
| 299 |  | cyclopropyl(4-(4-(1-(dimethylamino)ethyl)piperidin -1-yl)-7-fluoro-6-(4-hydroxy-3-methoxyphenyl)quinolin-3-yl) methanone | 492 |
| 300 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(1-(dimethylamino)ethyl)piperidin -1-yl)-7-fluoroquinolin-3-yl) (cyclopropyl)methanone | 514 |

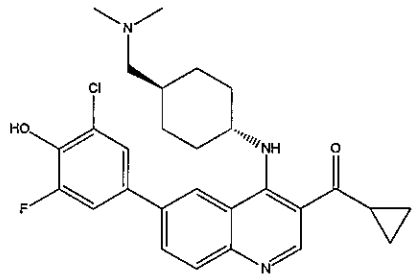
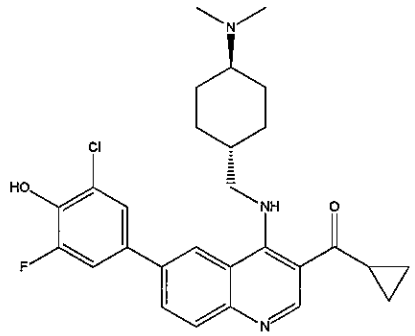
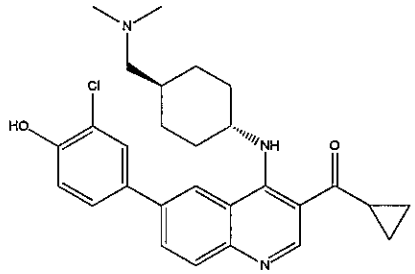
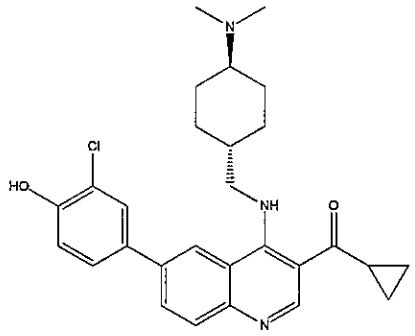
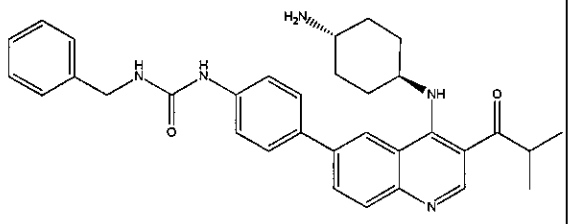
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| 301 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(1-(dimethylamino)ethyl) piperidin-1-yl)-7-fluoroquinolin -3-yl)methanone | 530 |
| 302 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl)-2-methylpropan-1-one | 496 |
| 303 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxy phenyl)-4-(4-(diethylamino) cyclohexylamino)quinolin-3-yl) ethanone | 496 |
| 304 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(piperidin -4-ylmethylamino)quinolin-3-yl) (cyclopropyl)methanone | 454 |
| 305 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxy phenyl)-4-(4-((dimethylamino) methyl) piperidin-1-yl)quinolin-3-yl) ethanone | 468 |

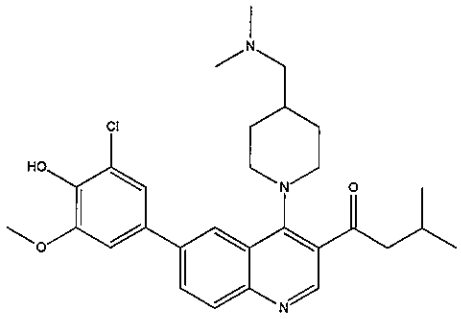
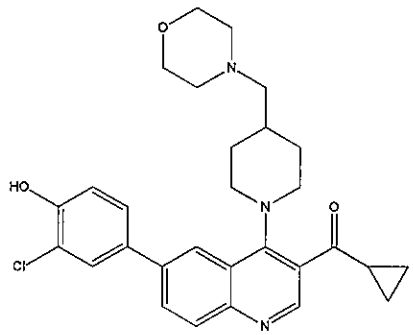
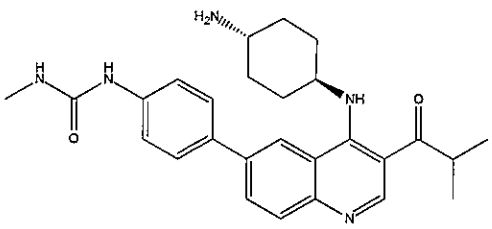
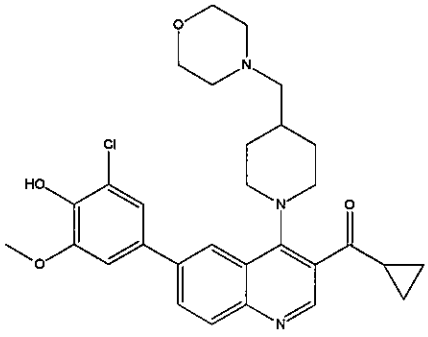
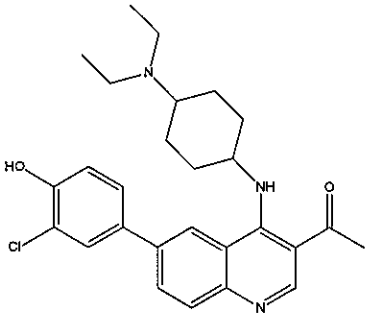
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| 306 |  | 1-(4-((trans)-4-(dimethylamino) cyclohexylamino)-6-(4-hydroxy-3-(trifluoromethoxy)phenyl) quinolin-3-yl)-2-methylpropan-1-one | 516 |
| 307 |  | cyclopropyl(6-(3-fluoro-4-hydroxy -5-methoxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin -1-yl)quinolin-3-yl)methanone | 504 |
| 308 |  | {6-(3-Chloro-5-fluoro-4 -hydroxyphenyl)-4-[(3-amino) adamantylamino]quinolin-3-yl} (cyclopropyl)methanone | 506 |
| 309 |  | {6-(3-Chloro-4-hydroxy-5 -methoxyphenyl)-4-[(3-amino) adamantylamino]quinolin-3-yl} (cyclopropyl)methanone | 518 |
| 310 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(piperidin -4-ylmethylamino)quinolin-3-yl) methanone | 470 |

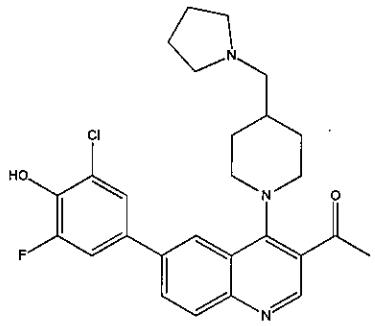
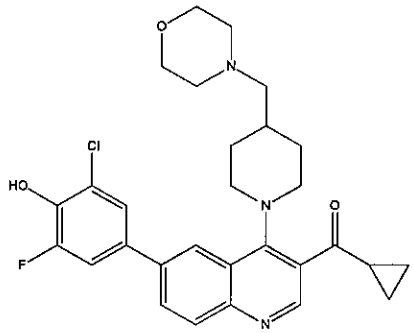
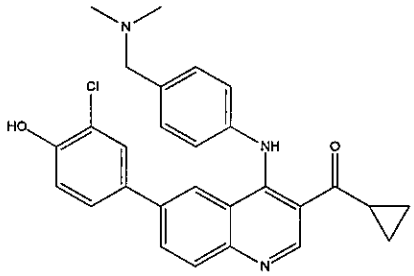
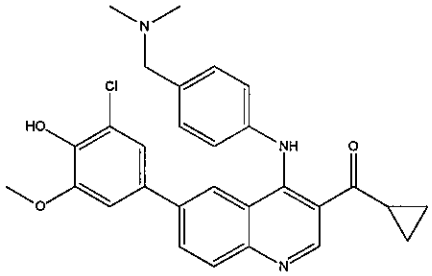
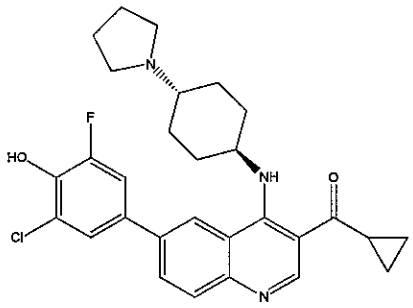
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| 311 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((cis)-4-(diethylamino)cyclohexylamino) quinolin-3-yl)(cyclopropyl) methanone | 522 |
| 312 |  | 1-(4-((trans)-4-aminocyclohexyl amino)-6- (3,5-dichloro phenyl)quinolin-3-yl) -2-methylpropan-1-one | 456 |
| 313 |  | cyclopropyl(6-(4-hydroxy-3-(trifluoromethoxy)phenyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin -1-yl)quinolin-3-yl)methanone | 540 |
| 314 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((trans)-4-(diethylamino)cyclohexylamino) quinolin-3-yl)(cyclopropyl) methanone | 522 |
| 315 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(((trans)-4-(dimethylamino)cyclohexyl) methylamino)quinolin-3-yl) (cyclopropyl)methanone | 508 |

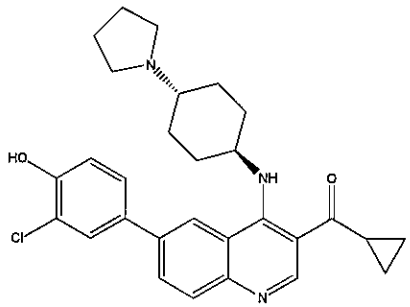
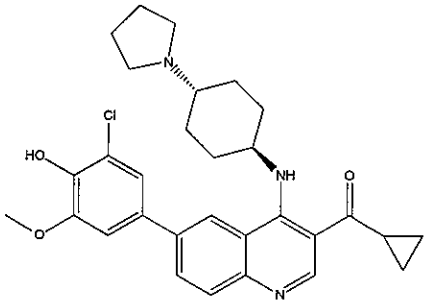
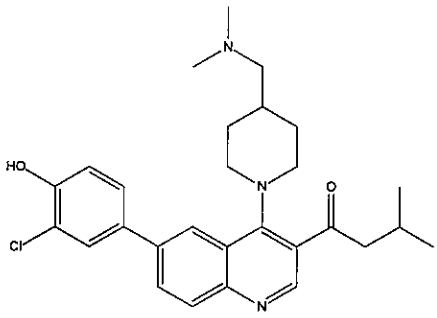
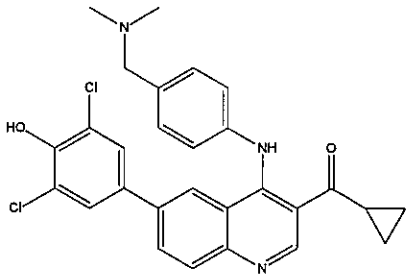
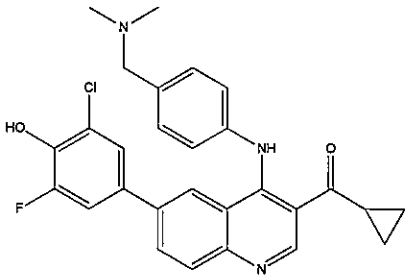
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| 316 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((trans)-4-((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone | 508 |
| 317 |  | 1-(4-((trans)-4-(dimethylamino) cyclohexylamino)-6-(3-ethoxy-4-hydroxyphenyl)quinolin-3-yl)-2-methylpropan-1-one | 476 |
| 318 |  | 1-(6-(3-chloro-4-hydroxyphenyl) -4-(4-(pyrrolidin-1-ylmethyl) piperidin-1-yl)quinolin-3-yl) -2-methylpropan-1-one | 492 |
| 319 |  | 1-(6-(3-chloro-4-hydroxy-5 -methoxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin -1-yl)quinolin-3-yl)-2-methylpropan-1-one | 522 |
| 320 |  | 1-(6-(3-chloro-4-hydroxyphenyl)-4 -(4-(pyrrolidin-1-ylmethyl) piperidin-1-yl)quinolin-3-yl) ethanone | 464 |

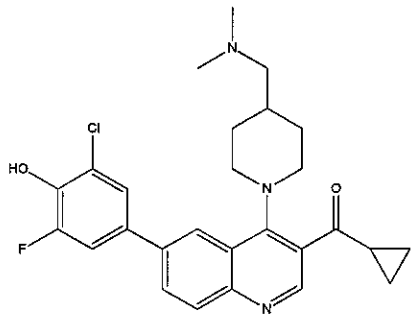
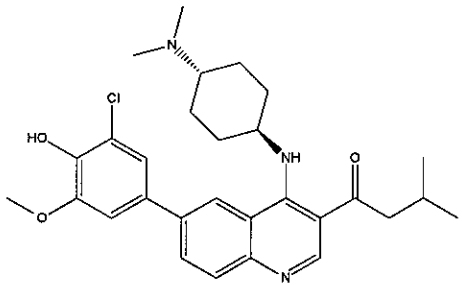
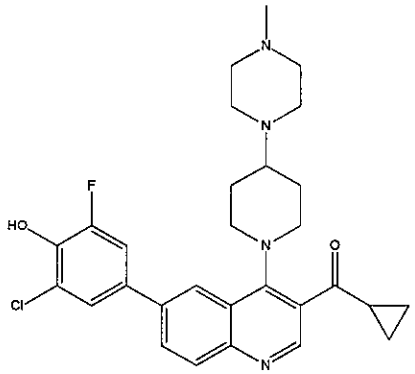
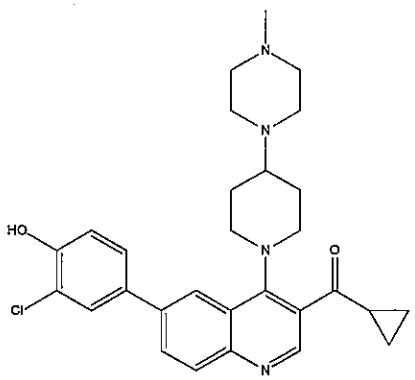
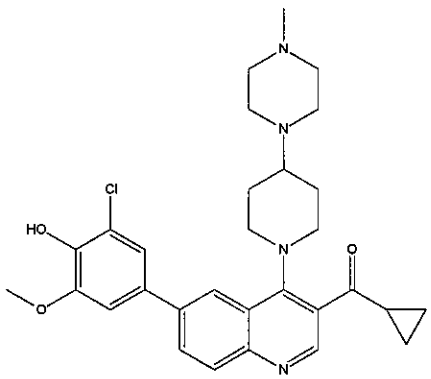
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| 321 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin-1-yl)quinolin-3-yl)ethanone | 494 |
| 322 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)-2-methylpropan-1-one | 484 |
| 323 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin-1-yl)quinolin-3-yl)-2-methylpropan-1-one | 510 |
| 324 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)methanone | 512 |
| 325 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(((trans)-4-(dimethylamino)cyclohexyl)methylamino)quinolin-3-yl)methanone | 512 |

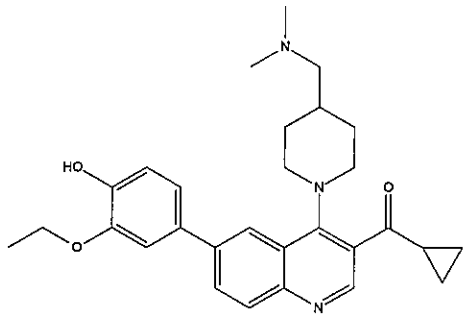
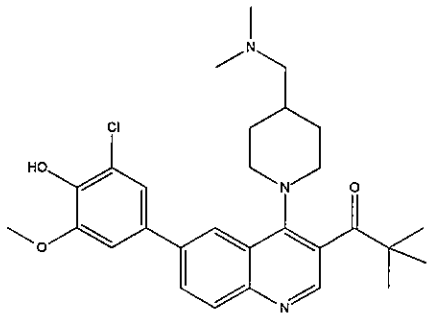
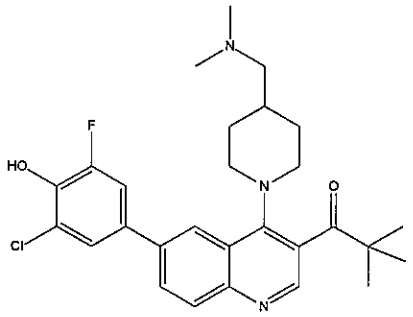
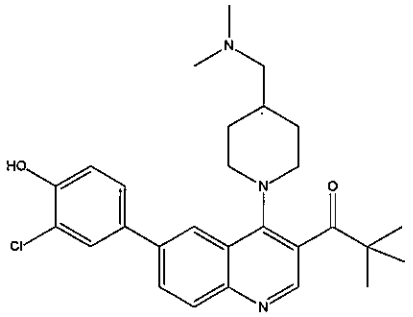
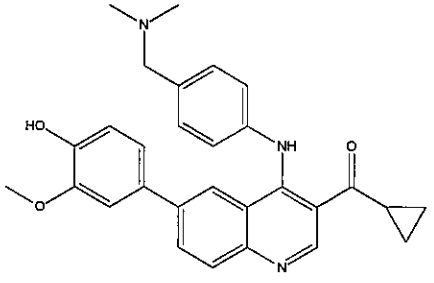
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| 326 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone | 496 |
| 327 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(((trans)-4-(dimethylamino)cyclohexyl) methylamino)quinolin-3-yl) (cyclopropyl)methanone | 496 |
| 328 |  | (6-(3-chloro-4-hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone | 478 |
| 329 |  | (6-(3-chloro-4-hydroxyphenyl)-4-(((trans)-4-(dimethylamino) cyclohexyl)methylamino) quinolin-3-yl)(cyclopropyl) methanone | 478 |
| 330 |  | 1-(4-(4-((trans)-4-aminocyclohexyl amino)-3- isobutyryl quinolin-6-yl)phenyl)-3- benzylurea | 536 |

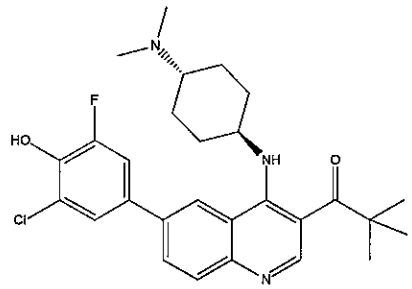
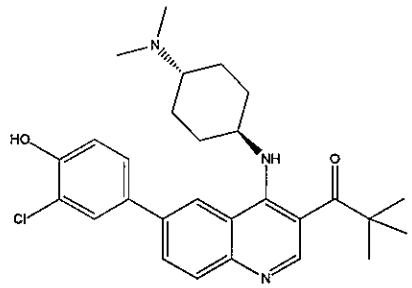
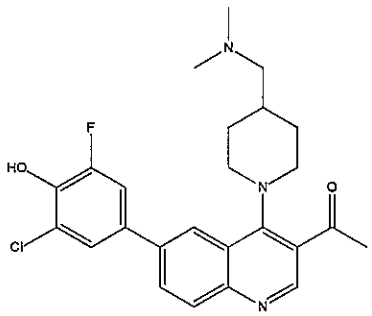
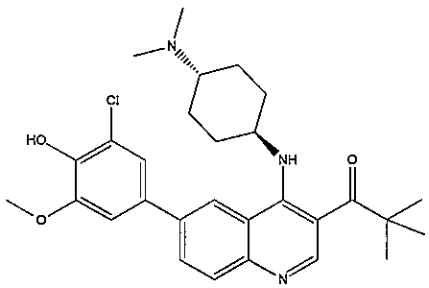
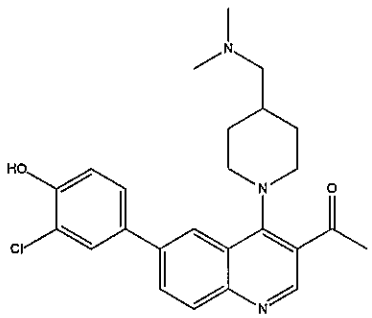
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| 331 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) -3-methylbutan-1-one | 510 |
| 332 |  | (6-(3-chloro-4-hydroxyphenyl)-4-(4-(morpholinomethyl)piperidin -1-yl)quinolin-3-yl) (cyclopropyl)methanone | 506 |
| 333 |  | 1-(4-(4-((trans)-4-aminocyclohexyl amino)-3- isobutyrylquinolin-6-yl) phenyl) -3-methylurea | 460 |
| 334 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(morpholinomethyl)piperidin-1-yl) quinolin-3-yl)(cyclopropyl) methanone | 536 |
| 335 |  | 1-(6-(3-chloro-4-hydroxyphenyl) -4-(4-(diethylamino) cyclohexyl amino)quinolin-3-yl) ethanone | 466 |

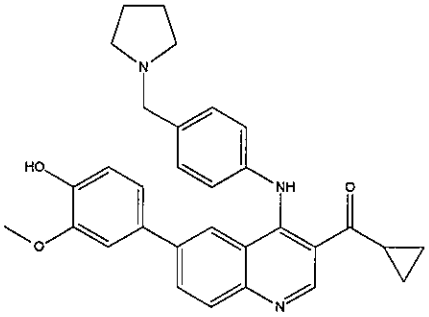
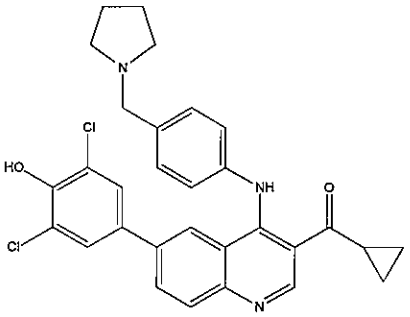
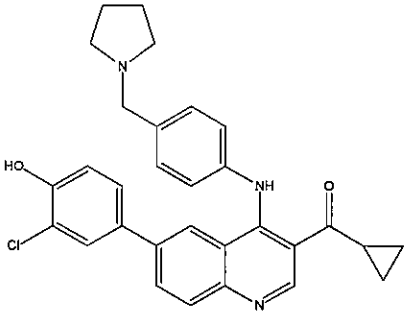
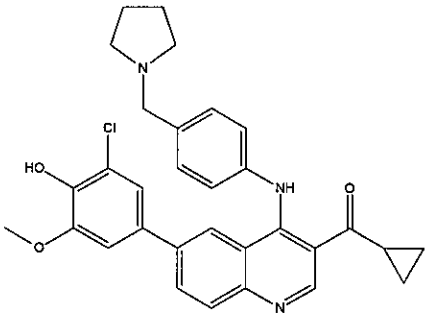
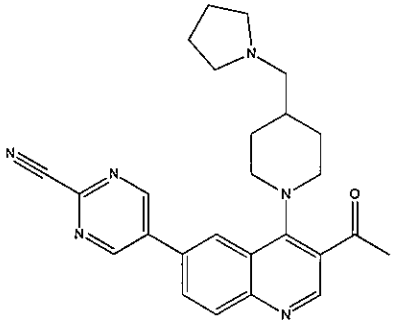
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| 336 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin-1-yl) quinolin-3-yl)ethanone | 482 |
| 337 |  | (6-(3-chloro-5-fluoro-4- hydroxyl phenyl)-4-(4- (morpholinomethyl) piperidin-1-yl) quinolin-3-yl) (cyclopropyl) methanone | 524 |
| 338 |  | (6-(3-chloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl) phenylamino)quinolin-3-yl) (cyclopropyl)methanone | 472 |
| 339 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl) phenylamino)quinolin-3-yl) (cyclopropyl)methanone | 502 |
| 341 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((trans)-4-(pyrrolidin-1-yl)cyclohexylamino) quinolin-3-yl)(cyclopropyl) methanone | 508 |

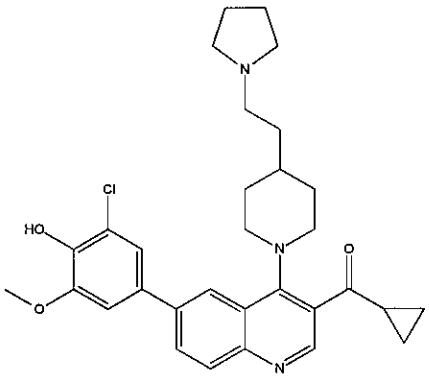
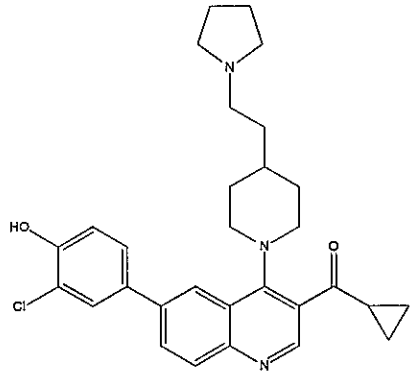
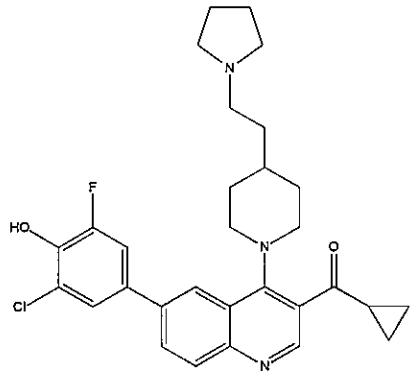
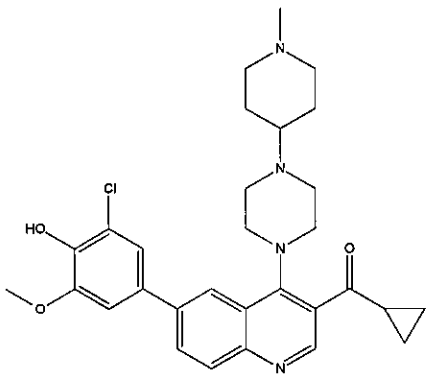
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| 342 |  | (6-(3-chloro-4-hydroxyphenyl)-4-((trans)-4-(pyrrolidin-1-yl) cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone | 490 |
| 343 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((trans)-4-(pyrrolidin-1-yl)cyclohexylamino) quinolin-3-yl)(cyclopropyl) methanone | 520 |
| 344 |  | 1-(6-(3-chloro-4-hydroxyphenyl) -4-(4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) -3-methylbutan-1-one | 480 |
| 345 |  | cyclopropyl(6-(3,5-dichloro -4-hydroxyphenyl)-4-(4-((dimethylamino)methyl) phenylamino)quinolin-3-yl) methanone | 506 |
| 346 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl) phenylamino)quinolin-3-yl) (cyclopropyl)methanone | 490 |

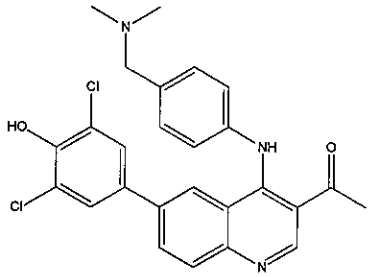
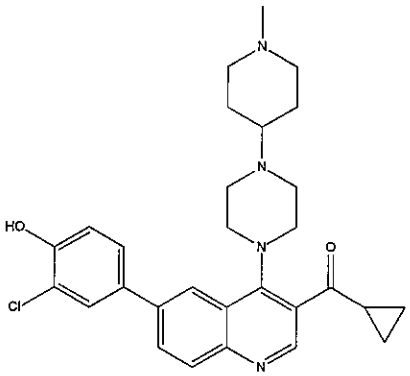
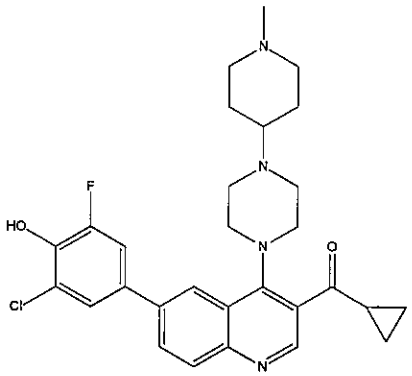
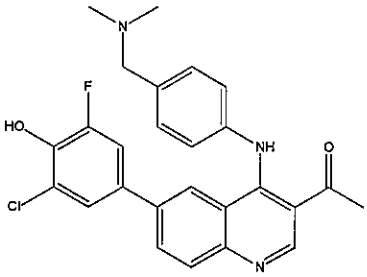
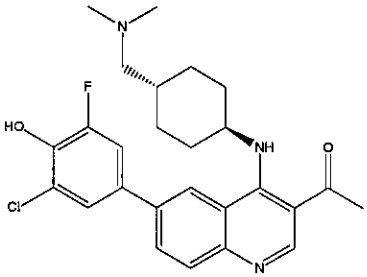
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| 347 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) (cyclopropyl)methanone | 482 |
| 348 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl)-3-methylbutan -1-one | 510 |
| 349 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(4-methylpiperazin-1-yl) piperidin-1-yl)quinolin-3-yl) (cyclopropyl)methanone | 523 |
| 350 |  | (6-(3-chloro-4-hydroxyphenyl)-4-(4-(4-methylpiperazin-1-yl) piperidin-1-yl)quinolin-3-yl) (cyclopropyl)methanone | 505 |
| 351 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(4-methylpiperazin-1-yl) piperidin-1-yl)quinolin-3-yl) (cyclopropyl)methanone | 535 |

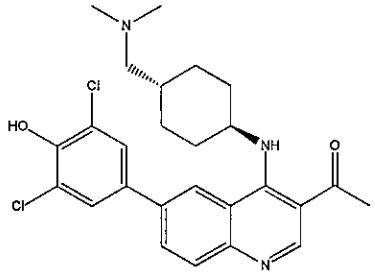
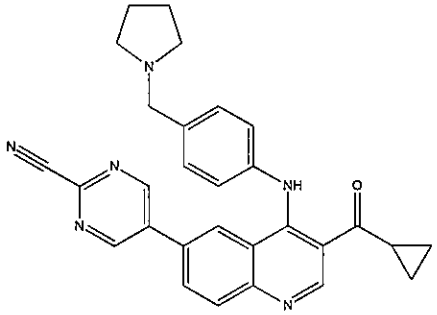
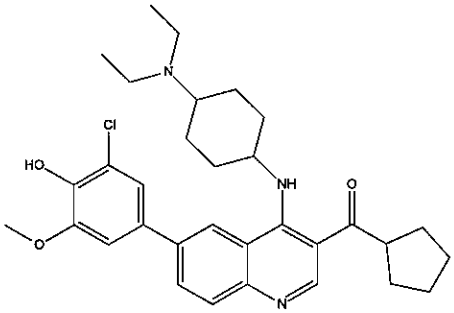
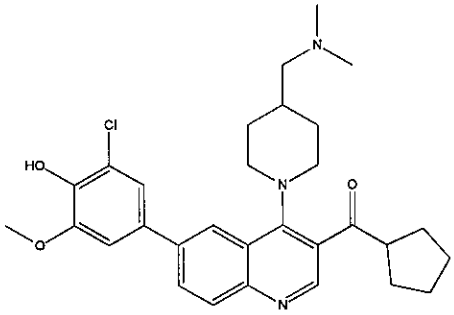
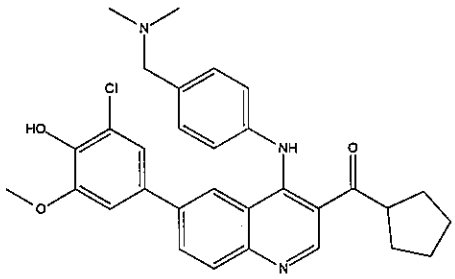
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| 353 |  | cyclopropyl(4-(4-((dimethylamino) methyl)piperidin-1-yl)-6- (3-ethoxy-4-hydroxyphenyl) quinolin-3-yl)methanone | 474 |
| 354 |  | 1-(6-(3-chloro-4-hydroxy-5- methoxyphenyl)-4-(4- ((dimethylamino)methyl)piperidin -1-yl)quinolin-3-yl)-2,2- dimethylpropan-1-one | 510 |
| 355 |  | 1-(6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-(4- ((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) -2,2-dimethylpropan-1-one | 498 |
| 358 |  | 1-(6-(3-chloro-4-hydroxyphenyl) -4-(4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) -2,2-dimethylpropan-1-one | 480 |
| 359 |  | cyclopropyl(4-(4-((dimethylamino) methyl)phenylamino)-6- (4-hydroxy-3-methoxyphenyl) quinolin-3-yl)methanone | 468 |

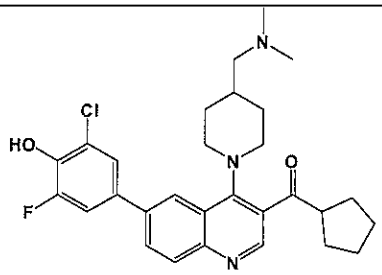
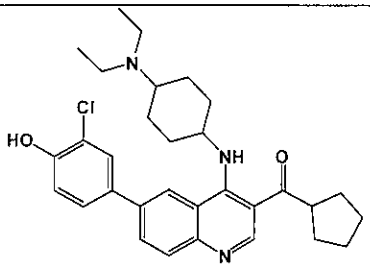
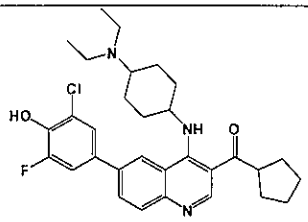
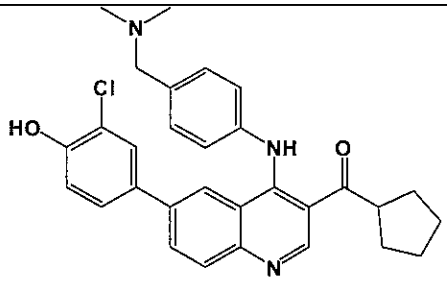
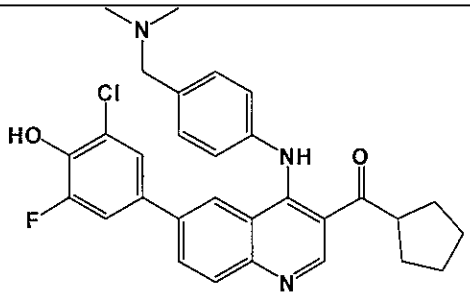
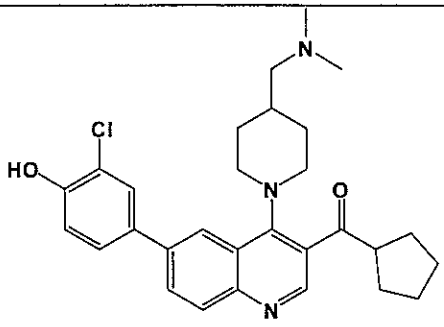
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| 360 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl) -2,2-dimethylpropan-1-one | 498 |
| 361 |  | 1-(6-(3-chloro-4-hydroxyphenyl) -4-((trans)-4-(dimethylamino) cyclohexylamino)quinolin-3-yl) -2,2-dimethylpropan-1-one | 480 |
| 362 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) ethanone | 456 |
| 363 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl) -2,2-dimethylpropan-1-one | 510 |
| 364 |  | 1-(6-(3-chloro-4-hydroxyphenyl) -4-(4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) ethanone | 438 |

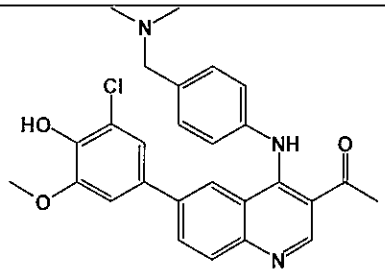
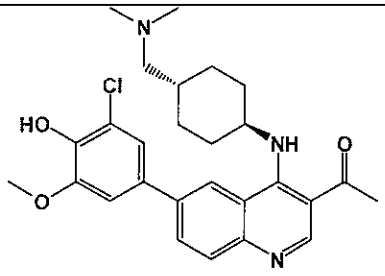
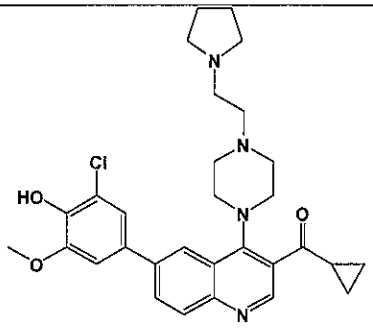
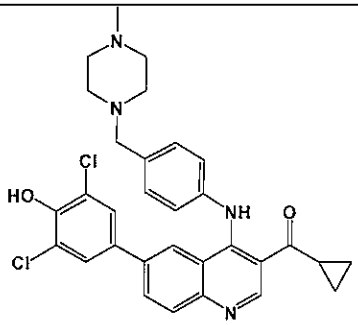
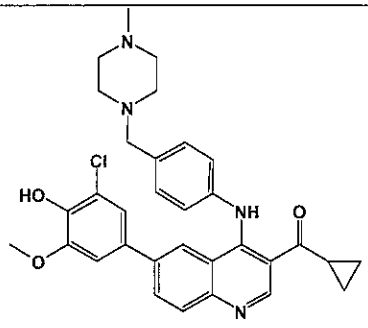
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|---|---|---|---|
| 365 |  | cyclopropyl(6-(4-hydroxy-3 -methoxyphenyl)-4-(4- (pyrrolidin-1-ylmethyl) phenylamino)quinolin-3-yl) methanone | 494 |
| 366 |  | cyclopropyl(6-(3,5-dichloro-4- hydroxyphenyl)-4-(4-(pyrrolidin -1-ylmethyl)phenylamino) quinolin-3-yl)methanone | 532 |
| 367 |  | (6-(3-chloro-4-hydroxyphenyl) -4-(4-(pyrrolidin-1-ylmethyl) phenylamino)quinolin-3-yl) (cyclopropyl)methanone | 498 |
| 368 |  | (6-(3-chloro-4-hydroxy -5-methoxyphenyl)-4-(4- (pyrrolidin-1-ylmethyl) phenylamino)quinolin-3-yl) (cyclopropyl)methanone | 528 |
| 369 |  | 5-(3-acetyl-4-(4-(pyrrolidin -1-ylmethyl)piperidin-1-yl) quinolin-6-yl)pyrimidine -2-carbonitrile | 441 |

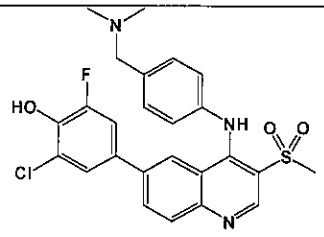
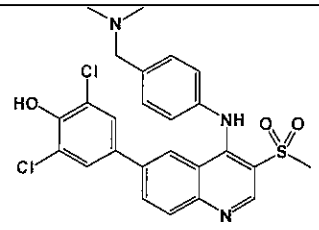
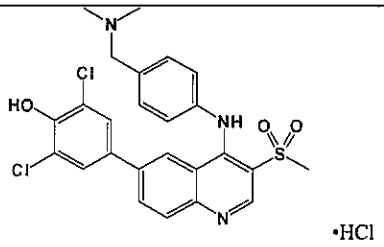
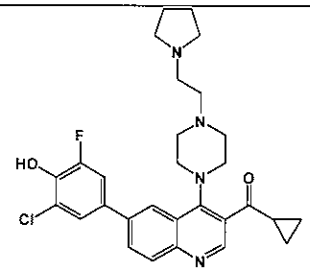
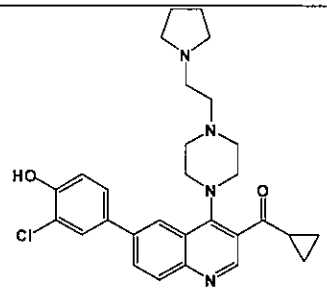
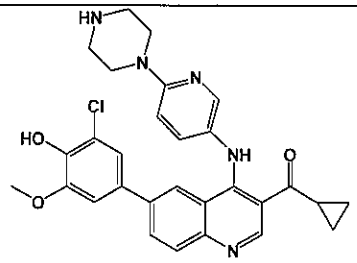
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| 370 |  | (6-(3-chloro-4-hydroxy -5-methoxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl) piperidin-1-yl)quinolin-3-yl) (cyclopropyl)methanone | 534 |
| 371 |  | (6-(3-chloro-4-hydroxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl) piperidin-1-yl)quinolin-3-yl) (cyclopropyl)methanone | 504 |
| 372 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl)piperidin -1-yl)quinolin-3-yl)(cyclopropyl) methanone | 522 |
| 373 |  | (6-(3-chloro-4-hydroxy -5-methoxyphenyl)-4-(4-(1-methylpiperidin-4-yl)piperazin -1-yl)quinolin-3-yl)(cyclopropyl) methanone | 535 |

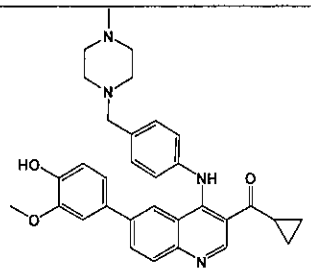
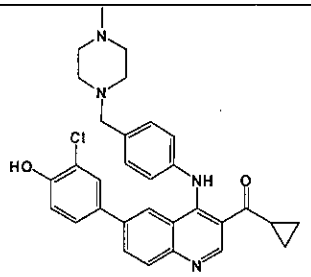
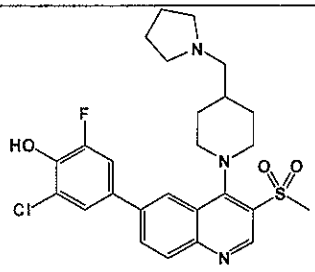
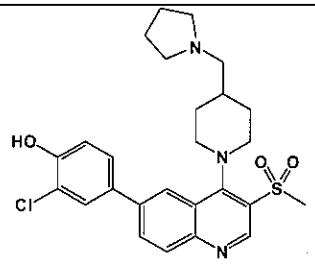
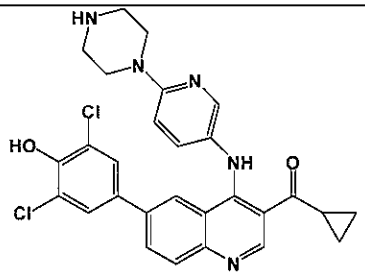
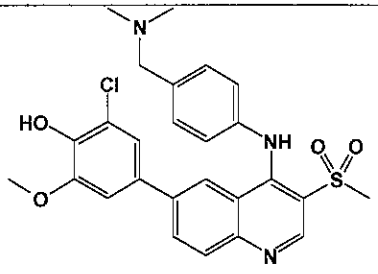
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|---|---|---|---|
| 374 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl) phenylamino)quinolin-3-yl) ethanone | 480 |
| 375 |  | (6-(3-chloro-4-hydroxyphenyl)-4-(4-(1-methylpiperidin-4-yl) piperazin-1-yl)quinolin-3-yl) (cyclopropyl)methanone | 505 |
| 376 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(1-methylpiperidin-4-yl) piperazin-1-yl)quinolin-3-yl) (cyclopropyl)methanone | 523 |
| 377 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl) phenylamino)quinolin-3-yl) ethanone | 464 |
| 378 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl) ethanone | 470 |

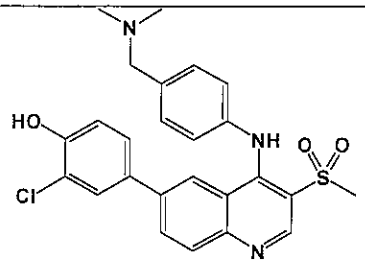
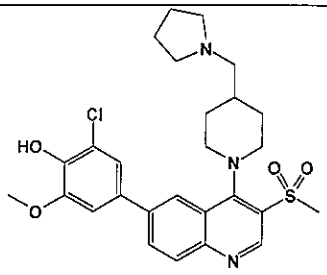
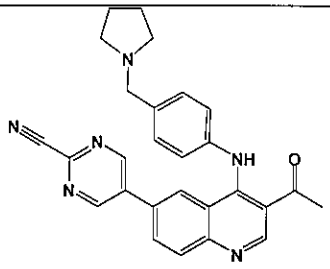
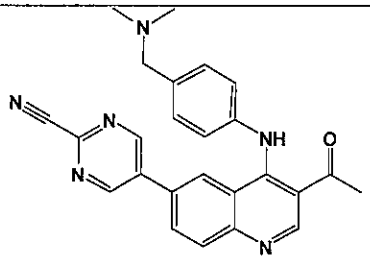
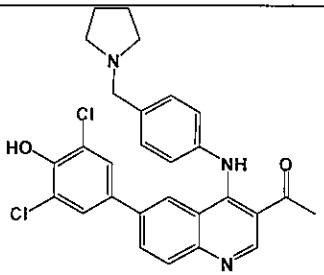
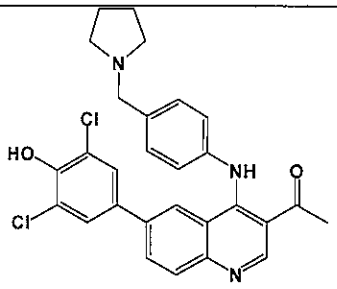
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| 379 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl) ethanone | 486 |
| 380 |  | 5-(3-(cyclopropanecarbonyl)-4-(4-(pyrrolidin-1-ylmethyl) phenylamino)quinolin-6-yl) pyrimidine-2-carbonitrile | 475 |
| 381 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(diethylamino)cyclohexylamino) quinolin-3-yl)(cyclopentyl) methanone | 550 |
| 382 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl) piperidin-1-yl)quinolin-3-yl) (cyclopentyl)methanone | 522 |
| 383 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl) phenylamino)quinolin-3-yl) (cyclopentyl)methanone | 530 |

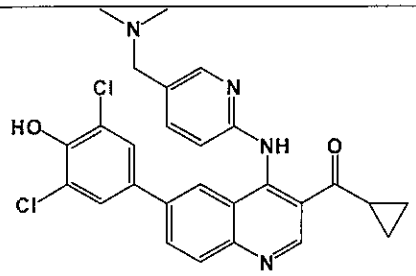
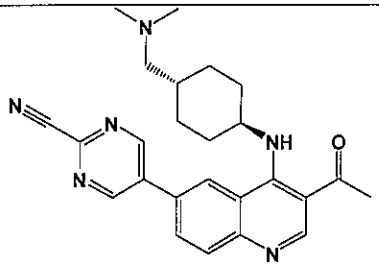
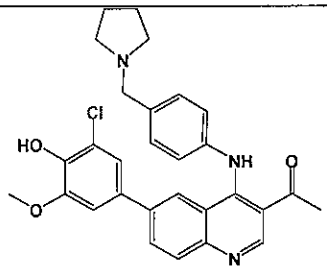
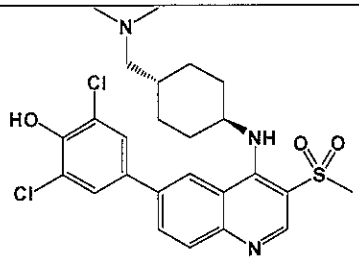
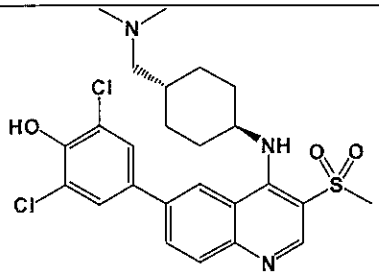
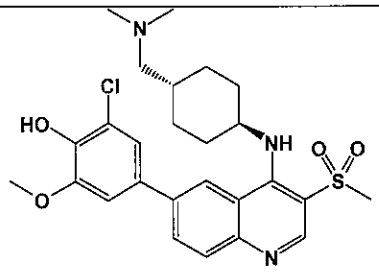
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| 384 |  | (6-(3-chloro-5-fluoro-4-hydroxy phenyl)-4-(4-((dimethylamino) methyl) piperidin-1-yl)quinolin-3-yl)(cyclo pentyl)methanone | 510 |
| 385 |  | (6-(3-chloro-4-hydroxyphenyl)-4-(4-(diethylamino)cyclohexylamino) quinolin-3-yl)(cyclopentyl) methanone | 520 |
| 386 |  | (6-(3-chloro-5-fluoro-4-hydroxy phenyl)-4-(4-(diethylamino)cyclo hexyl amino)quinolin-3-yl) (cyclopentyl) methanone | 538 |
| 387 |  | (6-(3-chloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenyl amino)quinolin-3-yl)(cyclopentyl) methanone | 500 |
| 388 |  | (6-(3-chloro-5-fluoro-4-hydroxyphe nyl)-4-(4-((dimethylamino)methyl) phenylamino)quinolin-3-yl) (cyclopentyl)methanone | 518 |
| 389 |  | (6-(3-chloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)piperidin-1 - yl)quinolin-3-yl)(cyclopentyl) methanone | 492 |

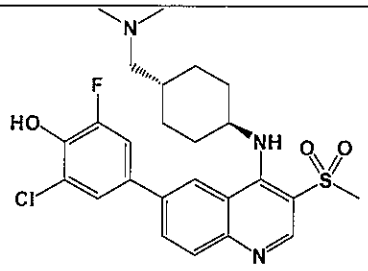
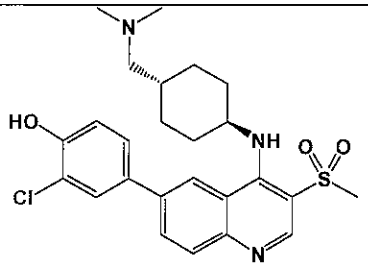
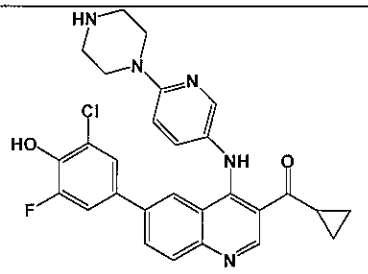
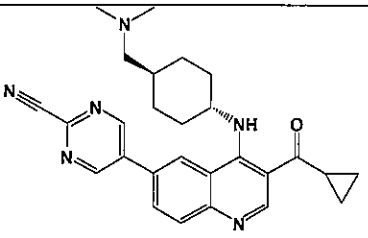
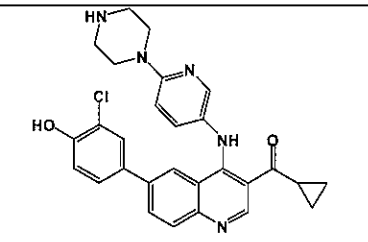
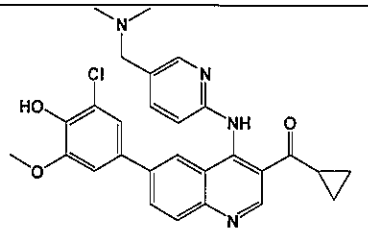
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| 391 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)ethanone | 476 |
| 392 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin- 3-yl)ethanone | 482 |
| 394 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl)piperazin-1-yl)quinolin-3-yl)(cyclopropyl)methanone | 535 |
| 397 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3 - yl)methanone | 562 |
| 398 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 557 |

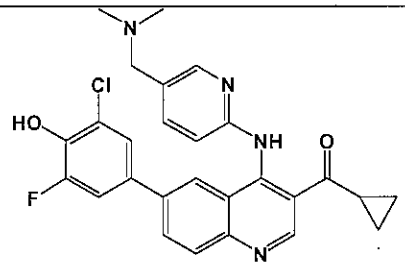
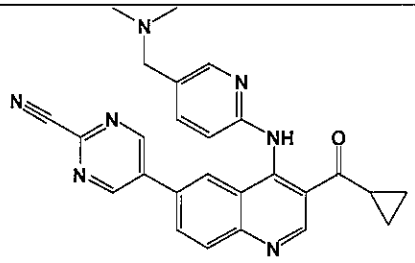
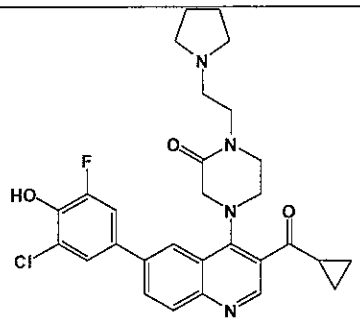
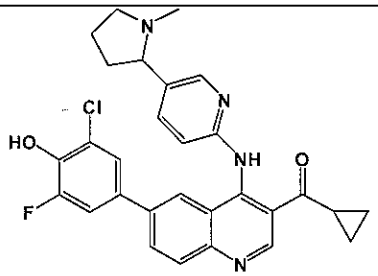
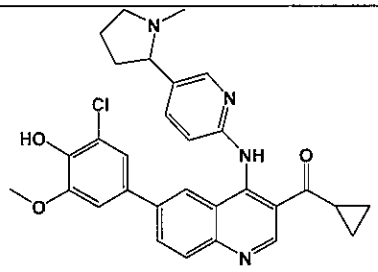
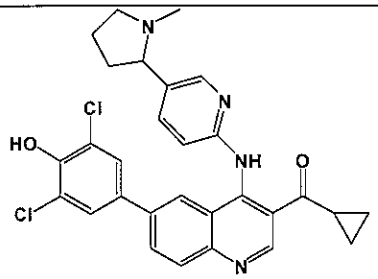
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|---|---|---|---|
| 399 |  | 2-chloro-4-(4-(4-((dimethylamino) methyl)phenylamino)-3-(methyl sulfonyl)quinolin-6-yl)-6-fluoro phenol | 500 |
| 400 |  | 2,6-dichloro-4-(4-(4-((dimethylamin o)methyl)phenylamino)-3-(methyl sulfonyl)quinolin-6-yl)phenol | 516 |
| 401 |  | 2,6-dichloro-4-(4-(4-((dimethylamin o)methyl)phenylamino)-3-(methyl sulfonyl)quinolin-6-yl)phenol hydrochloride | 516 |
| 402 |  | (6-(3-chloro-5-fluoro-4-hydroxyphe nyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl) piperazin-1-yl)quinolin-3-yl)(cyclo propyl)methanone | 523 |
| 403 |  | (6-(3-chloro-4-hydroxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl)piperazin-1 - yl)quinolin-3-yl)(cyclopropyl) methanone | 505 |
| 404 |  | (6-(3-chloro-4-hydroxy-5-methoxyp henyl)-4-(5-(piperazin-1-yl)pyridin-2-ylamino)quinolin-3-yl)(cycloprop yl)methanone | 530 |

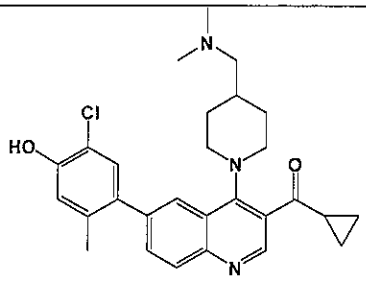
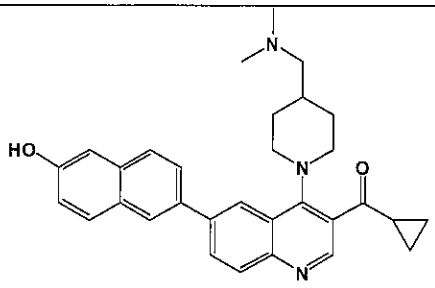
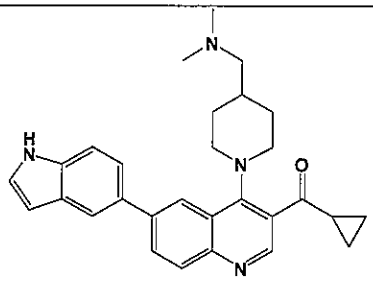
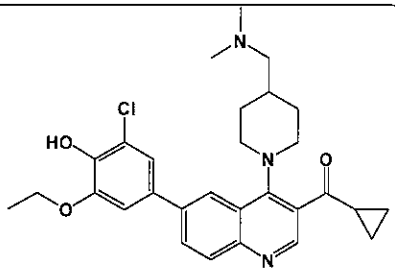
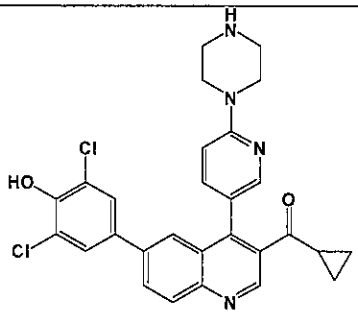
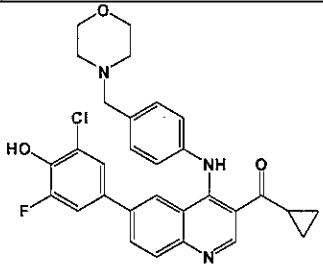
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|---|---|---|---|
| 405 |  | cyclopropyl(6-(4-hydroxy-3-methoxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)methanone | 523 |
| 406 |  | (6-(3-chloro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 527 |
| 407 |  | 2-chloro-6-fluoro-4-(3-(methylsulfonyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin-1-yl)quinolin-6-yl)phenol | 518 |
| 408 |  | 2-chloro-4-(3-(methylsulfonyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin-1-yl)quinolin-6-yl)phenol | 500 |
| 409 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(5-(piperazin-1-yl)pyridin-2-ylamino)quinolin-3-yl)methanone | 534 |
| 410 |  | 2-chloro-4-(4-(4-((dimethylamino)methyl)phenylamino)-3-(methylsulfonyl)quinolin-6-yl)-6-methoxyphenol | 512 |

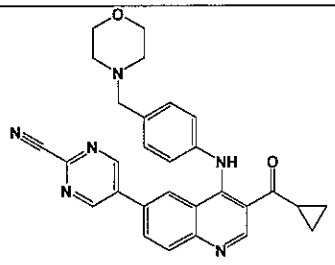
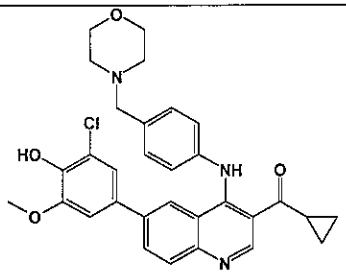
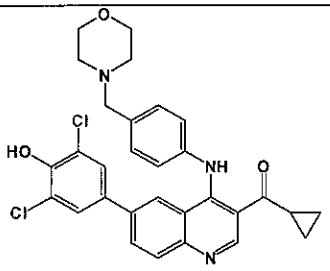
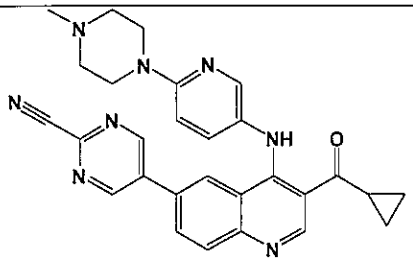
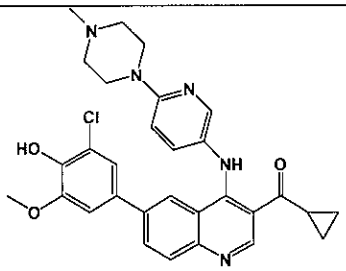
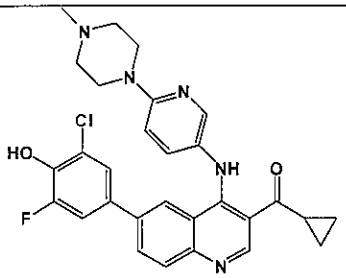
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| 411 |  | 2-chloro-4-(4-(4-((dimethylamino) methyl)phenylamino)-3-(methyl sulfonyl)quinolin-6-yl)phenol | 482 |
| 412 |  | 2-chloro-6-methoxy-4-(3-(methyl sulfonyl)-4-(4-(pyrrolidin-1-ylmethy l)piperidin-1-yl)quinolin-6-yl)phenol | 530 |
| 413 |  | 5-(3-acetyl-4-(4-(pyrrolidin-1-yl methyl)phenylamino)quinolin-6-yl) pyrimidine-2-carbonitrile | 449 |
| 414 |  | 5-(3-acetyl-4-(4-((dimethylamino) methyl)phenylamino)quinolin-6-yl) pyrimidine-2-carbonitrile | 422 |
| 415 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl) -4-(4-(pyrrolidin-1-ylmethyl)phenyl amino)quinolin-3-yl)ethanone | 506 |
| 416 |  •2HBr | 1-(6-(3,5-dichloro-4-hydroxyphenyl) -4-(4-(pyrrolidin-1-ylmethyl)phenyl amino)quinolin-3-yl)ethanone **dihydrobromide** | 506 |

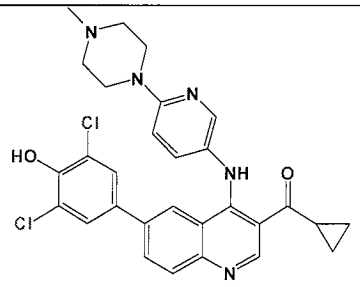
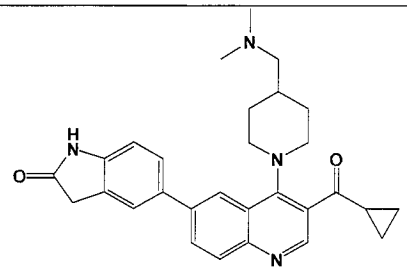
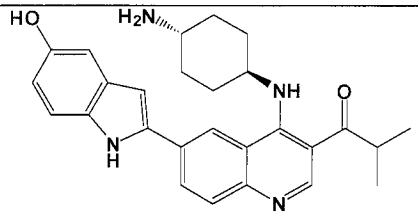
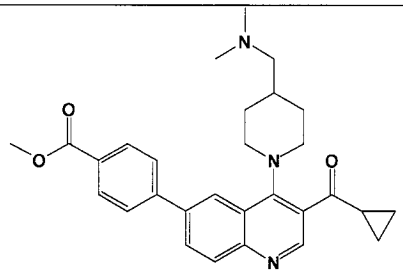
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| 417 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(5-((dimethylamino)methyl)pyridin-2-ylamino)quinolin-3-yl) methanone | 507 |
| 418 |  | 5-(3-acetyl-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino) quinolin-6-yl)pyrimidine-2-carbonitrile | 429 |
| 419 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)phenylamino)quinolin-3-yl)ethanone | 502 |
| 420 |  | 2,6-dichloro-4-(4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl)phenol | 522 |
| 421 |  | 2,6-dichloro-4-(4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl)phenol | 522 |
| 422 |  | 2-chloro-4-(4-(1R,4R)--4-((dimethylamino)methyl)cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl)-6-methoxyphenol | 518 |

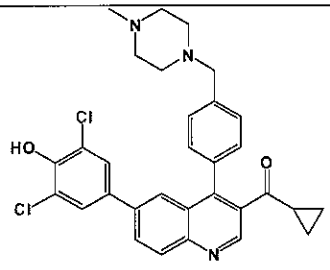
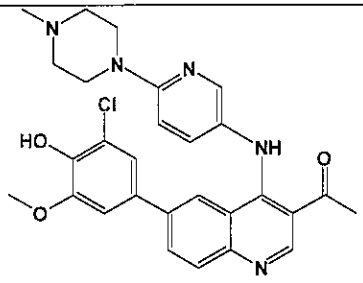
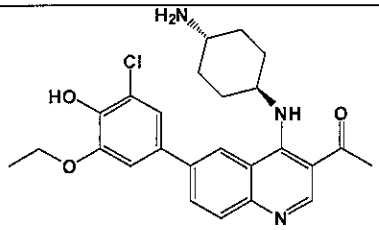
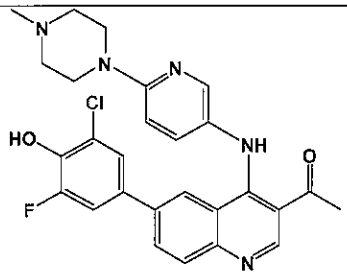
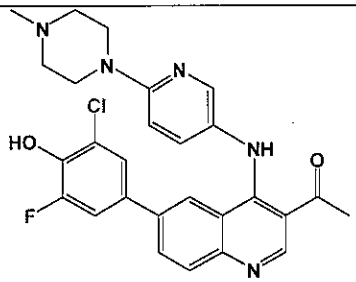
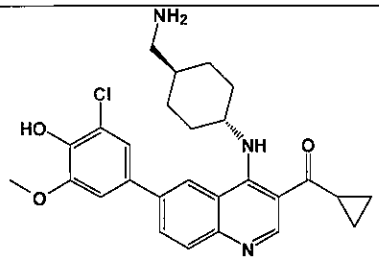
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| 423 |  | 2-chloro-4-(4-(1R,4R)--4-((dimethylamino)methyl)cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl)-6-fluorophenol | 506 |
| 424 |  | 2-chloro-4-(4-(1R,4R)--4-((dimethylamino)methyl)cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl)phenol | 488 |
| 425 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 518 |
| 426 |  | 5-(3-(cyclopropanecarbonyl)-4-(1R,4R)--4-((dimethylamino)methyl)cyclo hexylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | 455 |
| 427 |  | (6-(3-chloro-4-hydroxyphenyl)-4-(5-(piperazin-1-yl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 500 |
| 429 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(5-((dimethylamino)methyl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 503 |

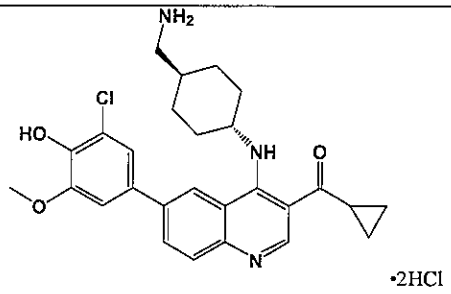
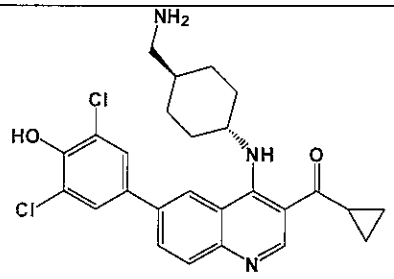
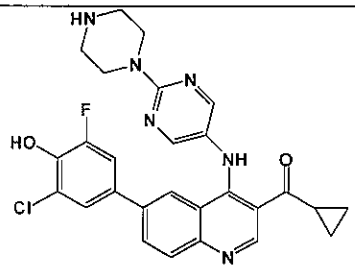
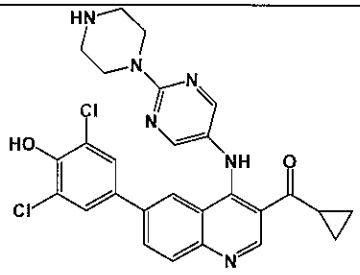
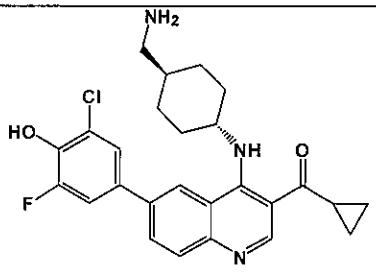
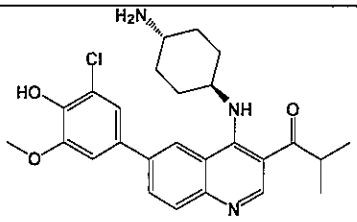
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|---|---|---|---|
| 435 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(5-((dimethylamino)methyl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 491 |
| 439 |  | 5-(3-(cyclopropanecarbonyl)-4-(5-((dimethylamino)methyl)pyridin-2-ylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | 450 |
| 440 |  | 4-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-yl)-1-(2-(pyrrolidin-1-yl)ethyl)piperazin-2-one | 537 |
| 443 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(5-(1-methylpyrrolidin-2-yl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 517 |
| 444 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(5-(1-methylpyrrolidin-2-yl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 529 |
| 445 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(5-(1-methylpyrrolidin-2-yl)pyridin-2-ylamino)quinolin-3-yl)methanone | 533 |

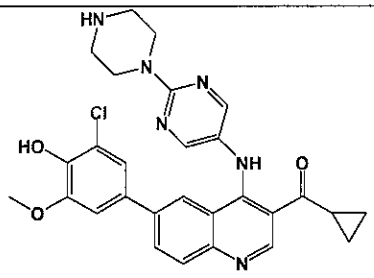
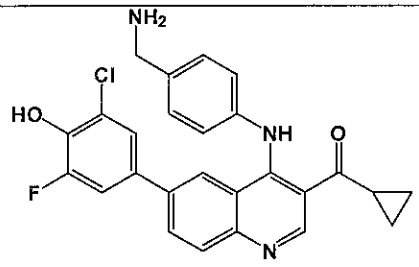
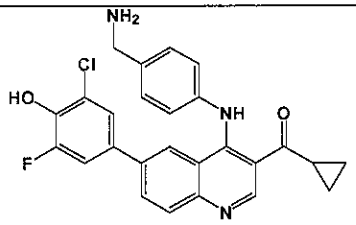
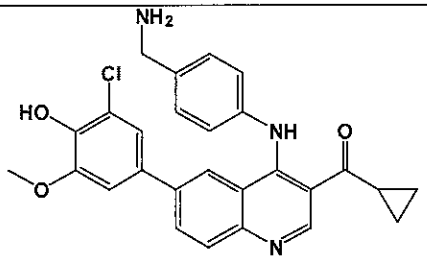
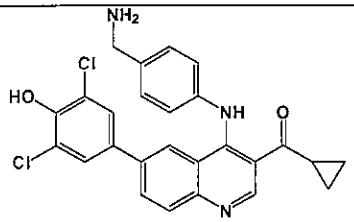
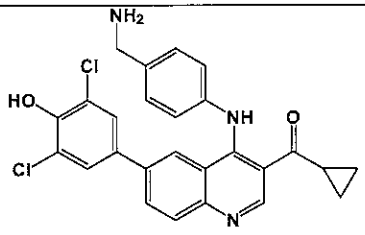
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|---|---|---|---|
| 448 |  | (6-(5-chloro-4-hydroxy-2-methylphenyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-3-yl)(cyclopropyl)methanone | 478 |
| 449 |  | cyclopropyl(4-(4-((dimethylamino)methyl)piperidin-1-yl)-6-(6-hydroxynaphthalen-2-yl)quinolin-3-yl)methanone | 480 |
| 453 |  | cyclopropyl(4-(4-((dimethylamino)methyl)piperidin-1-yl)-6-(1H-indol-5-yl)quinolin-3-yl)methanone | 453 |
| 457 |  | (6-(3-chloro-5-ethoxy-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-3-yl)(cyclopropyl)methanone | 508 |
| 459 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-yl)quinolin-3-yl)methanone | 519 |
| 460 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(morpholinomethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 532 |

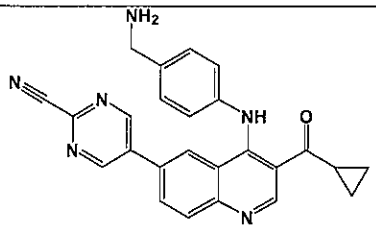
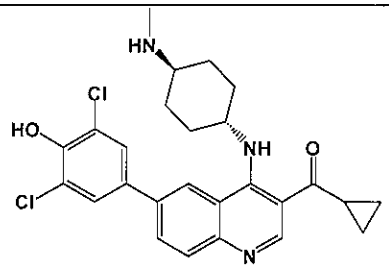
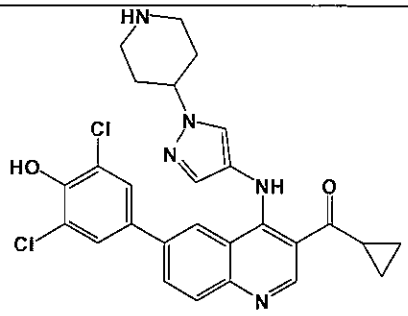
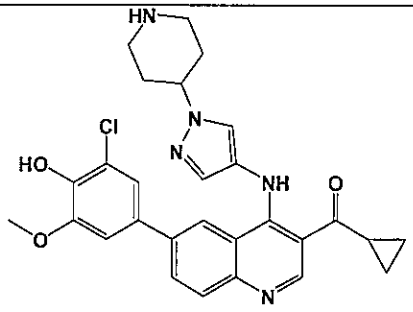
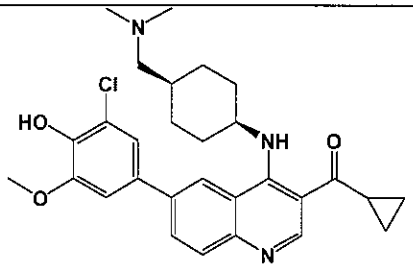
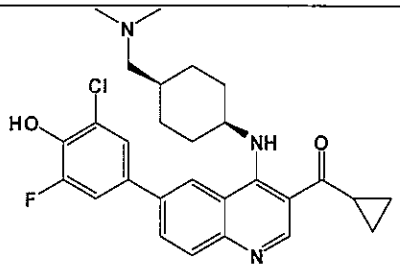
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|---|---|---|---|
| 461 |  | 5-(3-(cyclopropanecarbonyl)-4-(4-(morpholinomethyl)phenylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | 491 |
| 462 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(morpholinomethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 544 |
| 463 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(morpholinomethyl)phenylamino)quinolin-3-yl)methanone | 548 |
| 469 |  | 5-(3-(cyclopropanecarbonyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | 491 |
| 470 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 544 |
| 471 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 532 |

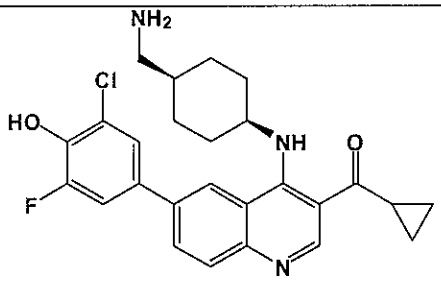
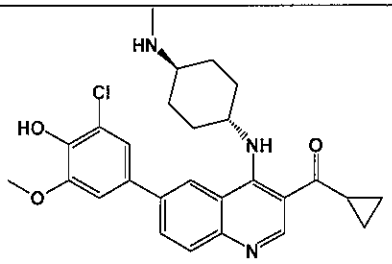
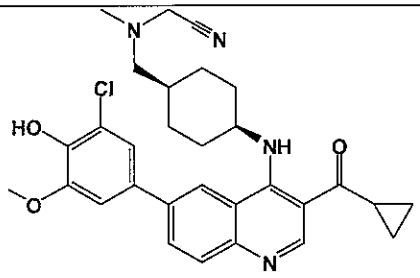
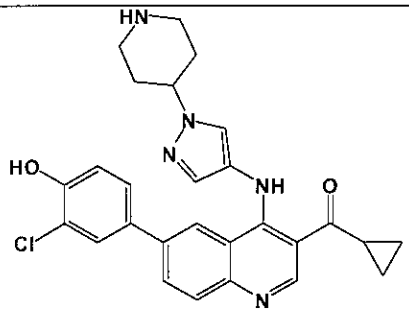
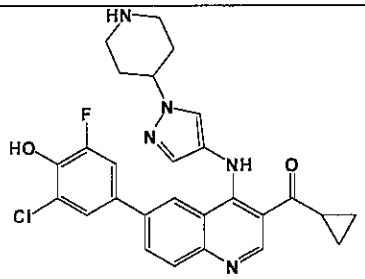
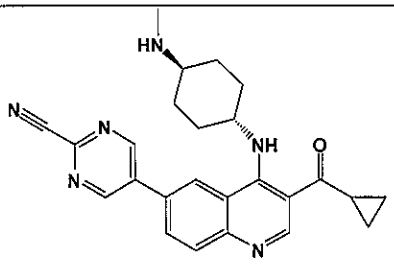
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|---|---|---|---|
| 472 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone | 548 |
| 474 |  | 5-(3-(cyclopropanecarbonyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-6-yl)indolin-2-one | 469 |
| 480 |  | 1-(4-(1R,4R)--4-aminocyclohexylamino)-6-(5-hydroxy-1H-indol-2-yl)quinolin-3-yl)-2-methylpropan-1-one | 443 |
| 481 |  | methyl 4-(3-(cyclopropanecarbonyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-6-yl)benzoate | 472 |

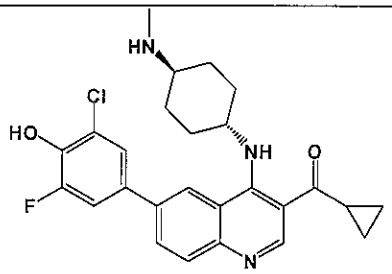
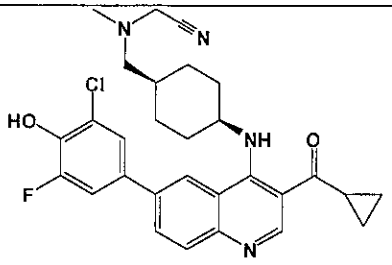
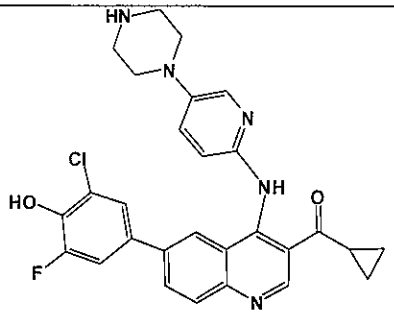
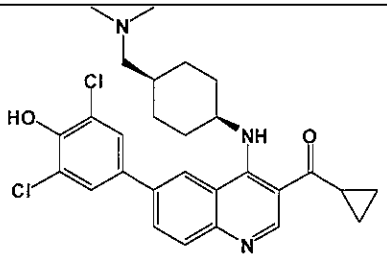
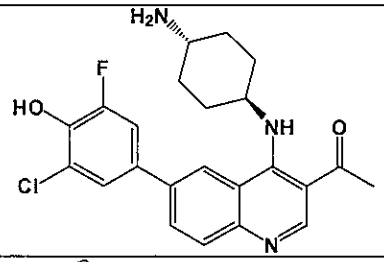
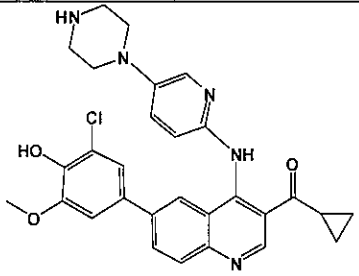
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|---|---|---|---|
| 482 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenyl)quinolin-3-yl)methanone | 546 |
| 483 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone | 518 |
| 486 |  | 1-(4-(1R,4R)--4-aminocyclohexylamino)-6-(3-chloro-5-ethoxy-4-hydroxyphenyl)quinolin-3-yl)ethanone | 454 |
| 487 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone | 506 |
| 488 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone | 506 |
| 493 |  | (4-(1R,4R)--4-(aminomethyl)cyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 480 |

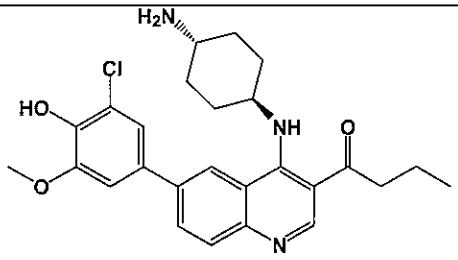
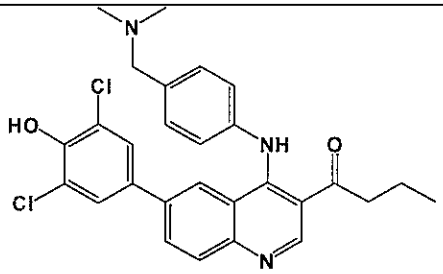
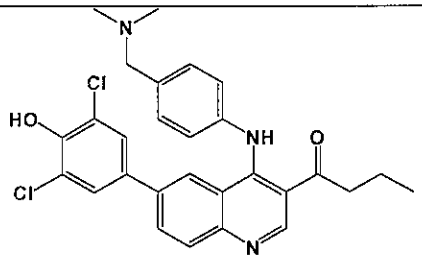
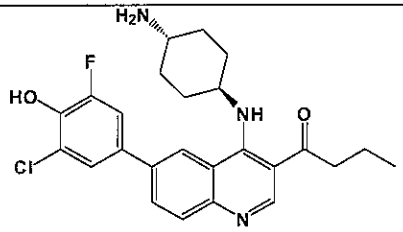
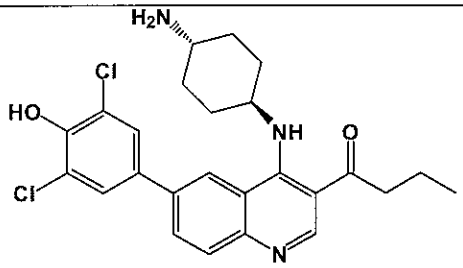
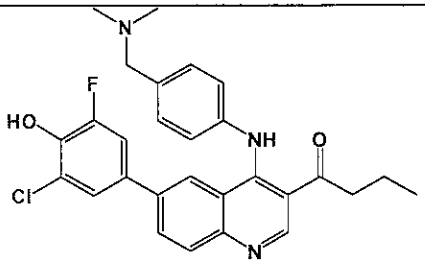
| | | | |
|---|---|---|---|
| 494 |  | (4-(1R,4R)--4-(aminomethyl)cyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 480 |
| 495 |  | (4-(1R,4R)--4-(aminomethyl)cyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 484 |
| 496 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 519 |
| 497 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)methanone | 535 |
| 501 |  | (4-(1R,4R)--4-(aminomethyl)cyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 468 |
| 502 |  | 1-(4-(1R,4R)--4-aminocyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)-2-methylpropan-1-one | 468 |

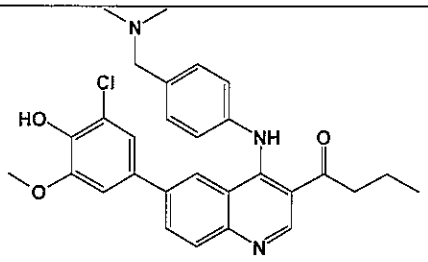
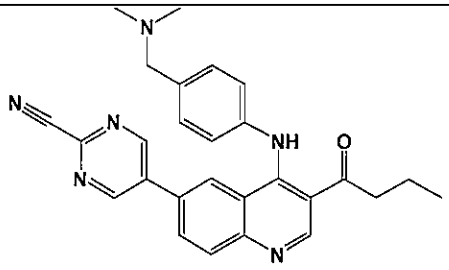
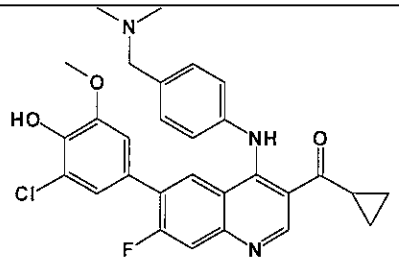
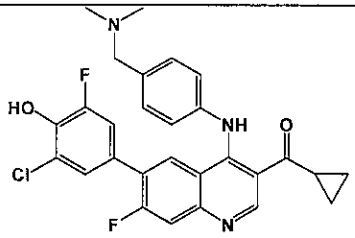
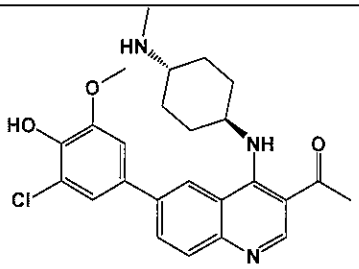
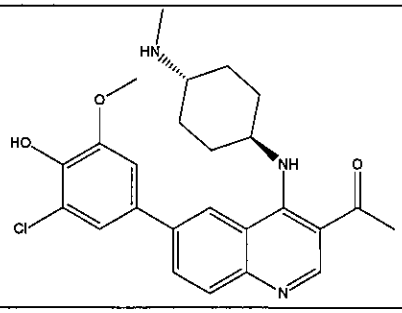
| | | | |
|---|---|---|---|
| 503 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 531 |
| 504 |  | (4-(4-(aminomethyl)phenylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 462 |
| 505 |  | (4-(4-(aminomethyl)phenylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 462 |
| 506 |  | (4-(4-(aminomethyl)phenylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 474 |
| 507 |  | (4-(4-(aminomethyl)phenylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 478 |
| 508 |  | (4-(4-(aminomethyl)phenylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 478 |

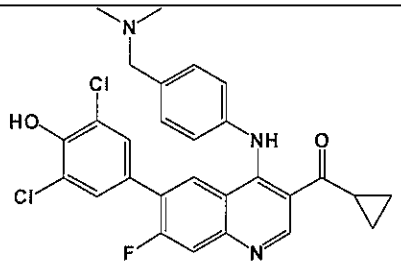
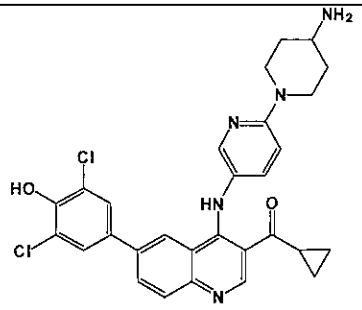
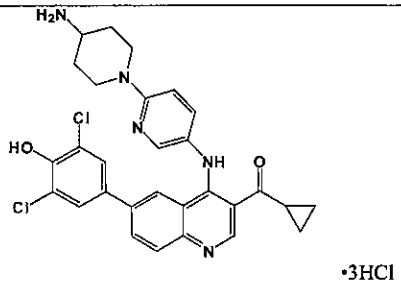
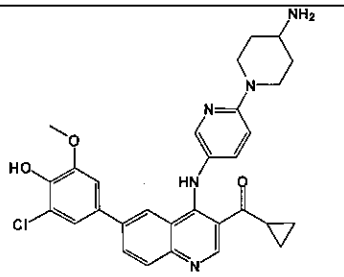
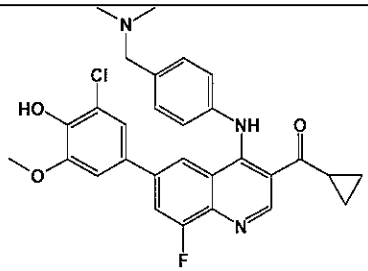
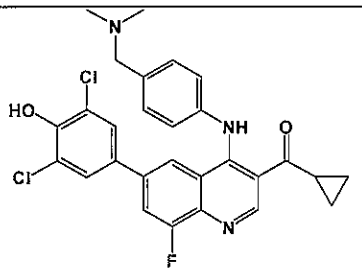
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|---|---|---|---|
| 509 |  | 5-(4-(4-(aminomethyl)phenylamino)-3-(cyclopropanecarbonyl)quinolin-6-yl)pyrimidine-2-carbonitrile | 420 |
| 510 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4--4-(methylamino)cyclohexylamino)quinolin-3-yl)methanone | 484 |
| 511 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(piperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)methanone | 522 |
| 512 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1-(piperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 518 |
| 513 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 508 |
| 514 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 496 |

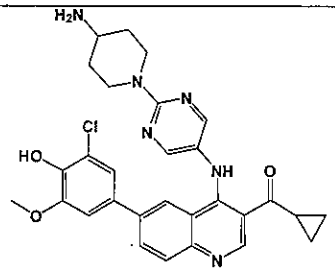
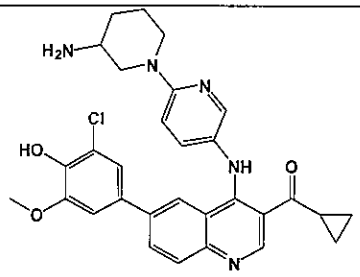
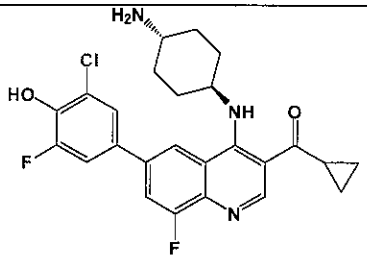
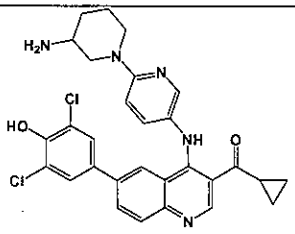
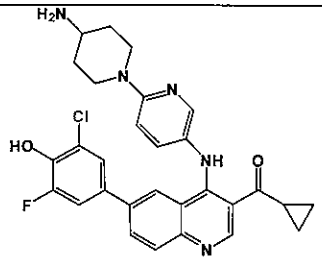
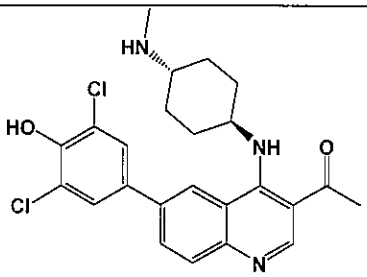
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| 515 |  | (4-((1s,4s)-4-(aminomethyl)cyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 468 |
| 517 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1R,4R)-4-(methylamino)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone | 480 |
| 518 |  | 2-((((1s,4s)-4-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino)cyclohexyl)methyl)(methyl)amino)acetonitrile | 533 |
| 519 |  | (6-(3-chloro-4-hydroxyphenyl)-4-(1-(piperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 488 |
| 520 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(piperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 506 |
| 522 |  | 5-(3-(cyclopropanecarbonyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | 427 |

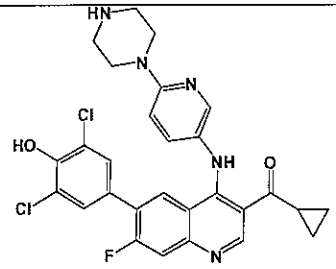
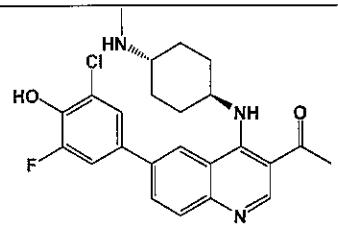
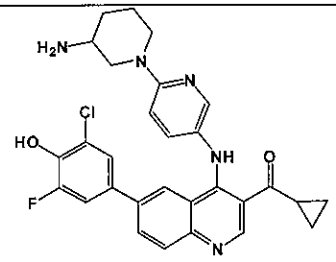
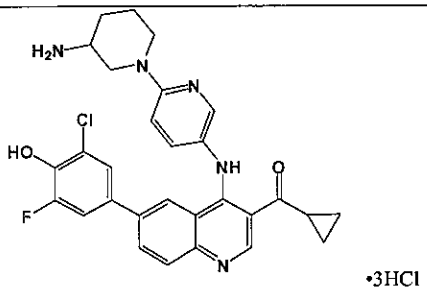
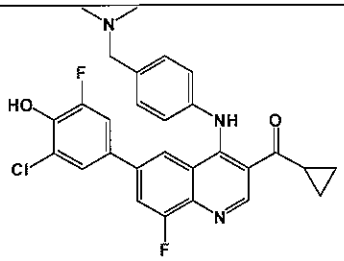
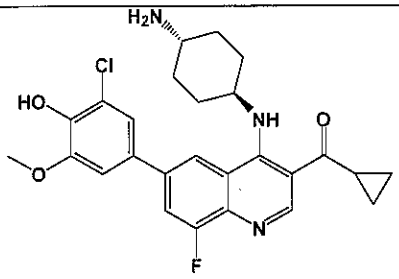
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|---|---|---|---|
| 523 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 468 |
| 524 |  | 2-((((1s,4s)-4-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino)cyclohexyl)methyl)(methyl)amino)acetonitrile | 521 |
| 525 |  ·HCl | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(5-(piperazin-1-yl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 518 |
| 526 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)methanone | 512 |
| 527 |  | 1-(4-(1R,4R)--4-aminocyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone | 428 |
| 528 |  ·HCl | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(5-(piperazin-1-yl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 530 |

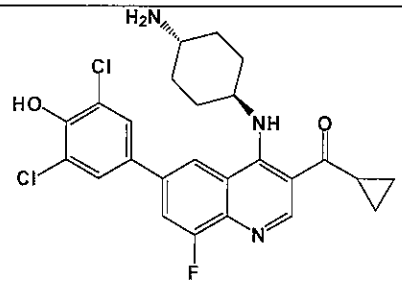
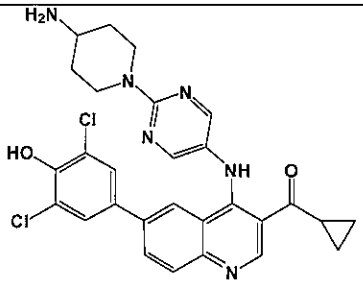
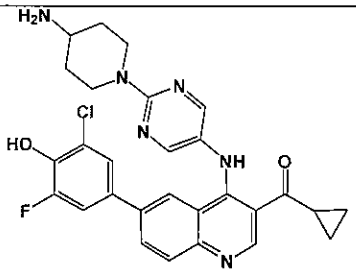
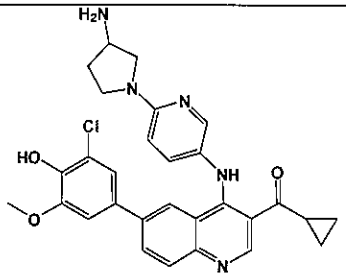
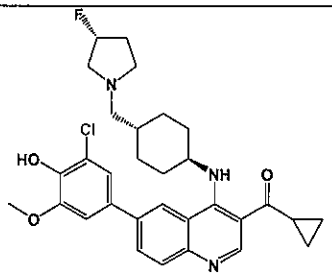
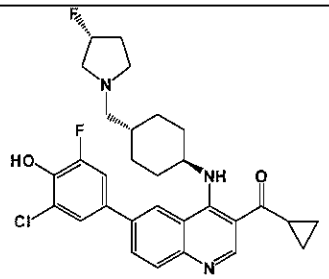
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|---|---|---|---|
| 529 |  | 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)butan-1-one | 468 |
| 530 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)butan-1-one | 508 |
| 531 |  •2HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)butan-1-one dihydrochloride | 508 |
| 532 |  | 1-(4-(1R,4R)--4-aminocyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)butan-1-one | 456 |
| 535 |  | 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)butan-1-one | 472 |
| 537 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)butan-1-one | 492 |

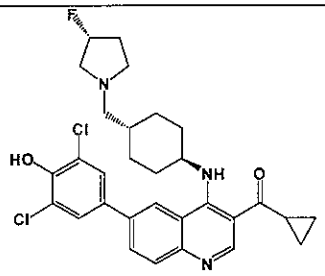
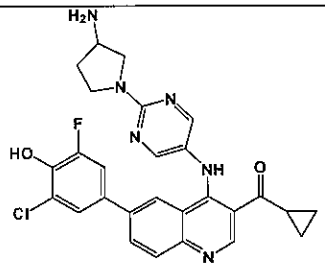
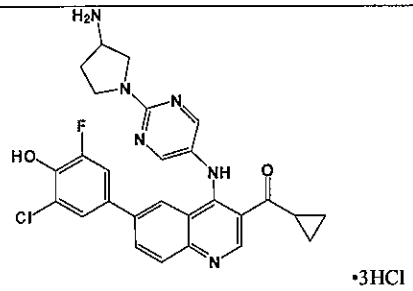
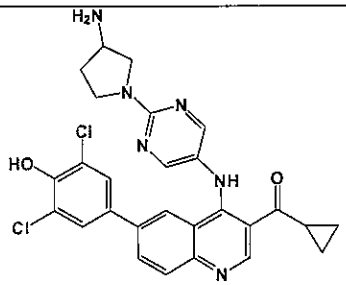
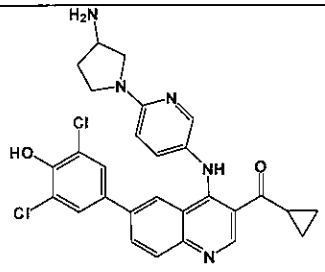
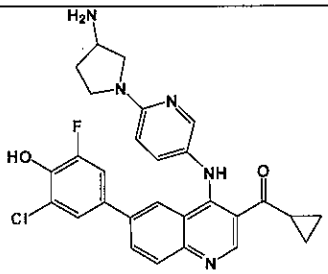
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|---|---|---|---|
| 538 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)butan-1-one | 504 |
| 539 |  | 5-(3-butyryl-4-(4-((dimethylamino)methyl)phenylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | 451 |
| 540 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-7-fluoroquinolin-3-yl)(cyclopropyl)methanone | 520 |
| 541 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-7-fluoroquinolin-3-yl)(cyclopropyl)methanone | 508 |
| 542 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)--4-(methylamino)cyclohexylamino)quinolin-3-yl)ethanone | 454 |
| 543 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)--4-(methylamino)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 454 |

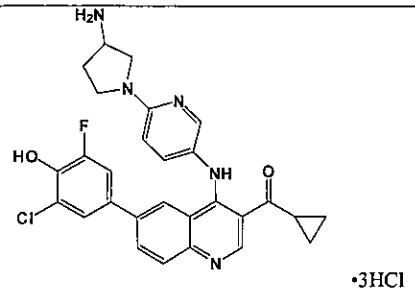
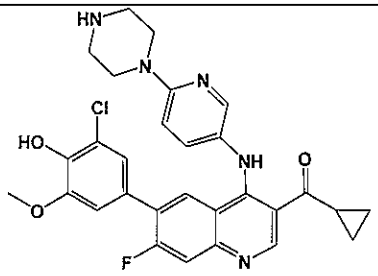
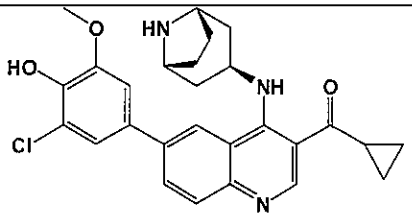
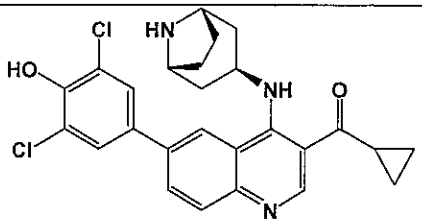
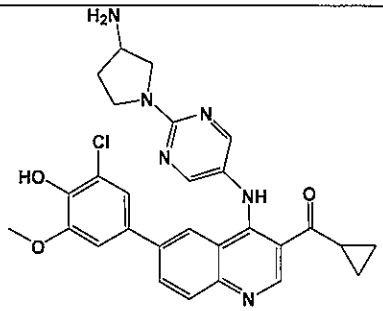
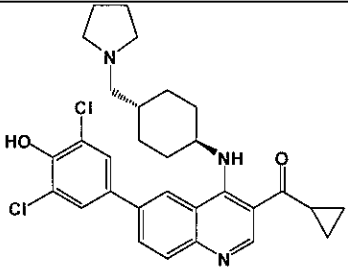
| | | | |
|---|---|---|---|
| 547 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-7-fluoroquinolin-3-yl)methanone | 524 |
| 548 |  | (4-(6-(4-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 548 |
| 549 |  | (4-(6-(4-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 548 |
| 550 |  | (4-(6-(4-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 544 |
| 551 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone | 520 |
| 552 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-8-fluoroquinolin-3-yl)methanone | 524 |

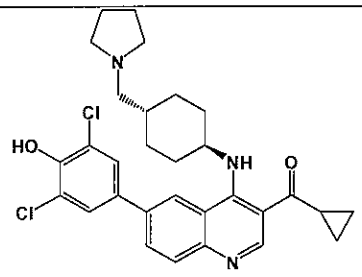
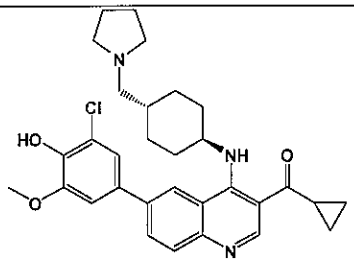
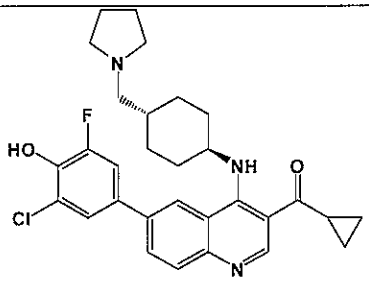
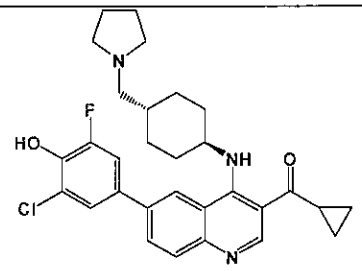
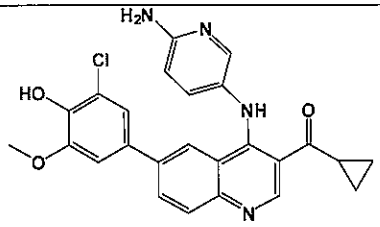
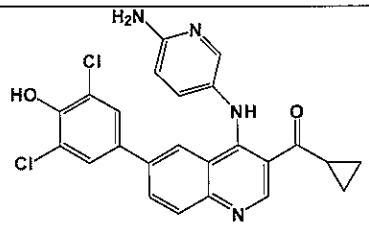
| | | | |
|---|---|---|---|
| 553 |  | (4-(2-(4-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 545 |
| 554 |  | (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 544 |
| 555 |  | (4-(1R,4R)--4-aminocyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone | 472 |
| 556 |  | (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 548 |
| 557 |  | (4-(6-(4-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 532 |
| 558 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)--4-(methylamino)cyclohexylamino)quinolin-3-yl)ethanone | 458 |

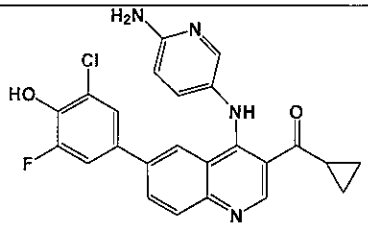
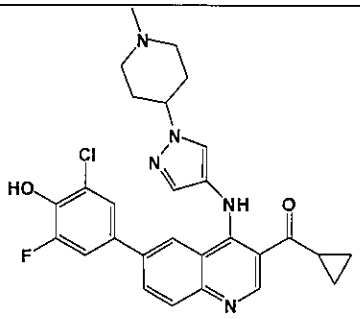
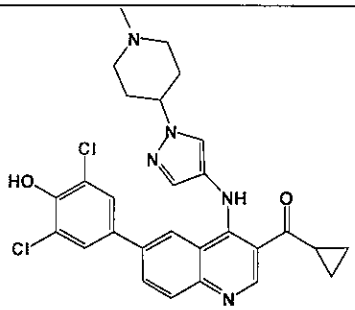
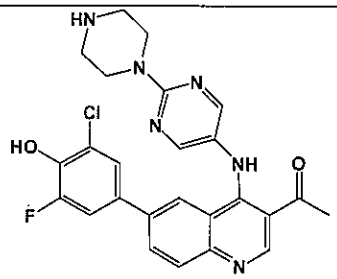
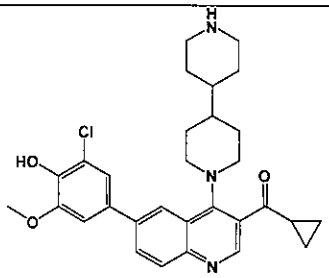
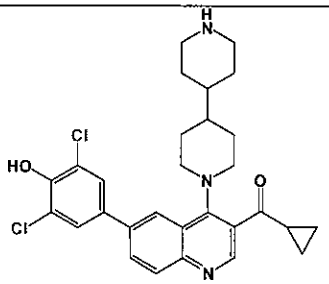
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| 559 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-7-fluoro-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone | 552 |
| 560 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)--4-(methylamino)cyclohexylamino)quinolin-3-yl)ethanone | 442 |
| 561 |  | (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 532 |
| 562 |  •3HCl | (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 532 |
| 563 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone | 508 |
| 564 |  | (4-(1R,4R)--4-aminocyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone | 484 |

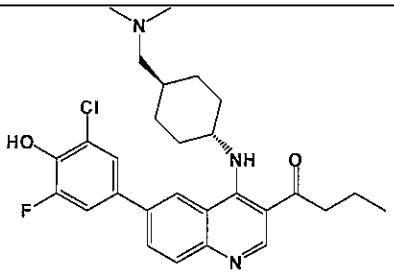
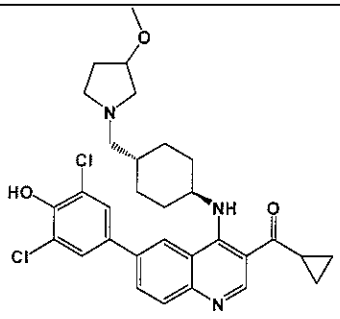
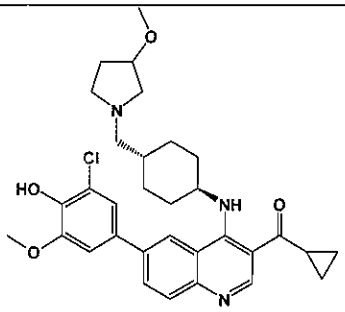
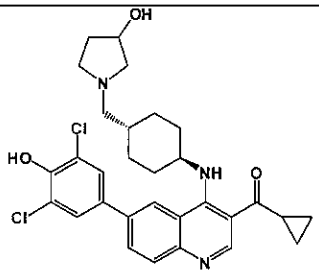
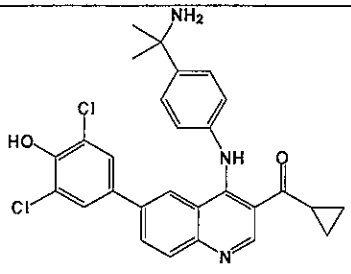
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| 565 |  | (4-(1R,4R)--4-aminocyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone | 488 |
| 566 |  | (4-(2-(4-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 549 |
| 567 |  | (4-(2-(4-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 533 |
| 568 |  | (4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 530 |
| 569 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)--4-(((R)-3-fluoropyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 552 |
| 570 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)--4-(((R)-3-fluoropyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 540 |

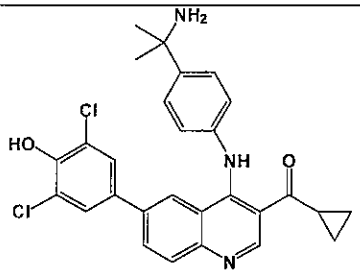
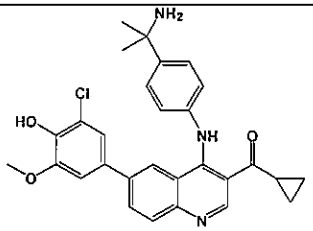
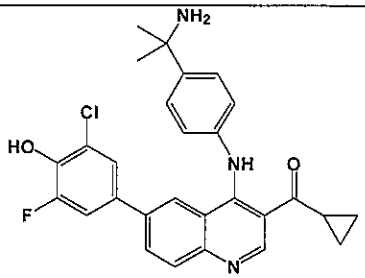
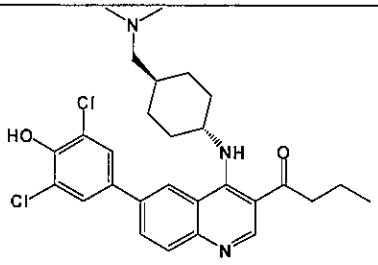
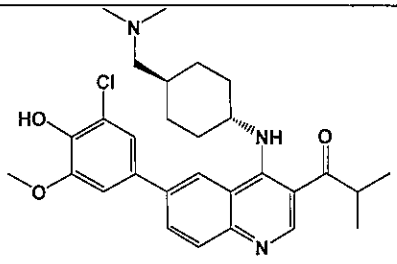
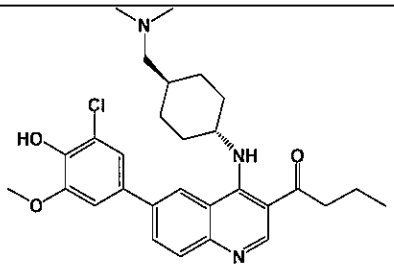
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| 571 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)--4-(((R)-3-fluoropyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)methanone | 556 |
| 572 |  | (4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 519 |
| 573 |  | (4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 519 |
| 574 |  | (4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 535 |
| 575 |  | (4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 534 |
| 576 |  | (4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 518 |

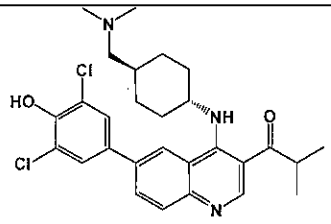
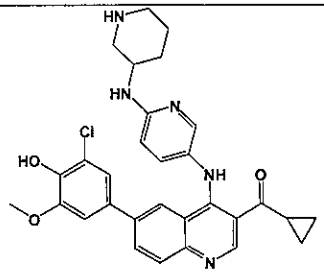
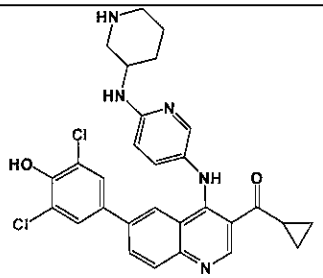
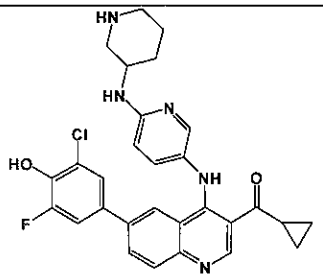
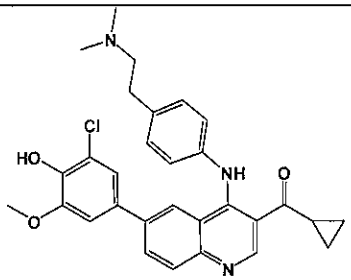
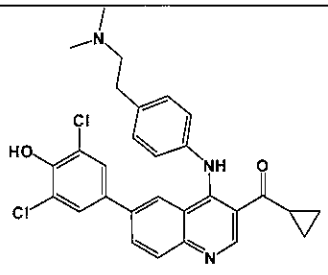
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| 577 |  •3HCl | (4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride) | 518 |
| 578 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-7-fluoro-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 548 |
| 579 |  | (4-((1R,3r,5S)-8-azabicyclo[3.2.1]octan-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 478 |
| 580 |  | (4-((1R,3r,5S)-8-azabicyclo[3.2.1]octan-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 482 |
| 582 |  | (4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 531 |
| 584 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)--4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)methanone | 539 |

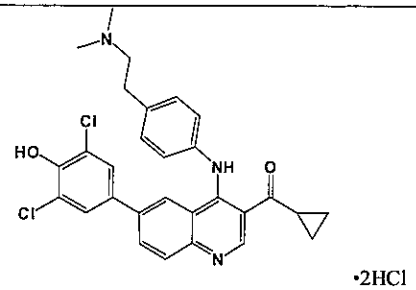
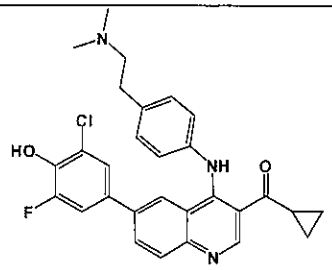
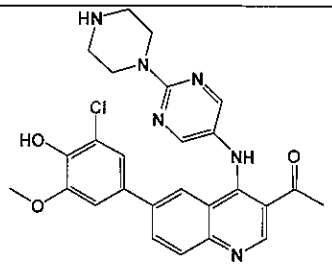
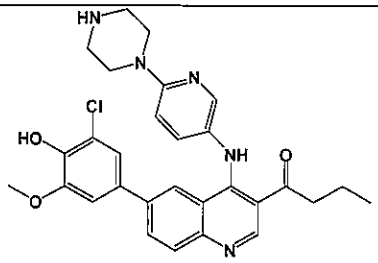
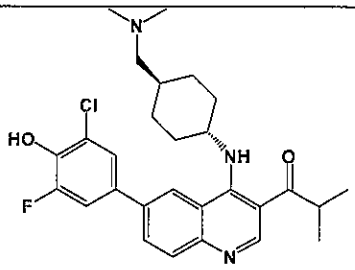
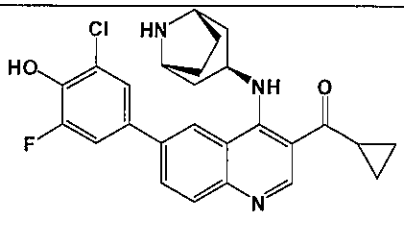
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| 585 |  •2HCl | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)--4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)methanone hydrochloride | 539 |
| 586 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)--4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 534 |
| 587 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)--4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 522 |
| 588 |  •2HCl | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)--4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 522 |
| 589 |  | (4-(6-aminopyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 461 |
| 590 |  | (4-(6-aminopyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 465 |

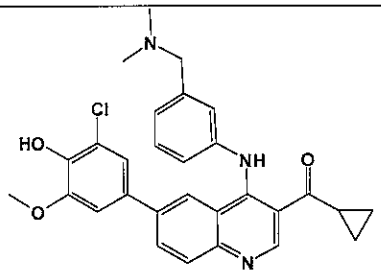
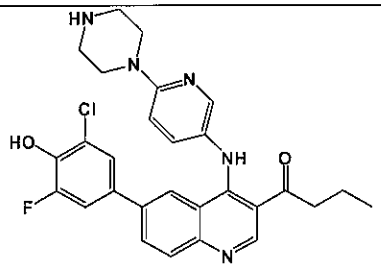
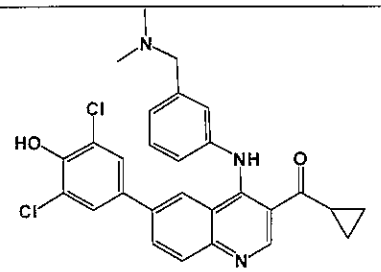
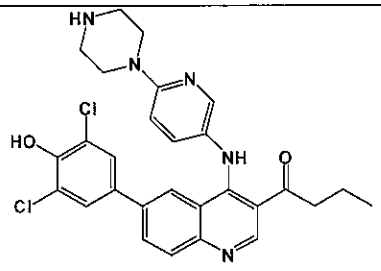
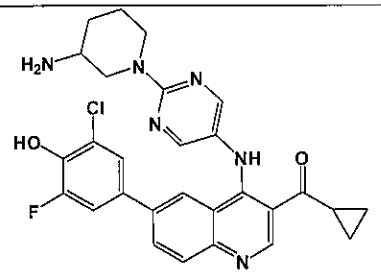
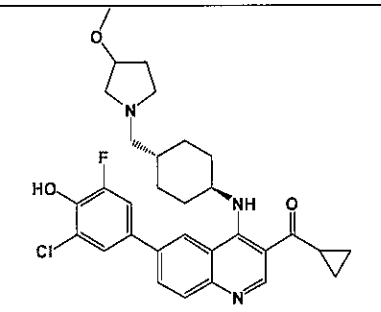
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| 591 |  | (4-(6-aminopyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 449 |
| 592 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 520 |
| 593 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)methanone | 536 |
| 594 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)ethanone | 493 |
| 595 |  | (4-(4,4'-bipiperidin-1-yl)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 520 |
| 596 |  | (4-(4,4'-bipiperidin-1-yl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 524 |

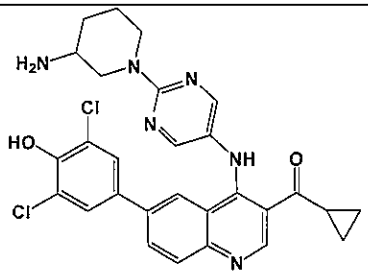
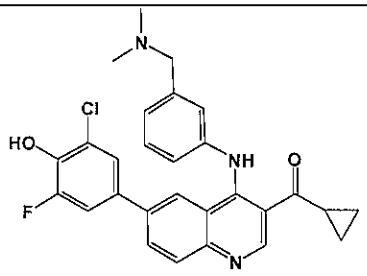
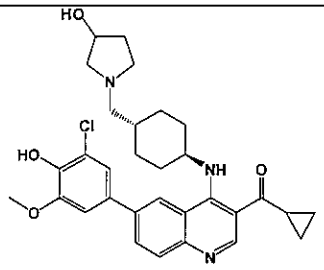
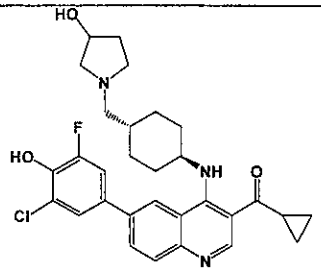
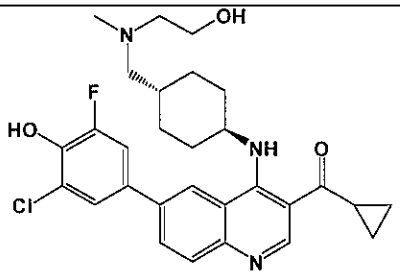
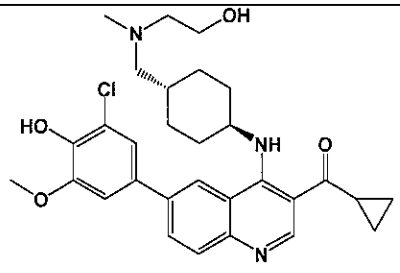
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| 597 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)--4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)butan-1-one | 498 |
| 598 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)--4-((3-methoxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)methanone | 569 |
| 599 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)--4-((3-methoxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 564 |
| 600 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)--4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)methanone | 555 |
| 601 |  •2HCl | (4-(4-(2-aminopropan-2-yl)phenylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 506 |

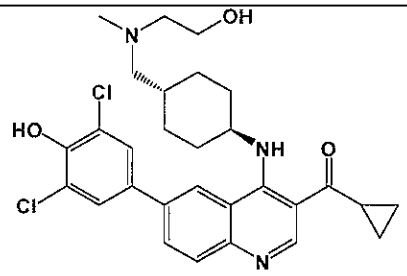
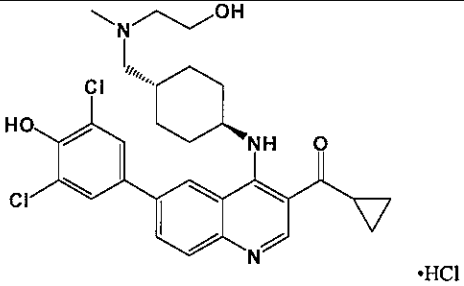
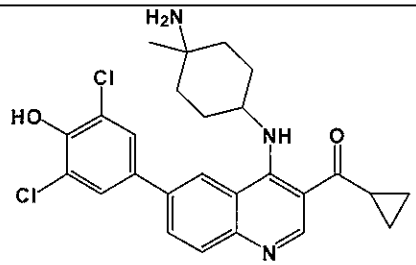
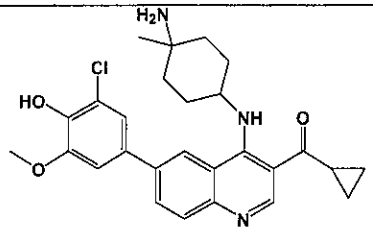
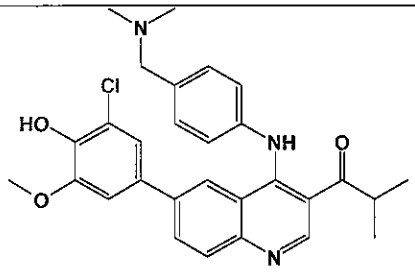
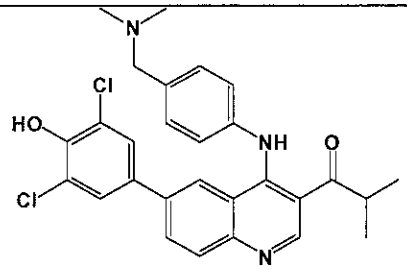
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| 602 |  | (4-(4-(2-aminopropan-2-yl)phenylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 506 |
| 603 |  | (4-(4-(2-aminopropan-2-yl)phenylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 502 |
| 604 |  | (4-(4-(2-aminopropan-2-yl)phenylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 490 |
| 605 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)--4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)butan-1-one | 514 |
| 606 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)--4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)-2-methylpropan-1-one | 510 |
| 607 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)--4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)butan-1-one | 510 |

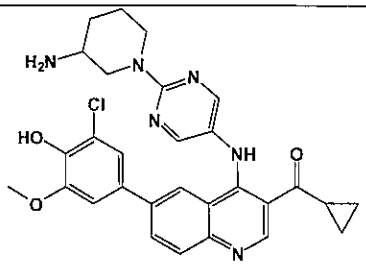
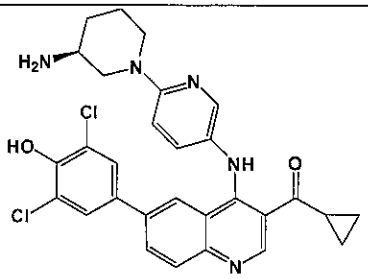
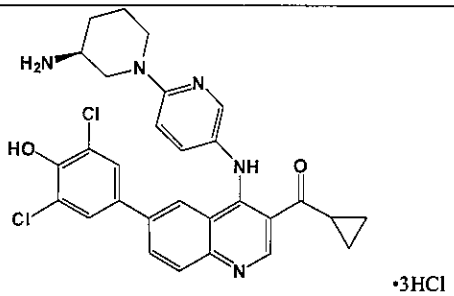
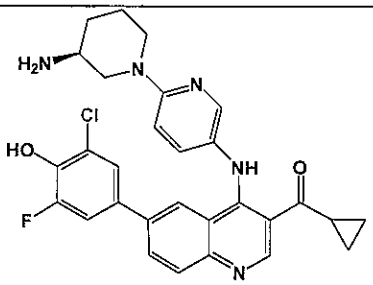
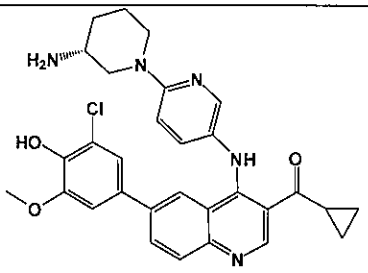
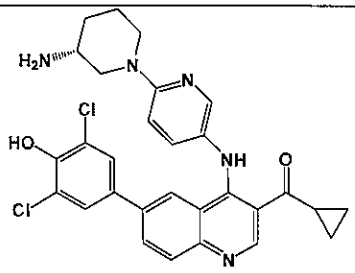
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| 608 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)--4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)-2-methylpropan-1-one | 514 |
| 609 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(piperidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 544 |
| 610 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(piperidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)methanone | 548 |
| 611 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(piperidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 532 |
| 612 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 516 |
| 613 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)methanone | 520 |

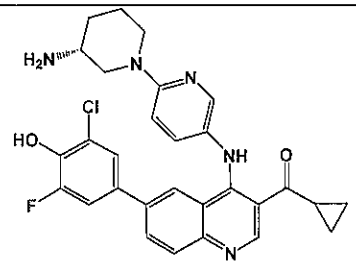
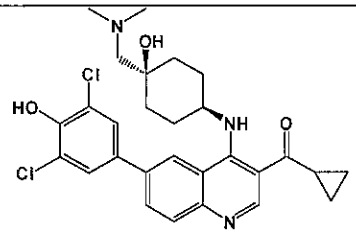
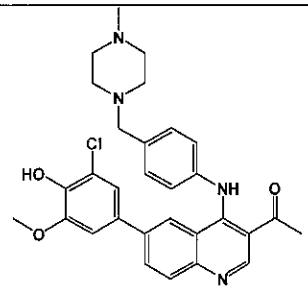
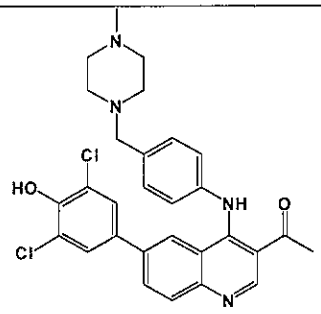
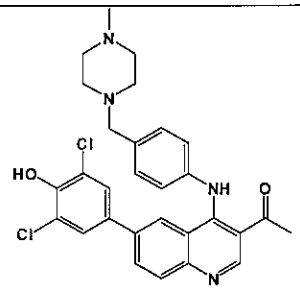
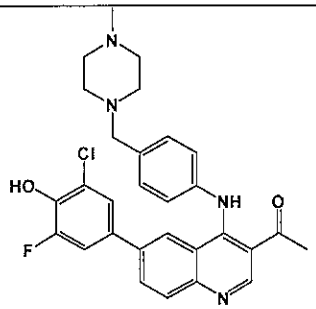
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| 614 |  ·2HCl | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)methanone hydrochloride | 520 |
| 615 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 504 |
| 616 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)ethanone | 505 |
| 617 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)butan-1-one | 532 |
| 620 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)--4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)-2-methylpropan-1-one | 498 |
| 621 |  | (4-((1R,3r,5S)-8-azabicyclo[3.2.1]octan-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 466 |

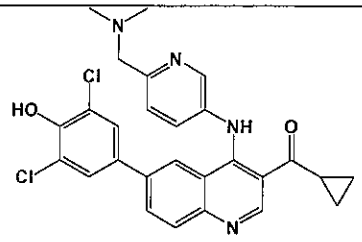
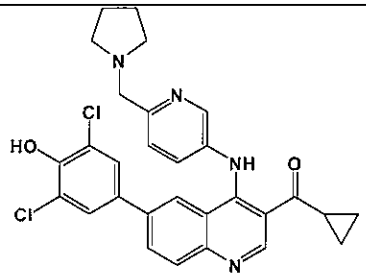
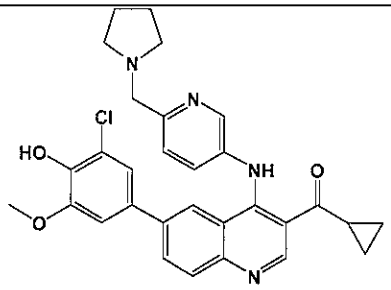
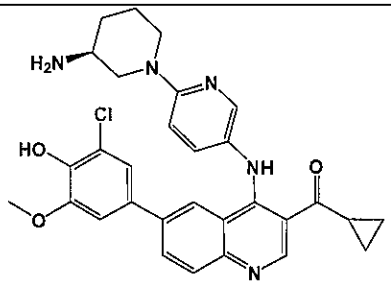
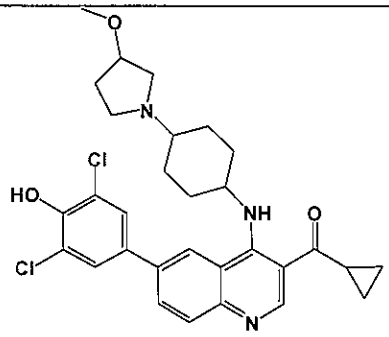
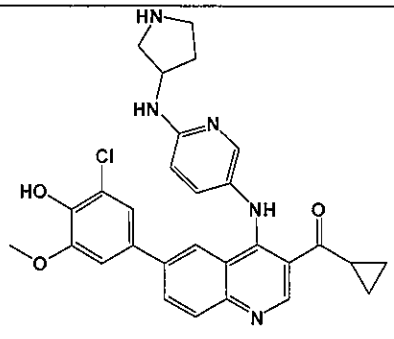
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| 622 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(3-((dimethylamino)methyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 502 |
| 623 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)butan-1-one | 520 |
| 624 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-((dimethylamino)methyl)phenylamino)quinolin-3-yl)methanone | 506 |
| 625 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)butan-1-one | 536 |
| 626 |  | (4-(2-(3-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 533 |
| 627 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)--4-((3-methoxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 552 |

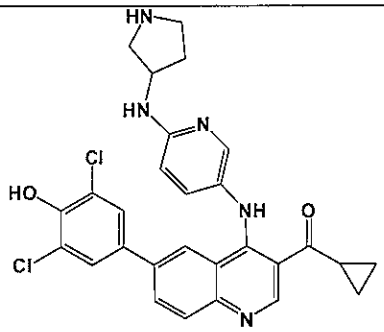
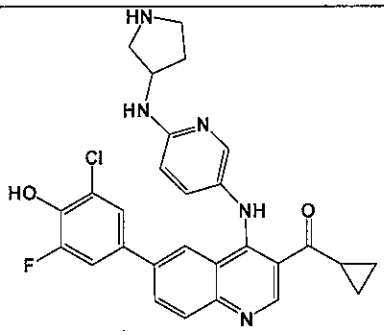
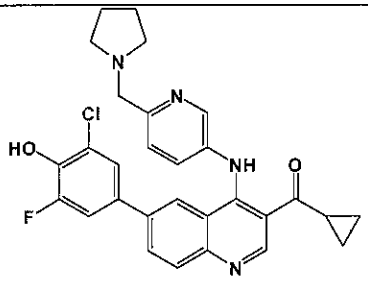
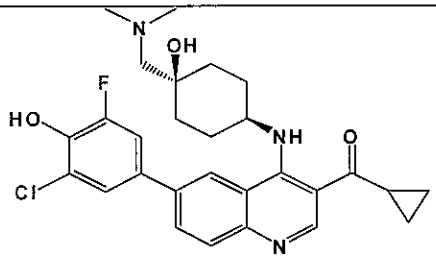
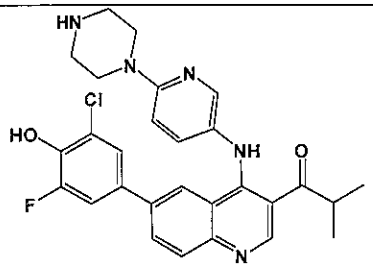
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|---|---|---|---|
| 628 |  | (4-(2-(3-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 549 |
| 629 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-((dimethylamino)methyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 490 |
| 630 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)--4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 550 |
| 631 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)--4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 538 |
| 632 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)--4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 526 |
| 633 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)--4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 538 |

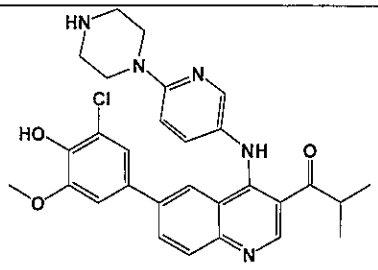
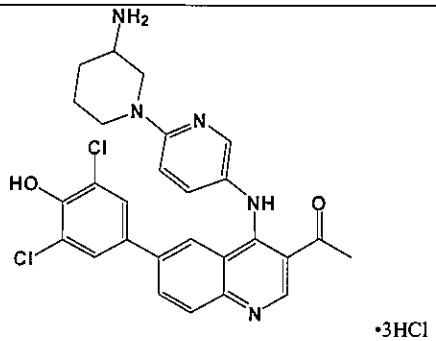
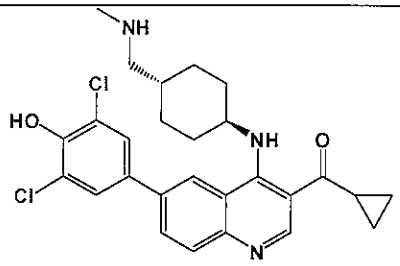
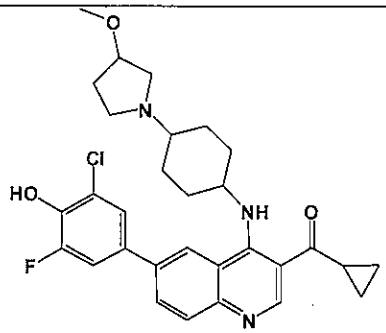
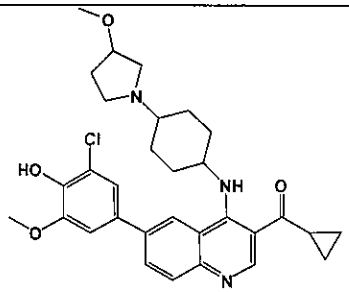
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|---|---|---|---|
| 634 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)--4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)methanone | 542 |
| 635 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)--4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)methanone hydrochloride | 542 |
| 638 |  | (4-(4-amino-4-methylcyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 484 |
| 639 |  | (4-(4-amino-4-methylcyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 480 |
| 640 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)-2-methylpropan-1-one | 504 |
| 641 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)-2-methylpropan-1-one | 508 |

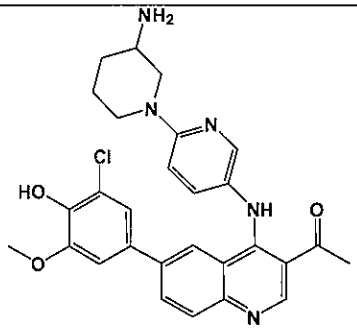
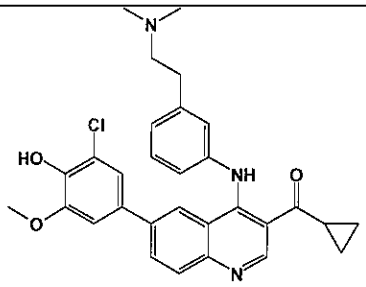
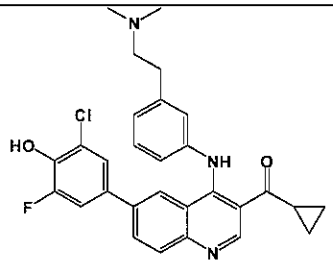
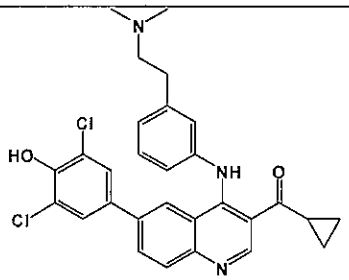
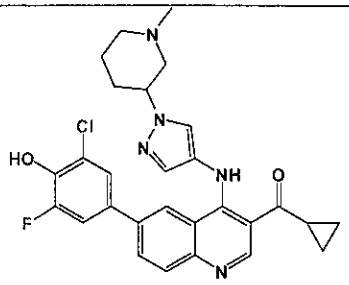
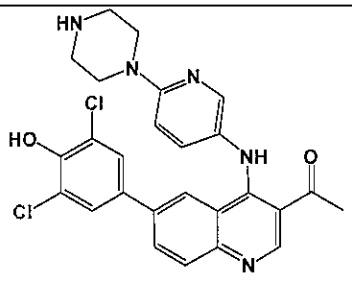
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|---|---|---|---|
| 644 |  | (4-(2-(3-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 545 |
| 646 |  | (S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 548 |
| 647 |  | (S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 548 |
| 648 |  | (S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 532 |
| 649 |  | (R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 544 |
| 650 |  | (R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 548 |

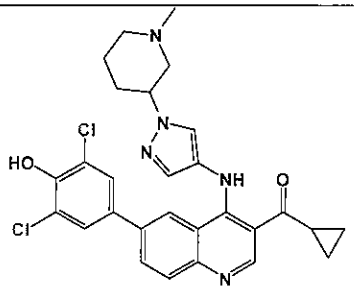
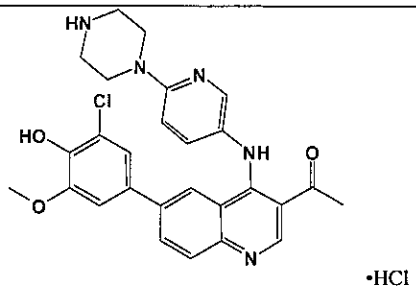
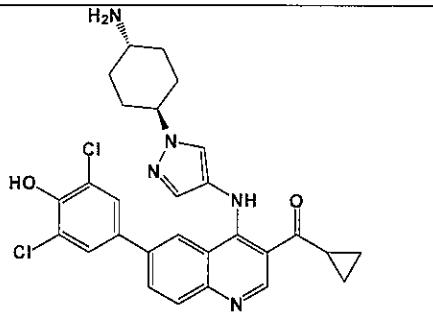
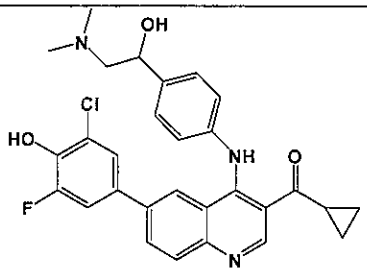
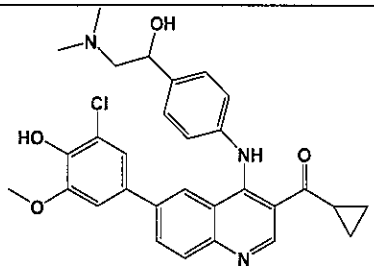
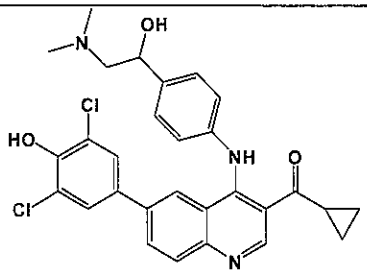
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| 651 |  | (R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 532 |
| 652 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)-4-hydroxycyclohexylamino)quinolin-3-yl)methanone | 528 |
| 653 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)ethanone | 531 |
| 654 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)ethanone | 535 |
| 655 |  •2HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((4-((4-methylpiperazin-1-yl)methyl)phenyl)amino)quinolin-3-yl)ethanone | 535 |
| 656 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)ethanone | 519 |

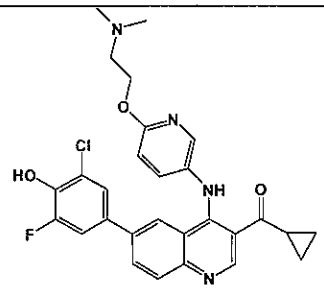
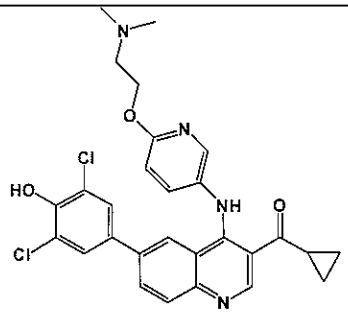
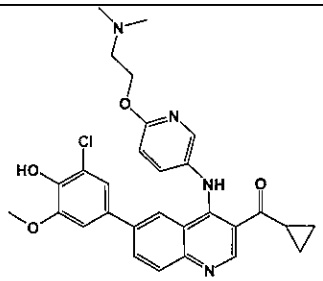
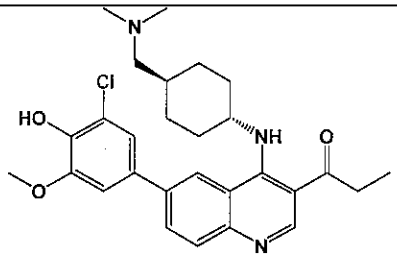
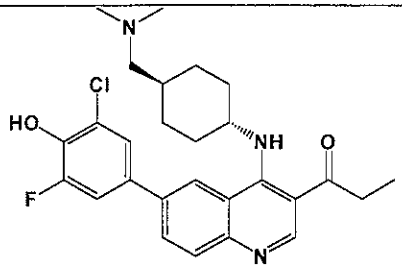
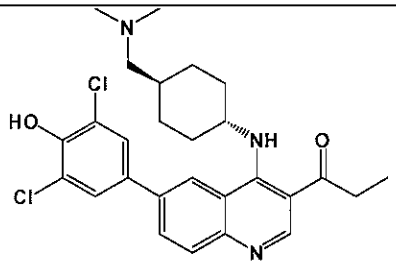
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| 657 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-((dimethylamino)methyl)pyridin-3-ylamino)quinolin-3-yl)methanone | 507 |
| 658 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(pyrrolidin-1-ylmethyl)pyridin-3-ylamino)quinolin-3-yl)methanone | 533 |
| 659 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(pyrrolidin-1-ylmethyl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 529 |
| 660 |  | (S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 544 |
| 661 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(3-methoxypyrrolidin-1-yl)cyclohexylamino)quinolin-3-yl)methanone | 555 |
| 665 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(pyrrolidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 530 |

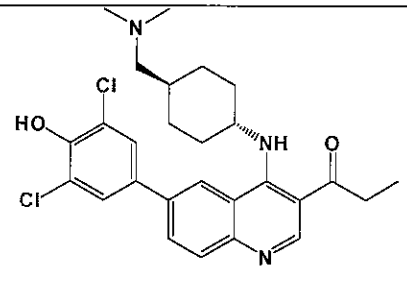
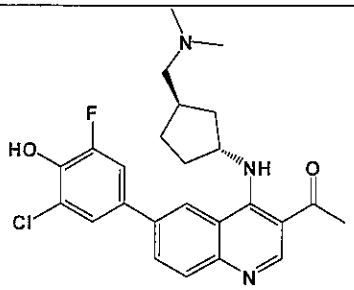
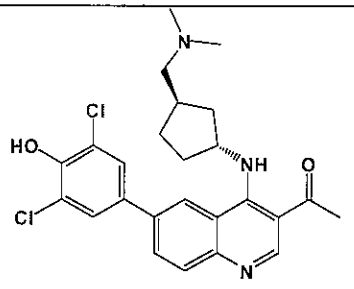
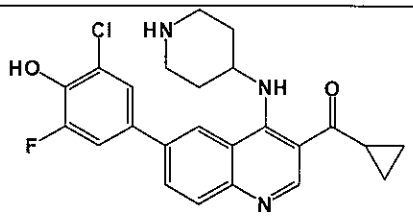
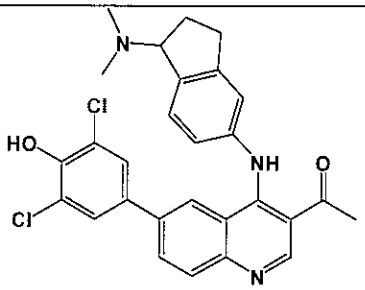
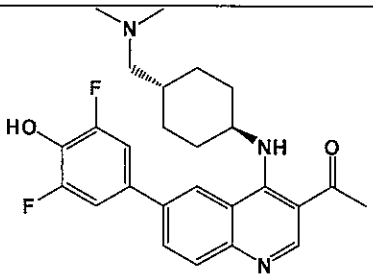
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| 666 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(pyrrolidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)methanone | 534 |
| 667 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(pyrrolidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 518 |
| 672 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(pyrrolidin-1-ylmethyl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 517 |
| 673 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)-4-hydroxycyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 512 |
| 674 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)-2-methylpropan-1-one | 520 |

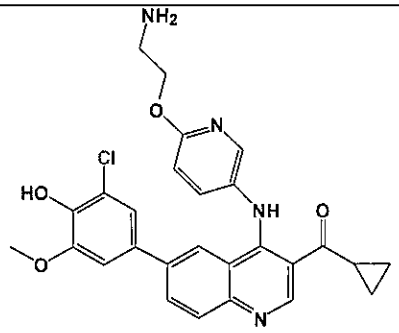
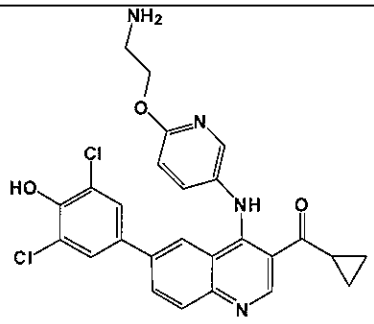
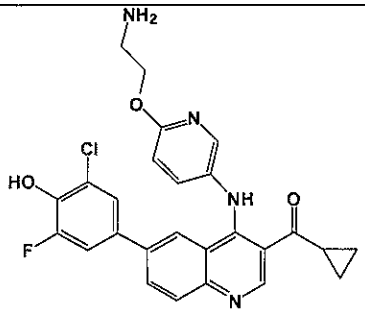
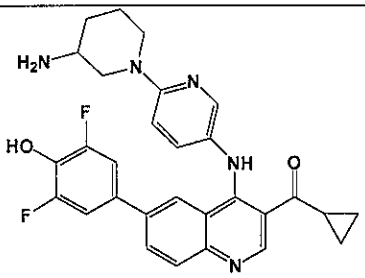
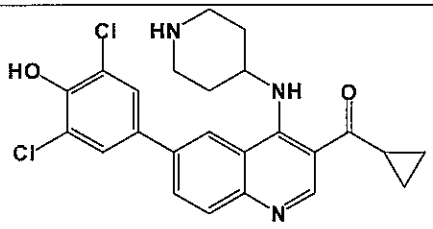
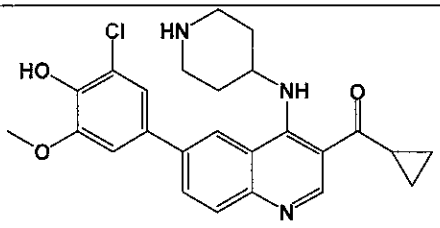
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| 680 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)-2-methylpropan-1-one | 532 |
| 681 |  •3HCl | 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)ethanone | 522 |
| 685 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((methylamino)methyl)cyclohexylamino)quinolin-3-yl)methanone | 498 |
| 686 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(3-methoxypyrrolidin-1-yl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 538 |
| 687 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(3-methoxypyrrolidin-1-yl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 550 |

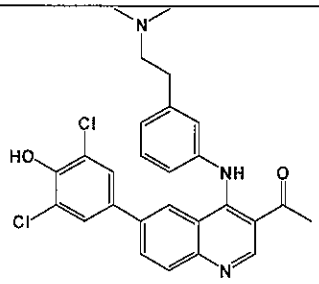
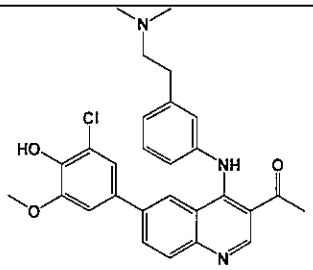
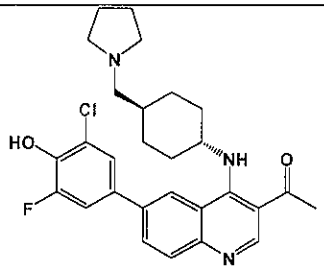
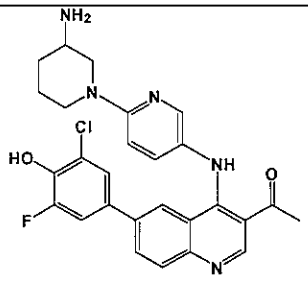
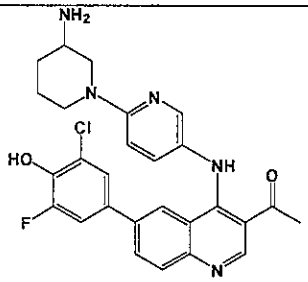
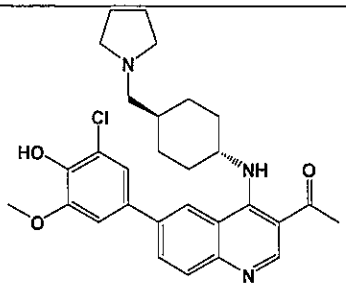
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| 688 |  | 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)ethanone | 518 |
| 692 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 516 |
| 693 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 504 |
| 698 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)methanone | 520 |
| 699 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-3-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 520 |
| 702 |  •3HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone hydrochloride | 508 |

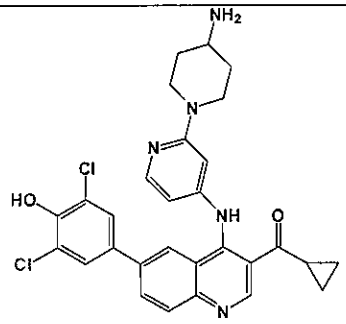
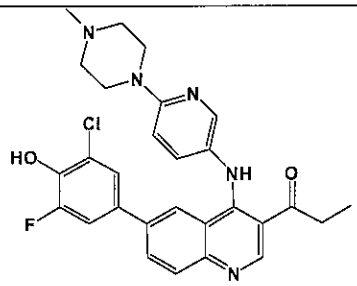
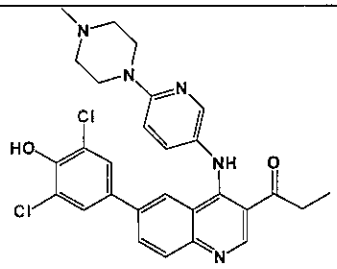
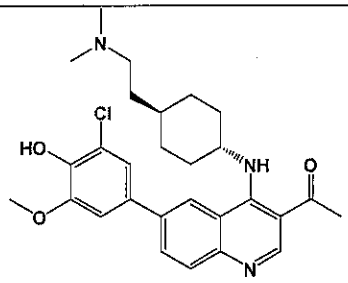
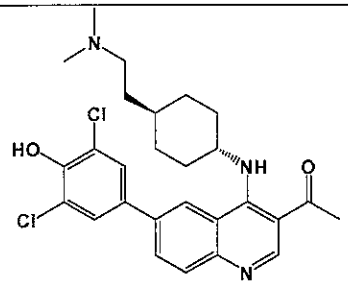
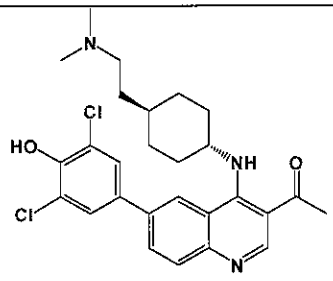
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| 703 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-3-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)methanone | 536 |
| 704 |  •HCl | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone hydrochloride | 504 |
| 706 |  •2HCl | (4-(1-(1R,4R)-4-aminocyclohexyl)-1H-pyrazol-4-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 536 |
| 707 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)-1-hydroxyethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 520 |
| 708 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(2-(dimethylamino)-1-hydroxyethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 532 |
| 709 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)-1-hydroxyethyl)phenylamino)quinolin-3-yl)methanone | 536 |

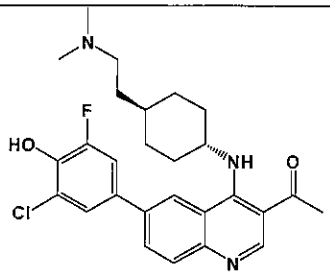
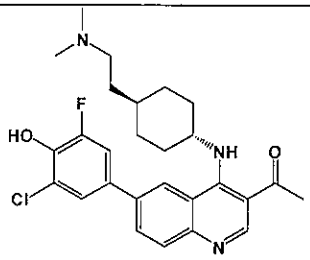
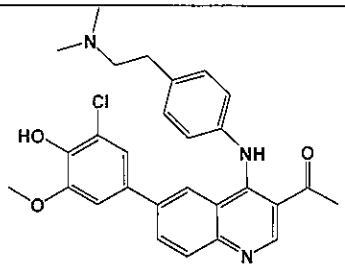
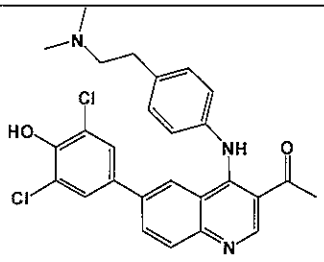
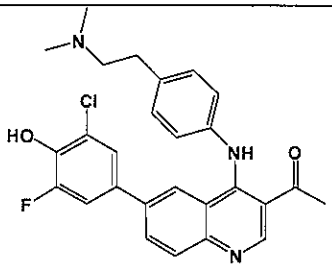
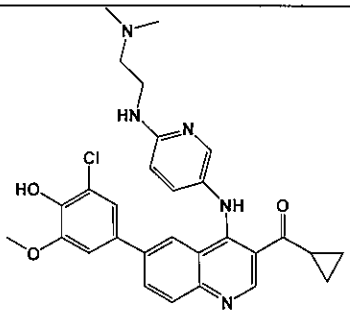
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| 710 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 521 |
| 711 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)methanone | 537 |
| 712 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 533 |
| 713 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)propan-1-one | 496 |
| 714 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)propan-1-one | 484 |
| 715 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)propan-1-one | 500 |

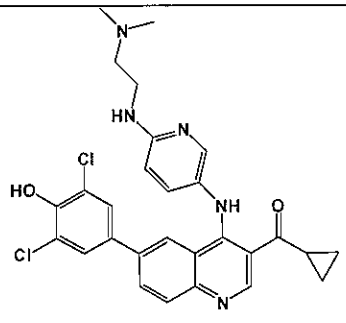
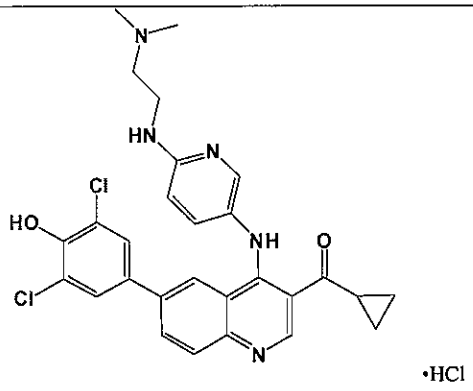
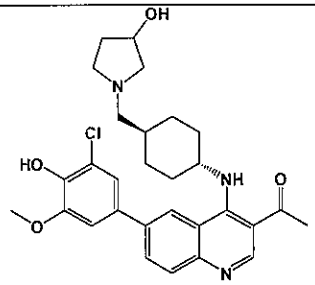
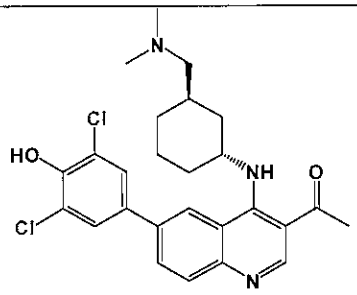
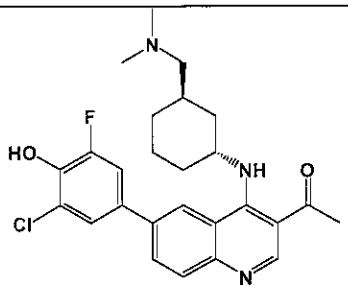
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|---|---|---|---|
| 716 |  •2HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)propan-1-one dihydrochloride | 500 |
| 717 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclopentylamino)quinolin-3-yl)ethanone | 456 |
| 718 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclopentylamino)quinolin-3-yl)ethanone | 472 |
| 719 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(piperidin-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 440 |
| 720 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(dimethylamino)-2,3-dihydro-1H-inden-5-ylamino)quinolin-3-yl)ethanone | 506 |
| 721 |  | 1-(6-(3,5-difluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 454 |

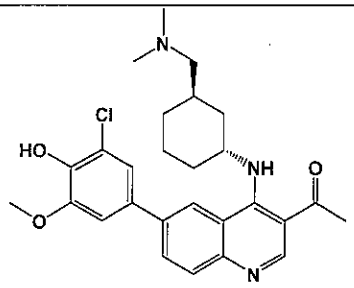
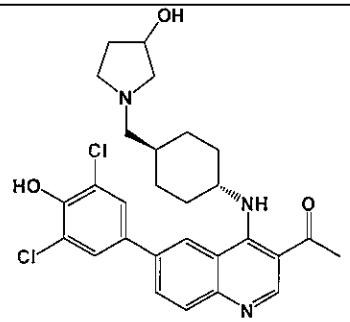
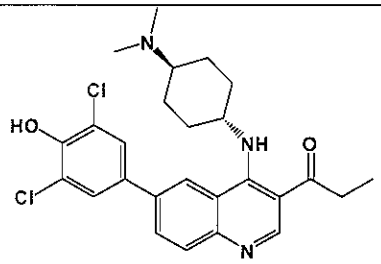
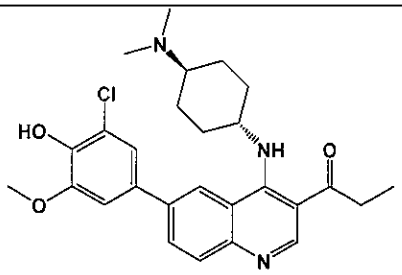
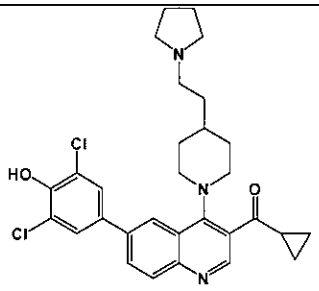
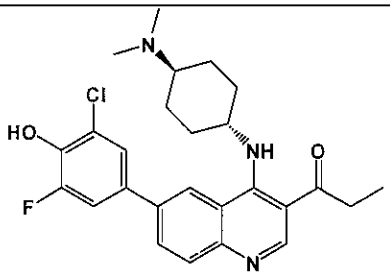
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|---|---|---|---|
| 722 |  | (4-(6-(2-aminoethoxy)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 505 |
| 723 |  | (4-(6-(2-aminoethoxy)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 509 |
| 724 |  | (4-(6-(2-aminoethoxy)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 493 |
| 725 |  | (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-difluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 516 |
| 726 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(piperidin-4-ylamino)quinolin-3-yl)methanone | 456 |
| 727 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(piperidin-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 452 |

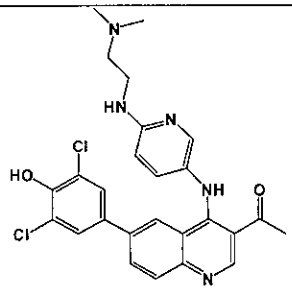
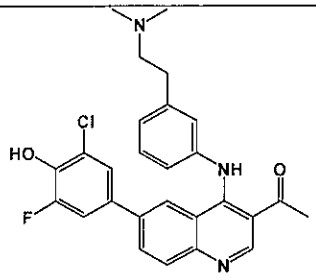
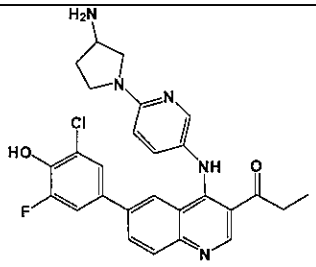
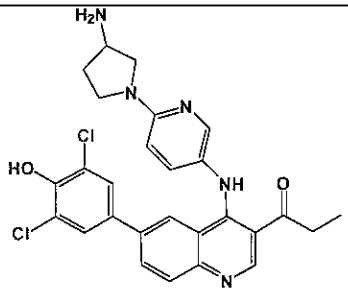
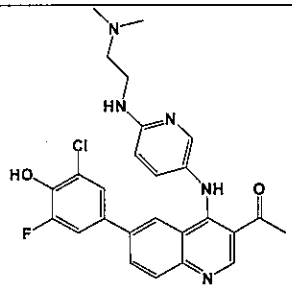
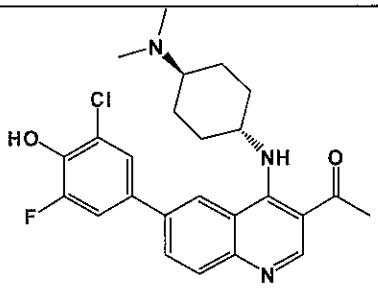
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|---|---|---|---|
| 729 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone | 494 |
| 730 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone | 490 |
| 731 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone | 496 |
| 732 |  | 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone | 506 |
| 733 |  | 1-(4-((6-(3-aminopiperidin-1-yl)pyridin-3-yl)amino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone | 506 |
| 734 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone | 508 |

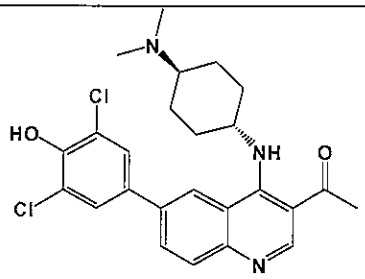
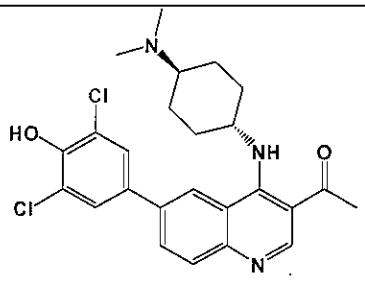
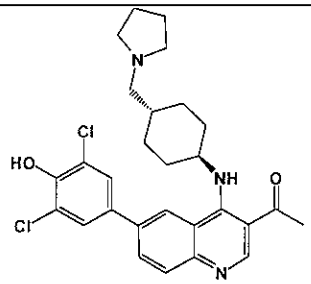
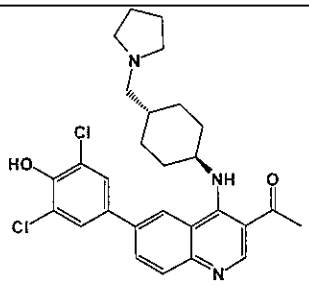
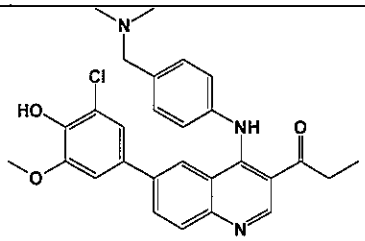
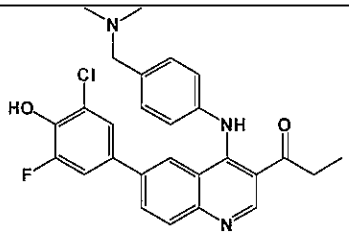
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|---|---|---|---|
| 735 |  | (4-(2-(4-aminopiperidin-1-yl)pyridin-4-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 548 |
| 736 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)propan-1-one | 520 |
| 737 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)propan-1-one | 536 |
| 738 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexylamino)quinolin-3-yl)ethanone | 496 |
| 739 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexylamino)quinolin-3-yl)ethanone | 500 |
| 740 |  •2HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 500 |

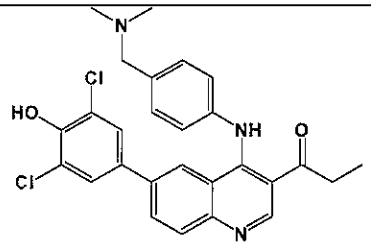
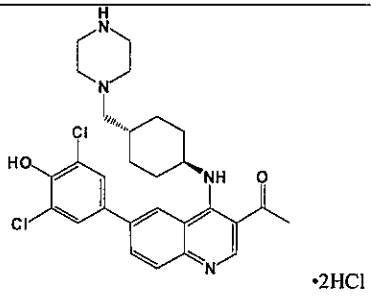
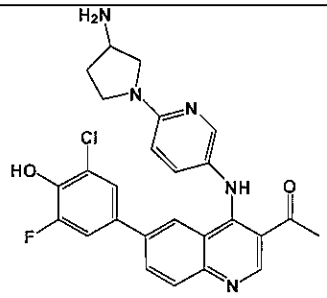
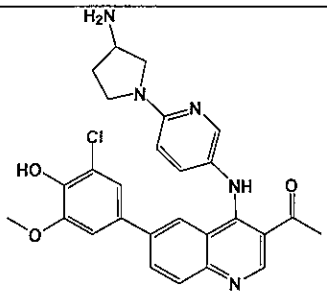
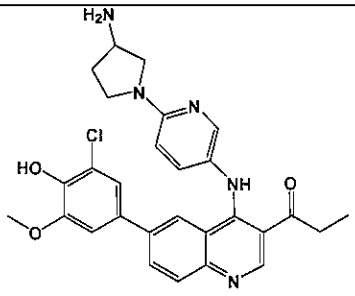
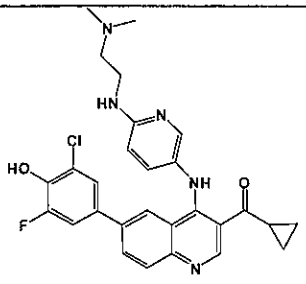
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|---|---|---|---|
| 741 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexylamino)quinolin-3-yl)ethanone | 484 |
| 742 |  •2HCl | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexylamino)quinolin-3-yl)ethanone **di**hydrochloride | 484 |
| 743 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone | 490 |
| 744 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone | 494 |
| 745 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone | 478 |
| 746 |  | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 532 |

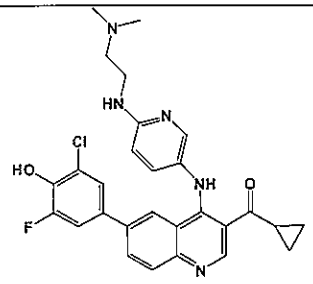
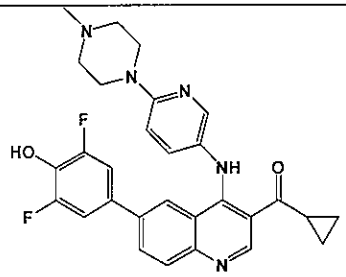
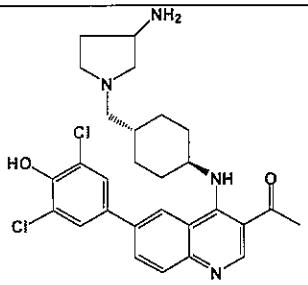
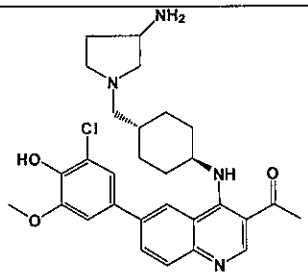
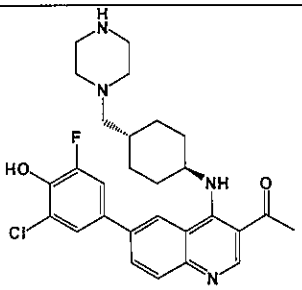
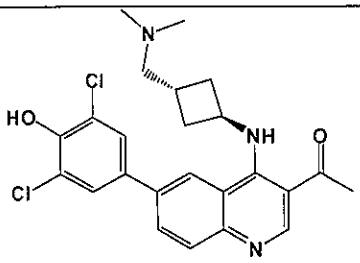
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|---|---|---|---|
| 747 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)methanone | 536 |
| 748 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)methanone hydrochloride | 536 |
| 749 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 524 |
| 750 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 486 |
| 751 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 470 |

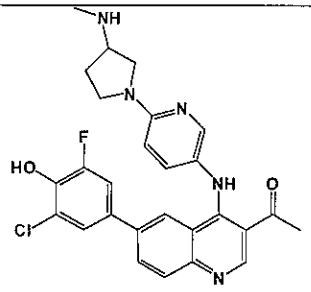
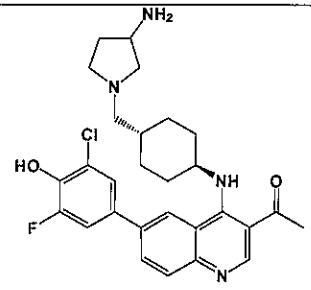
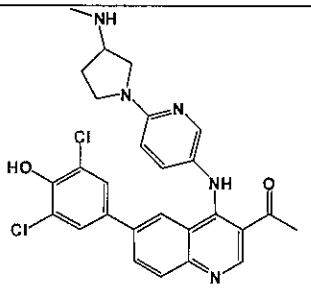
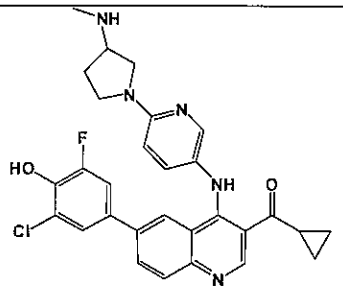
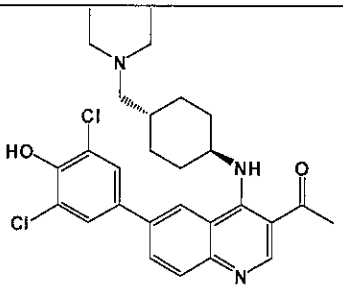
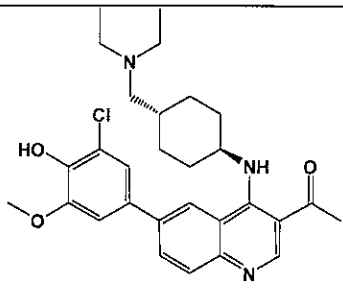
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| 752 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 482 |
| 753 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 528 |
| 754 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)propan-1-one | 486 |
| 755 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)propan-1-one | 482 |
| 756 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl)piperidin-1-yl)quinolin-3-yl)methanone | 539 |
| 757 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)propan-1-one | 470 |

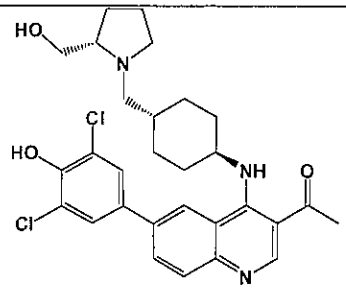
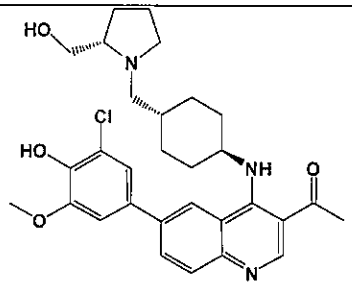
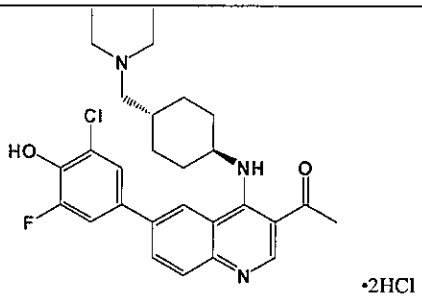
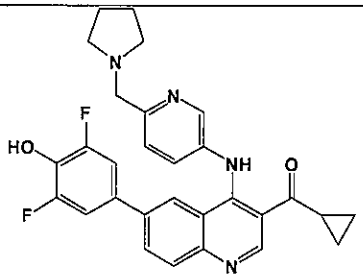
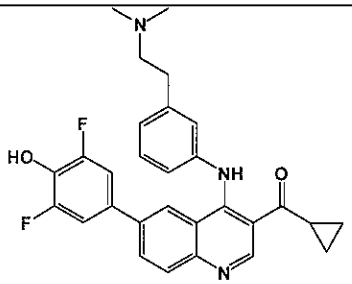
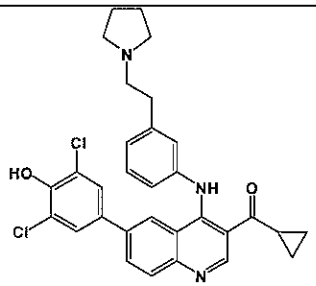
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| 758 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)ethanone | 510 |
| 759 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone | 478 |
| 760 |  | 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one | 506 |
| 761 |  | 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one | 522 |
| 762 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)ethanone | 494 |
| 763 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)ethanone | 456 |

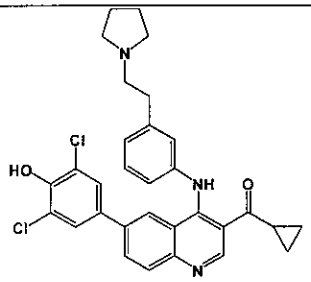
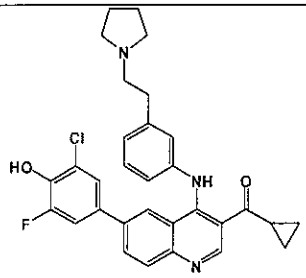
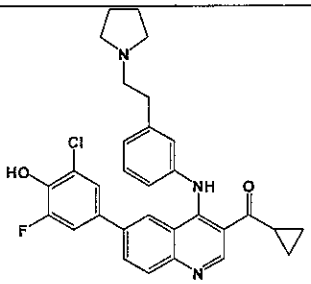
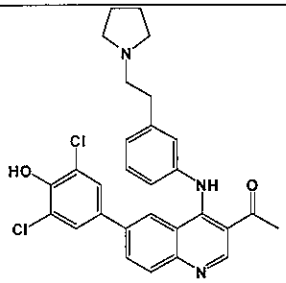
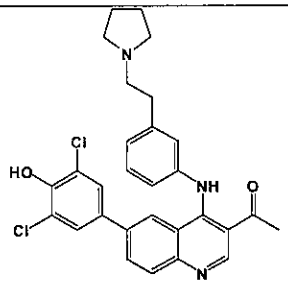
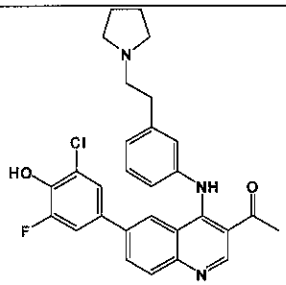
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| 765 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)ethanone | 472 |
| 766 |  •2HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-(dimethylamino)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 472 |
| 767 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone | 512 |
| 768 |  •2HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 512 |
| 769 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)propan-1-one | 490 |
| 770 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)propan-1-one | 478 |

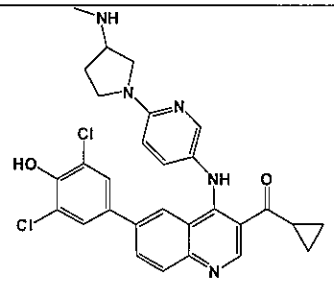
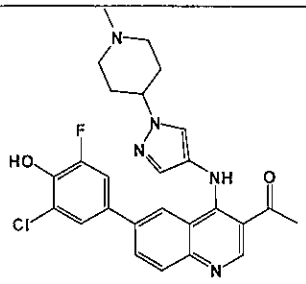
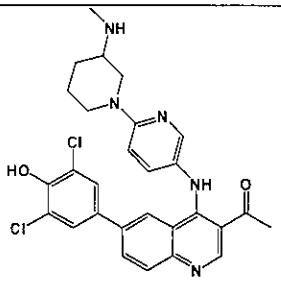
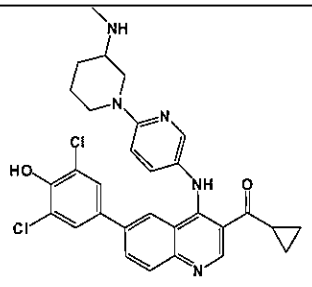
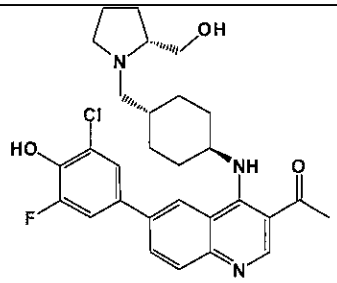
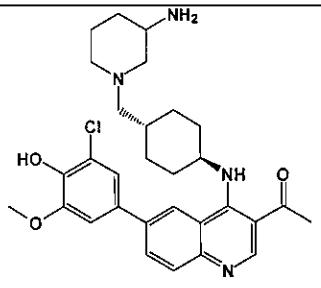
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| 771 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)propan-1-one | 494 |
| 772 |  •2HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(piperazin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 527 |
| 773 |  | 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone | 492 |
| 774 |  | 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)ethanone | 504 |
| 775 |  | 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)propan-1-one | 518 |
| 776 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 520 |

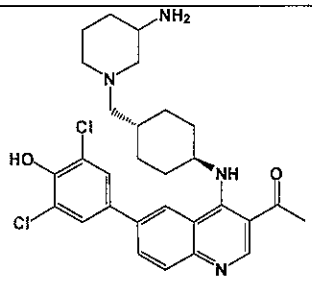
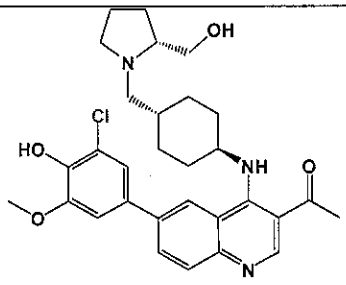
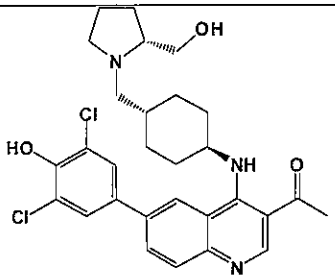
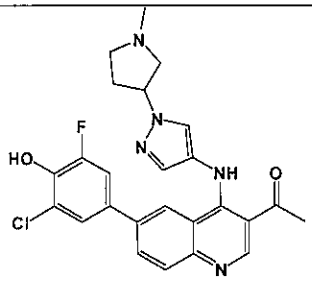
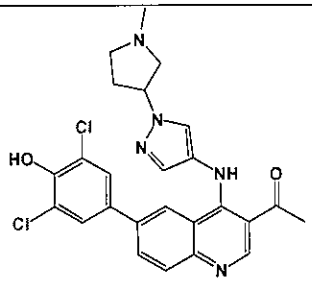
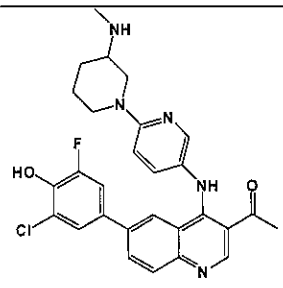
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|---|---|---|---|
| 777 |  •3HCl | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone trihydrochloride | 520 |
| 778 |  | cyclopropyl(6-(3,5-difluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone | 516 |
| 779 |  •HCl | 1-(4-(1R,4R)-4-((3-aminopyrrolidin-1-yl)methyl)cyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)ethanone hydrochloride | 527 |
| 780 |  •HCl | 1-(4-(1R,4R)-4-((3-aminopyrrolidin-1-yl)methyl)cyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)ethanone hydrochloride | 523 |
| 783 |  •2HCl | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(piperazin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 511 |
| 784 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1r,3r)-3-((dimethylamino)methyl)cyclobutylamino)quinolin-3-yl)ethanone | 458 |

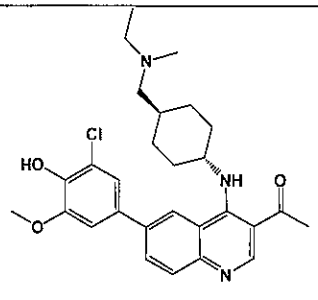
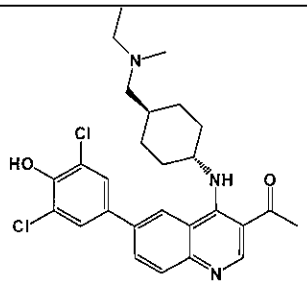
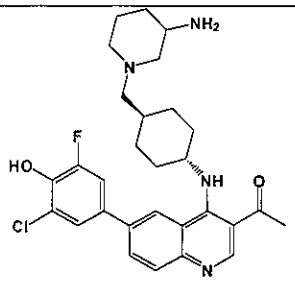
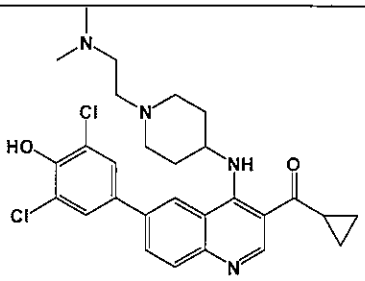
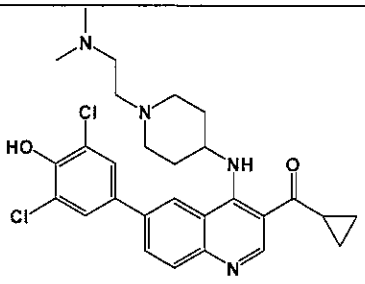
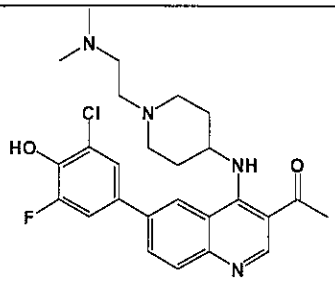
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|---|---|---|---|
| 785 |  •3HCl | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(3-(methylamino)pyrrolidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone trihydrochloride | 506 |
| 786 |  •HCl | 1-(4-(1R,4R)-4-((3-aminopyrrolidin-1-yl)methyl)cyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone hydrochloride | 511 |
| 788 |  •3HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(3-(methylamino)pyrrolidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone trihydrochloride | 522 |
| 789 |  •3HCl | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(3-(methylamino)pyrrolidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone trihydrochloride | 532 |
| 790 |  •2HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((diethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 514 |
| 791 |  •HCl | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((diethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride | 510 |

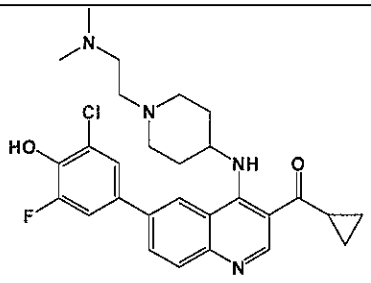
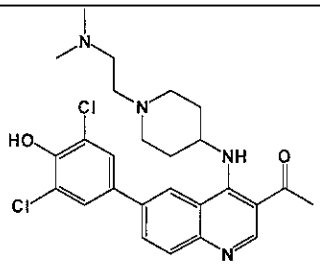
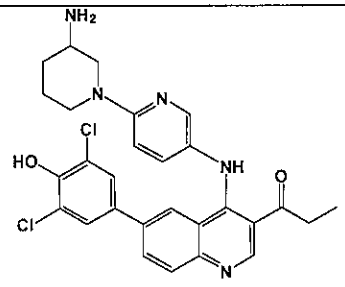
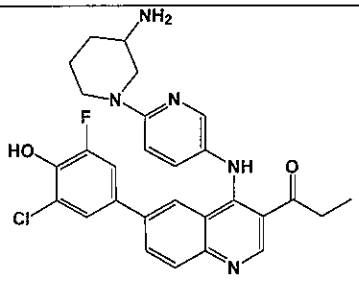
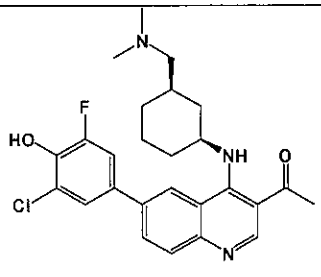
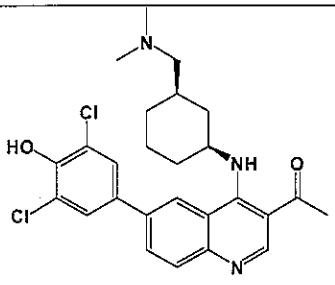
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|---|---|---|---|
| 792 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1S,4R)-4-(((S)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 542 |
| 793 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1S,4R)-4-(((S)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 538 |
| 794 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((diethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 498 |
| 795 |  | cyclopropyl(6-(3,5-difluoro-4-hydroxyphenyl)-4-(6-(pyrrolidin-1-ylmethyl)pyridin-3-ylamino)quinolin-3-yl)methanone | 501 |
| 796 |  | cyclopropyl(6-(3,5-difluoro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)methanone | 488 |
| 797 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)methanone | 546 |

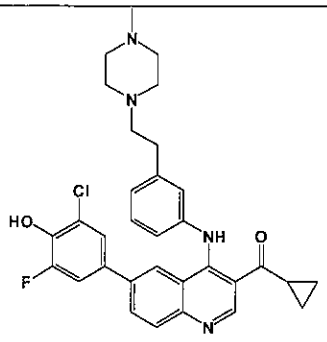
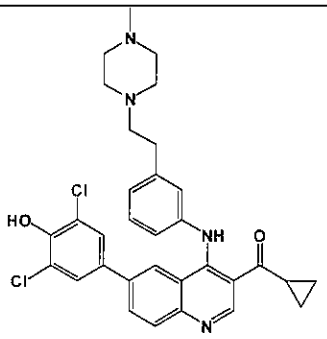
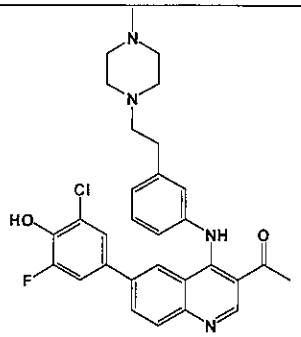
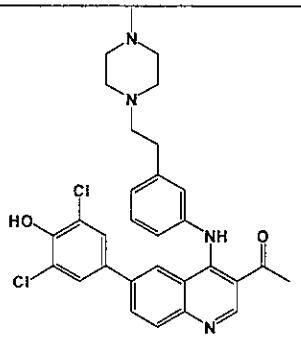
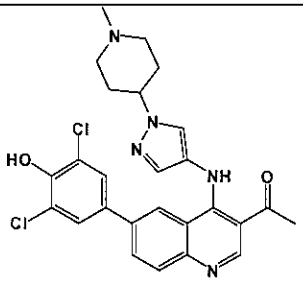
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|---|---|---|---|
| 798 |  •2HCl | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)methanone hydrochloride | 546 |
| 799 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 530 |
| 800 |  •2HCl | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 530 |
| 801 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)ethanone | 520 |
| 802 |  •2HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-3-yl)ethanone hydrochloride | 520 |
| 803 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)ethanone | 504 |

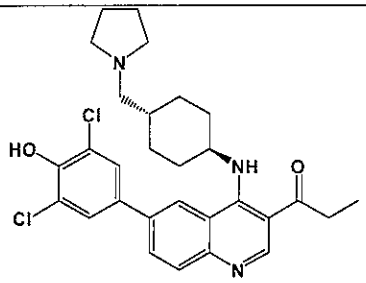
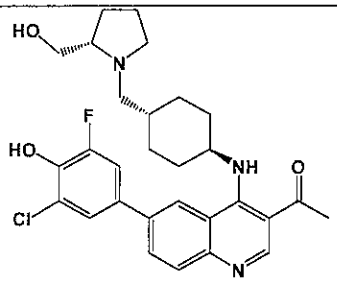
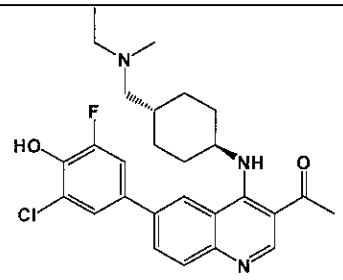
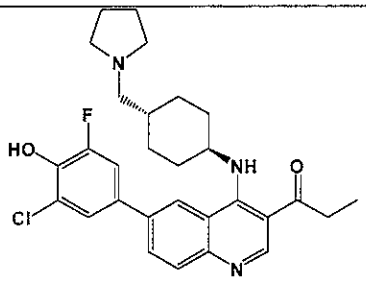
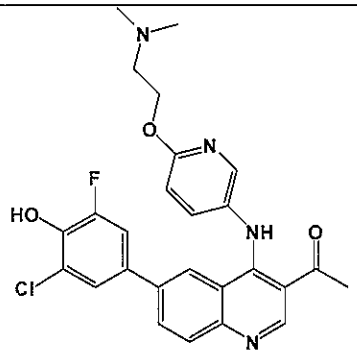
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| 804 |  •3HCl | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(3-(methylamino)pyrrolidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone trihydrochloride | 548 |
| 805 |  •HCl | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)ethanone hydrochloride | 494 |
| 806 |  •3HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(3-(methylamino)piperidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone trihydrochloride | 536 |
| 807 |  •3HCl | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(3-(methylamino)piperidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone trihydrochloride | 562 |
| 808 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(((R)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride | 526 |
| 809 |  •HCl | 1-(4-(1R,4R)-4-((3-aminopiperidin-1-yl)methyl)cyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)ethanone hydrochloride | 537 |

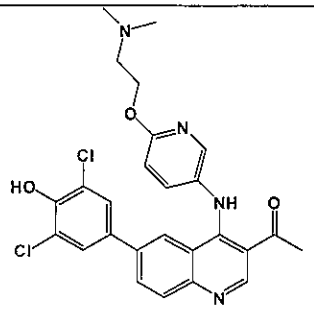
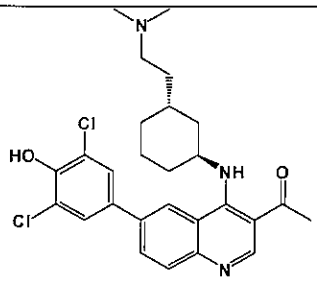
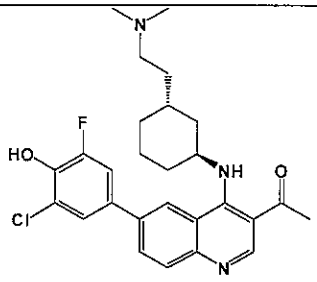
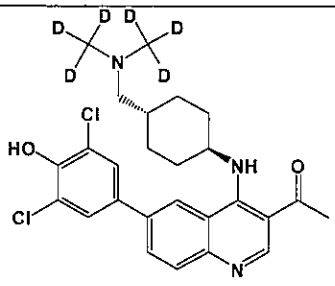
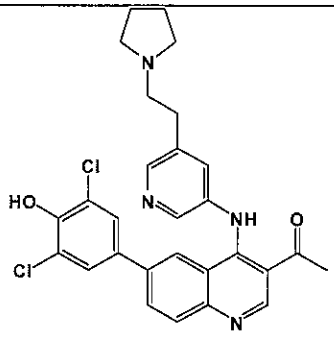
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|---|---|---|---|
| 810 |  •3HCl | 1-(4-(1R,4R)-4-((3-aminopiperidin-1-yl)methyl)cyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)ethanone trihydrochloride | 542 |
| 811 |  | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(((R)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 538 |
| 812 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(((R)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 542 |
| 813 |  •2HCl | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(1-methylpyrrolidin-3-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)ethanone dihydrochloride | 480 |
| 814 |  •2HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(1-methylpyrrolidin-3-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)ethanone dihydrochloride | 496 |
| 815 |  •3HCl | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(3-(methylamino)piperidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone trihydrochloride | 520 |

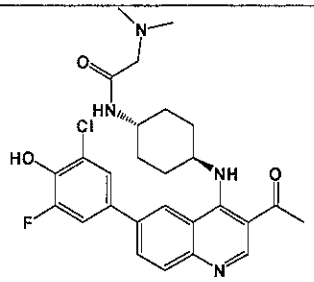
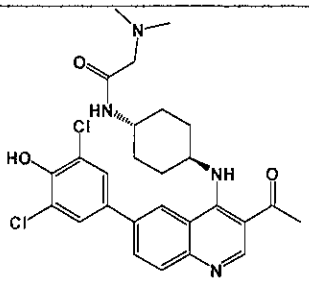
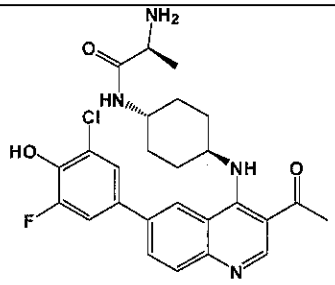
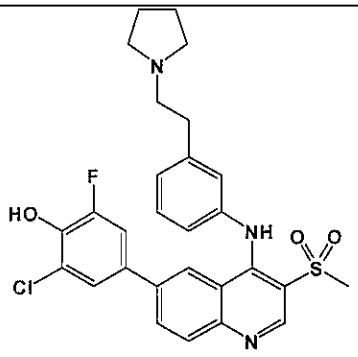
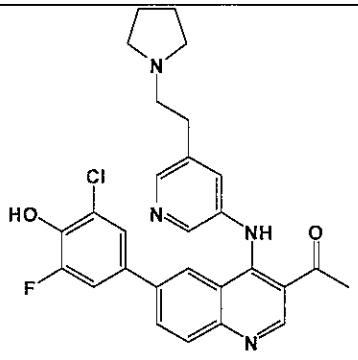
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| 816 |  •HCl | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((ethyl(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride | 496 |
| 817 |  •2HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((ethyl(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 500 |
| 818 |  •3HCl | 1-(4-(1R,4R)-4-((3-aminopiperidin-1-yl)methyl)cyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone trihydrochloride | 525 |
| 819 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)methanone | 527 |
| 820 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)methanone | 527 |
| 821 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)ethanone | 485 |

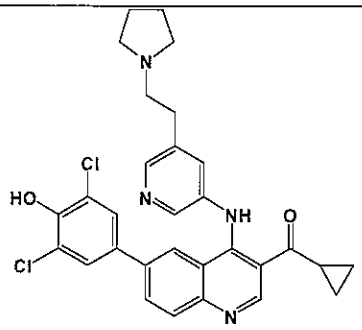
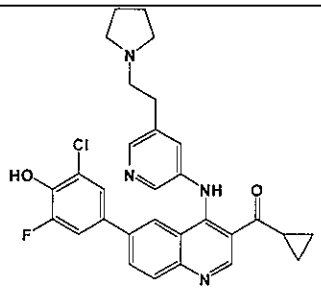
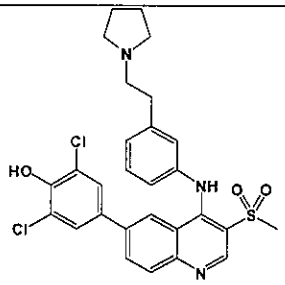
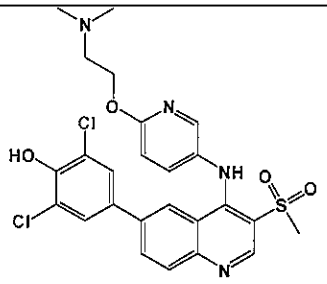
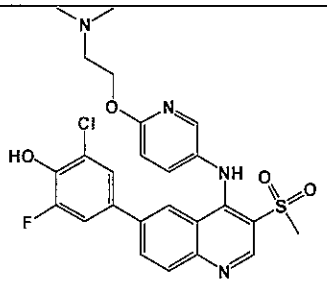
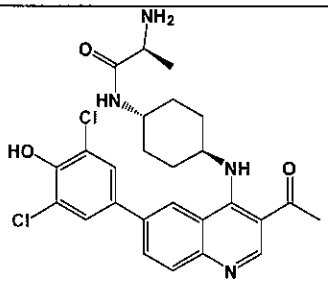
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| 822 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 511 |
| 823 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)ethanone | 501 |
| 824 |  •3HCl | 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one trihydrochloride | 536 |
| 825 |  •3HCl | 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one trihydrochloride | 520 |
| 826 |  •HCl | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1S,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride | 470 |
| 827 |  •HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1S,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride | 486 |

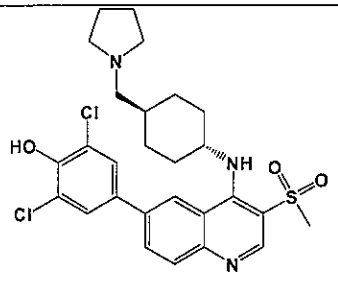
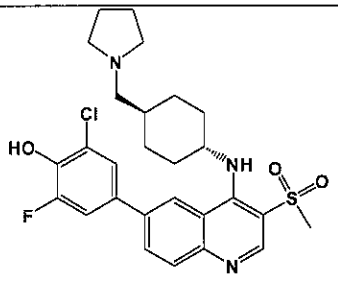
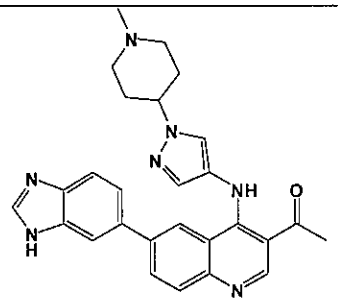
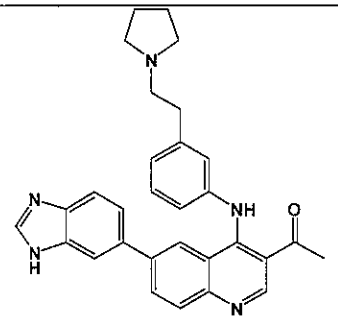
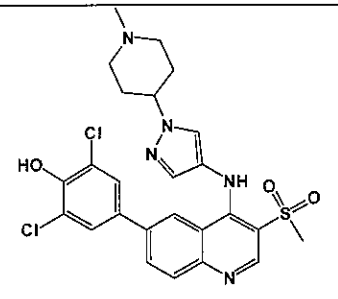
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|---|---|---|---|
| 828 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(4-methylpiperazin-1-yl)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 559 |
| 829 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(4-methylpiperazin-1-yl)ethyl)phenylamino)quinolin-3-yl)methanone | 576 |
| 830 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(4-methylpiperazin-1-yl)ethyl)phenylamino)quinolin-3-yl)ethanone | 533 |
| 831 |  | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(4-methylpiperazin-1-yl)ethyl)phenylamino)quinolin-3-yl)ethanone | 549 |
| 836 |  •2HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)ethanone dihydrochloride | 510 |

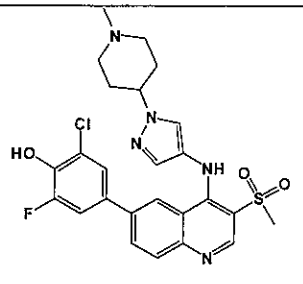
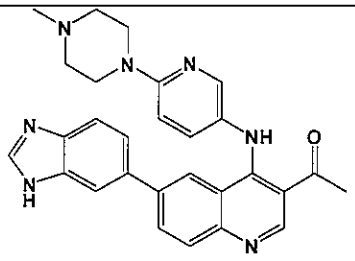
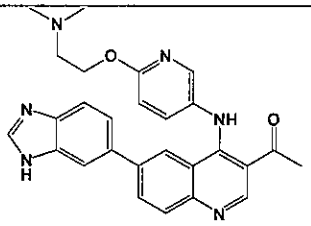
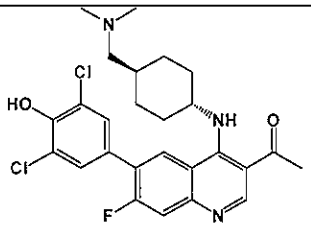
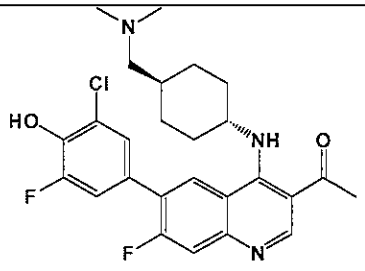
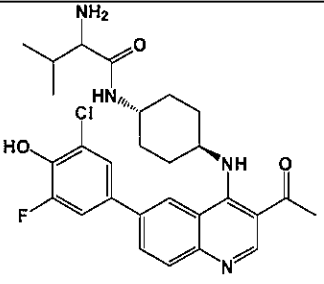
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|---|---|---|---|
| 843 |  •2HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)propan-1-one dihydrochloride | 526 |
| 844 |  | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1S,4r)-4-(((S)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 526 |
| 845 |  •2HCl | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((ethyl(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 484 |
| 846 |  •2HCl | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)propan-1-one dihydrochloride | 510 |
| 848 |  •HCl | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)ethanone hydrochloride | 495 |

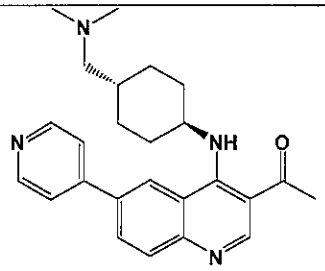
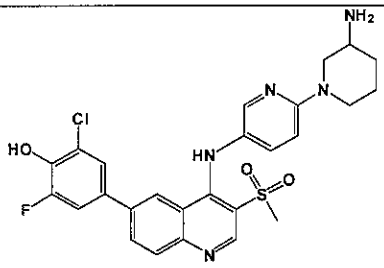
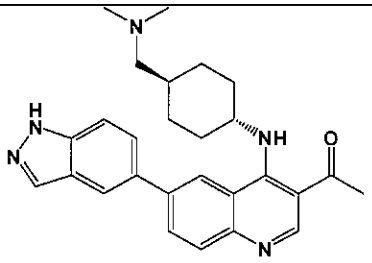
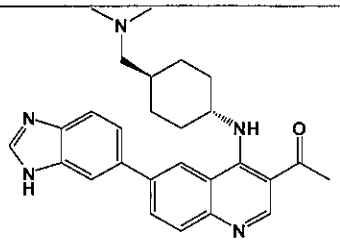
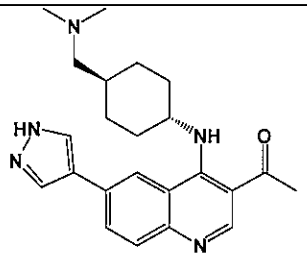
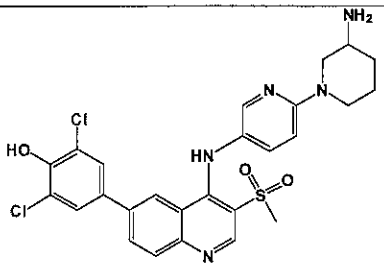
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|---|---|---|---|
| 852 |  •2HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)ethanone dihydrochloride | 511 |
| 861 |  •HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(((1S,3R)-3-(2-(dimethylamino)ethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 500 |
| 862 |  •HCl | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(((1S,3R)-3-(2-(dimethylamino)ethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 484 |
| 864 |  •2HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((bis-(trideuteromethyl)amino)methyl)cyclohexyl)amino)quinolin-3-yl)ethanone dihydrochloride | 492 |
| 873 |  •HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((5-(2-(pyrrolidin-1-yl)ethyl)pyridin-3-yl)amino)quinolin-3-yl)ethanone hydrochloride | 521 |

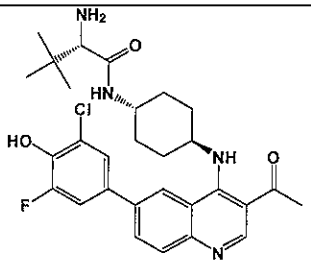
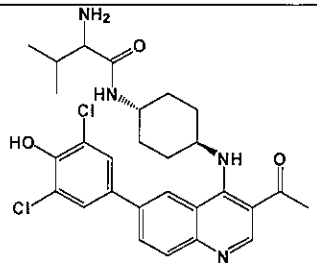
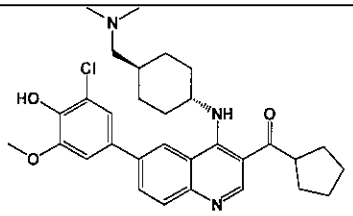
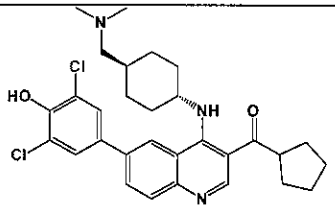
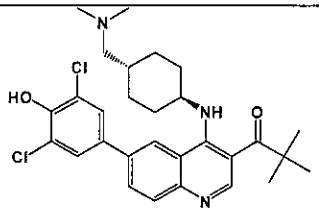
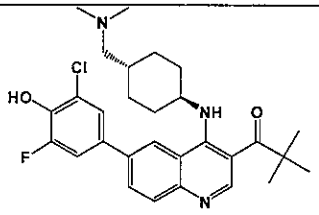
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| 876 |  •2HCl | N-(1R,4R)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-(dimethyl amino)acetamide dihydrochloride | 513 |
| 877 |  •HCl | N-(1R,4R)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl) amino)cyclohexyl)-2-(dimethylamino)acetamide hydrochloride | 529 |
| 878 |  •2HCl | (S)-N-((1r,4S)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-amino propanamide dihydrochloride | 499 |
| 879 |  •HCl | 2-chloro-6-fluoro-4-(3-(methylsulfonyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl) phenyl)amino)quinolin-6-yl)phenol hydrochloride | 540 |
| 880 |  •HCl | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((5-(2-(pyrrolidin-1-yl)ethyl) pyridin-3-yl)amino)quinolin-3-yl)ethanone hydrochloride | 505 |

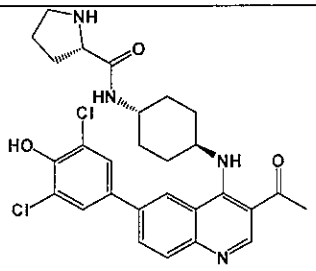
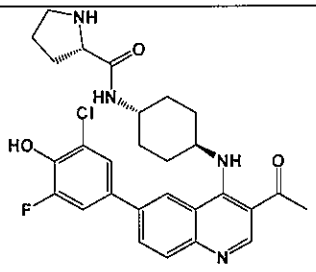
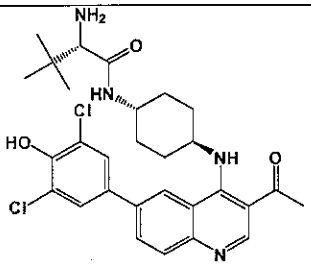
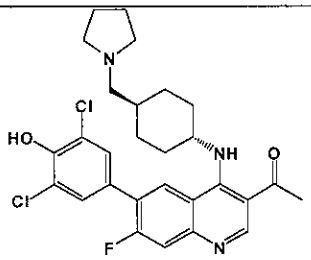
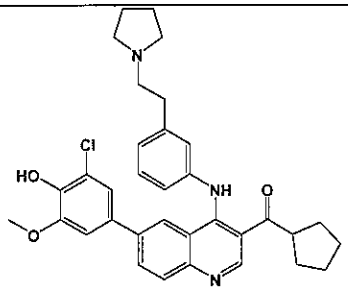
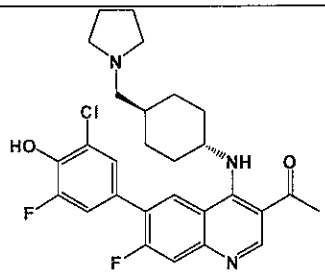
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|---|---|---|---|
| 881 |  | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((5-(2-(pyrrolidin-1-yl)ethyl)pyridin-3-yl)amino)quinolin-3-yl)methanone | 547 |
| 882 |  | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((5-(2-(pyrrolidin-1-yl)ethyl)pyridin-3-yl)amino)quinolin-3-yl)(cyclopropyl)methanone | 531 |
| 883 |  •HCl | 2,6-dichloro-4-(3-(methylsulfonyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-6-yl)phenol hydrochloride | 557 |
| 884 |  •HCl | 2,6-dichloro-4-(4-((6-(2-(dimethylamino)ethoxy)pyridin-3-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)phenol hydrochloride | 547 |
| 885 |  •HCl | 2-chloro-4-(4-((6-(2-(dimethylamino)ethoxy)pyridin-3-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)-6-fluorophenol hydrochloride | 531 |
| 886 |  •2HCl | (S)-N-((1r,4S)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-aminopropanamide dihydrochloride | 515 |

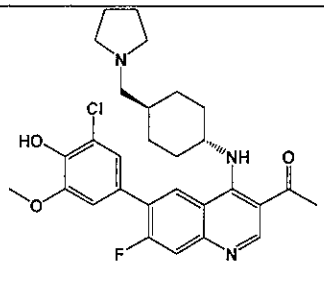
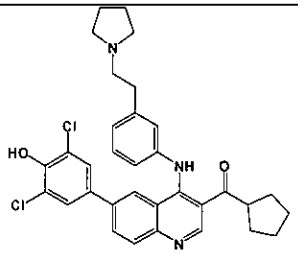
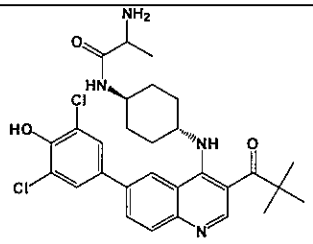
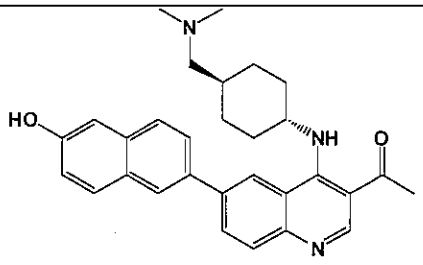
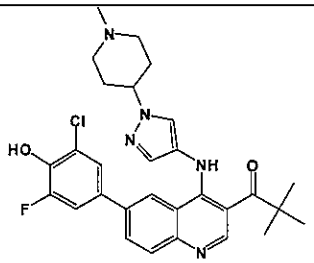
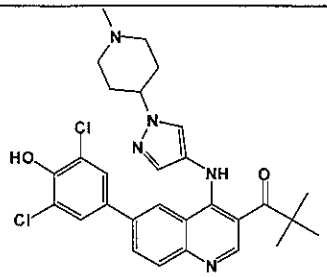
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|---|---|---|---|
| 890 |  •HCl | 2,6-dichloro-4-(3-(methylsulfonyl)-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl) cyclohexyl)amino)quinolin-6-yl)phenol hydrochloride | 549 |
| 891 |  •HCl | 2-chloro-6-fluoro-4-(3-(methylsulfonyl)-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-6-yl)phenol hydrochloride | 532 |
| 895 |  •HCl | 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)quinolin-3-yl)ethanone hydrochloride | 466 |
| 896 |  •HCl | 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-3-yl)ethanone hydrochloride | 476 |
| 899 |  •HCl | 2,6-dichloro-4-(4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)phenol hydrochloride | 546 |

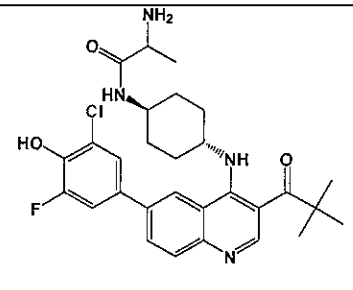
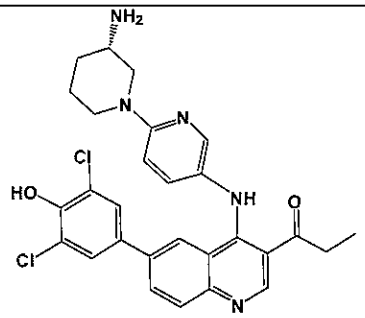
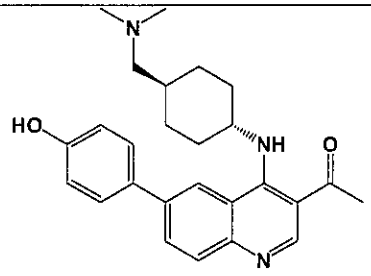
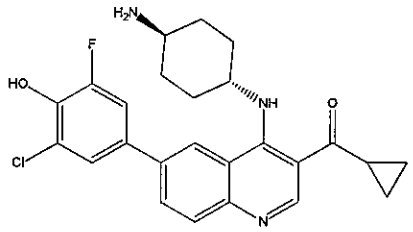
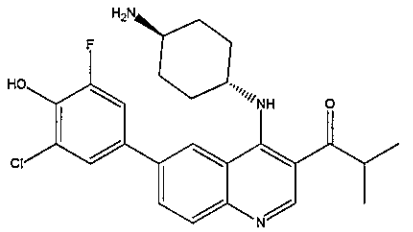
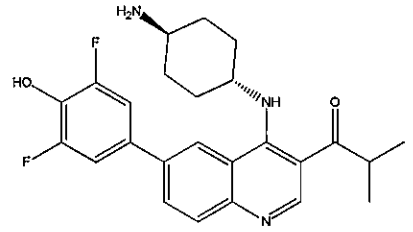
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|---|---|---|---|
| 900 |  •HCl | 2-chloro-6-fluoro-4-(4-((1-(1-methyl piperidin-4-yl)-1H-pyrazol-4-yl)amino)-3-(methylsulfonyl)quinolin-6-yl) phenol hydrochloride | 530 |
| 901 |  •HCl | 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((6-(4-methylpiperazin-1-yl)pyridin-3-yl)amino)quinolin-3-yl)ethanone hydrochloride | 478 |
| 902 |  •HCl | 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((6-(2-(dimethylamino)ethoxy)pyridin-3-yl)amino)quinolin-3-yl)ethanone hydrochloride | 467 |
| 903 |  •HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-7-fluoroquinolin-3-yl)ethanone hydrochloride | 504 |
| 904 |  •HCl | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-7-fluoroquinolin-3-yl)ethanone hydrochloride | 488 |
| 907 |  •2HCl | N-(1R,4R)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-amino-3-methylbutanamide dihydrochloride | 527 |

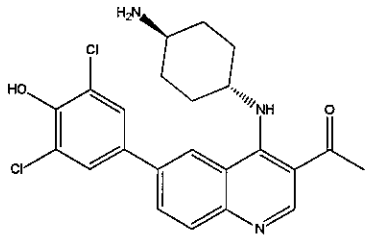
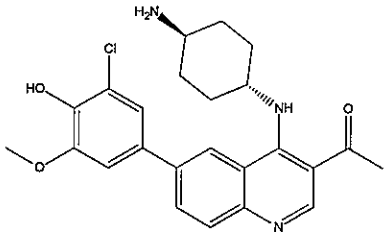
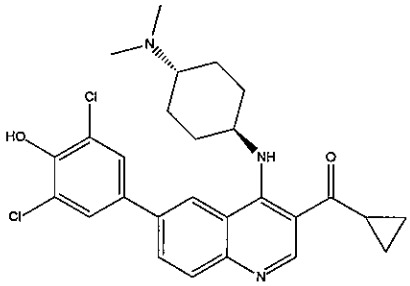
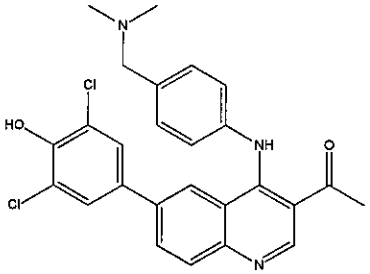
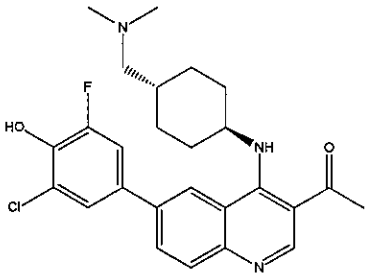
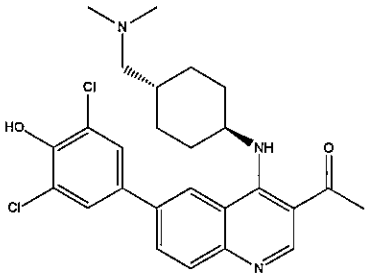
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|---|---|---|---|
| 908 |  •HCl | 1-(4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-6-(pyridin-4-yl)quinolin-3-yl)ethanone hydrochloride | 403 |
| 909 |  •3HCl | 4-(4-((6-(3-aminopiperidin-1-yl)pyridin-3-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)-2-chloro-6-fluorophenol trihydrochloride | 542 |
| 910 |  •HCl | 1-(4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-6-(1H-indazol-5-yl)quinolin-3-yl)ethanone hydrochloride | 442 |
| 911 |  •HCl | 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 442 |
| 912 |  •HCl | 1-(4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-6-(1H-pyrazol-4-yl)quinolin-3-yl)ethanone hydrochloride | 392 |
| 913 |  •3HCl | 4-(4-((6-(3-aminopiperidin-1-yl)pyridin-3-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)-2,6-dichlorophenol trihydrochloride | 558 |

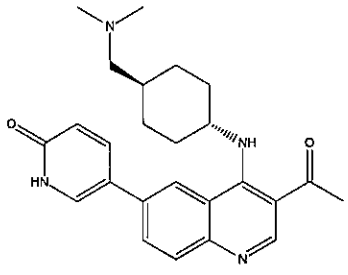
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| 914 |  •HCl | (S)-N-((1r,4S)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-amino-3,3-dimethylbutanamide hydrochloride | 541 |
| 915 |  •2HCl | N-(1R,4R)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-amino-3-methylbutanamide dihydrochloride | 543 |
| 916 |  •HCl | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)(cyclopentyl)methanone hydrochloride | 536 |
| 917 |  •HCl | cyclopentyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)methanone hydrochloride | 541 |
| 918 |  •HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)-2,2-dimethylpropan-1-one hydrochloride | 529 |
| 919 |  •HCl | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)-2,2-dimethylpropan-1-one hydrochloride | 512 |

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|---|---|---|---|
| 920 |  •2HCl | (S)-N-((1r,4S)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)pyrrolidine-2-carboxamide dihydrochloride | 541 |
| 921 |  •2HCl | (S)-N-((1r,4S)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)pyrrolidine-2-carboxamide dihydrochloride | 525 |
| 922 |  •HCl | (S)-N-((1r,4S)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-amino-3,3-dimethylbutanamide hydrochloride | 558 |
| 923 |  •HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-7-fluoro-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 530 |
| 924 |  •HCl | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-3-yl)(cyclopentyl)methanone hydrochloride | 570 |
| 925 |  •HCl | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-7-fluoro-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 514 |

| | | | |
|---|---|---|---|
| 926 |  •HCl | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-7-fluoro-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 526 |
| 927 |  •HCl | cyclopentyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-3-yl)methanone hydrochloride | 575 |
| 928 |  •HCl | 2-amino-N-((1R,4R)-4-((6-(3,5-dichloro-4-hydroxyphenyl)-3-pivaloylquinolin-4-yl)amino)cyclohexyl)propanamide hydrochloride | 558 |
| 929 |  •HCl | 1-(4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-6-(6-hydroxynaphthalen-2-yl)quinolin-3-yl)ethanone hydrochloride | 468 |
| 930 |  •HCl | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)quinolin-3-yl)-2,2-dimethylpropan-1-one hydrochloride | 536 |
| 931 |  •HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)quinolin-3-yl)-2,2-dimethylpropan-1-one hydrochloride | 552 |

| | | | |
|---|---|---|---|
| 932 |  •HCl | 2-amino-N-(1R,4R)-4-((6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-pivaloylquinolin-4-yl)amino)cyclohexyl)propanamide hydrochloride | 541 |
| 934 |  •3HCl | (S)-1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxy phenyl)quinolin-3-yl) propan-1-one trihydrochloride | 536 |
| 935 |  •HCl | 1-(4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)-6-(4-hydroxyphenyl)quinolin-3-yl) ethanone dihydrochloride | 418 |
| 936 |  •HCl | (4-((trans)-4-aminocyclohexyl amino)-6- (3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl) (cyclopropyl)methanone hydrochloride | 454 |
| 937 |  •2HCl | 1-(4-((trans)-4-aminocyclohexylamino) -6-(3-chloro-5-fluoro-4- hydroxy phenyl)quinolin-3-yl) -2-methylpropan-1-one dihydrochloride | 456 |
| 938 |  •HCl | 1-(4-((trans)-4-aminocyclohexyl amino)-6- (3,5-difluoro-4-hydroxyphenyl) quinolin-3-yl)-2-methylpropan-1-one hydrochloride | 439 |

| | | | |
|---|---|---|---|
| 939 |  •HCl | 1-(4-((trans)-4-aminocyclohexyl amino)-6-(3,5-dichloro-4-hydroxy phenyl) quinolin-3-yl)ethanone hydrochloride | 444 |
| 940 |  •HCl | 1-(4-((trans)-4-aminocyclohexylami no)-6- (3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl) ethanone hydrochloride | 440 |
| 941 |  •2HBr | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((trans)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl)methanone dihydrobromide | 498 |
| 942 |  •2HBr | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl) phenylamino)quinolin-3-yl) ethanone dihydrobromide | 480 |
| 943 |  •2HCl | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl) ethanone dihydrochloride | 470 |
| 944 |  •2HCl | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl) ethanone dihydrochloride | 486 |

| | | | |
|---|---|---|---|
| 945 |  ·HCl | 5-(3-acetyl-4-((1R,4R)-4-((dimethyl amino)methyl)cyclohexyl)amino)qui nolin-6-yl)pyridin-2(1H)-one hydrochloride | 419 |

Compound (I) and pharmaceutically acceptable salts thereof may be administered singly as they are; however, ordinarily, they are desirably provided as various types of pharmaceutical formulations. Such pharmaceutical formulations are used for animals or humans.

Pharmaceutical formulations of the present invention may comprise as an active ingredient compound (I) or a pharmaceutically acceptable salt thereof alone, or a mixture with any other active ingredients for treatment. Furthermore, these pharmaceutical formulations are produced by any methods well known in the technical field of drug formulation by mixing the active ingredient together with one or more types of pharmaceutically acceptable carriers (for example, diluents, solvents, and excipients).

Desirably, the route of administration most effective for the treatment is used, and examples include oral route, or parenteral route such as intravenous route.

The form of administration is, for example, tablets and injections.

Tablets and such which are appropriate for oral administration can be produced using excipients such as lactose, disintegrants such as starch, lubricants such as magnesium stearate, and binders such as hydroxypropylcellulose.

Injections and such which are appropriate for parenteral administration can be produced using, for example, solvents or diluents such as salt solutions, glucose solutions, or a mixture of salt water and glucose solution.

The dose of compound (I) or a pharmaceutically acceptable salt thereof, and the number of doses differ depending on the form of administration, the age and body weight of the patient, the nature of the symptom to be treated or severity, and such, but ordinarily for oral administration, it is 0.01 mg to 1000 mg, preferably in the range of 0.05 mg to 100 mg for an adult, and it is administered once to several times a day. In the case of parenteral administration such as intravenous administration, 0.001 mg to 1000 mg, or preferably 0.01 mg to 100 mg is administered to an adult once to several times a day. However, these doses and the number of doses vary depending on the various conditions mentioned above.

Hereinbelow, the present invention will be specifically described with reference to the Examples, but the scope of the present invention is not to be construed as being limited thereto.

The intermediates and compounds of interest in the following Examples can be isolated and purified by subjecting them to separation and purification methods commonly used in synthetic organic chemistry unless otherwise specified, and examples include filtration,

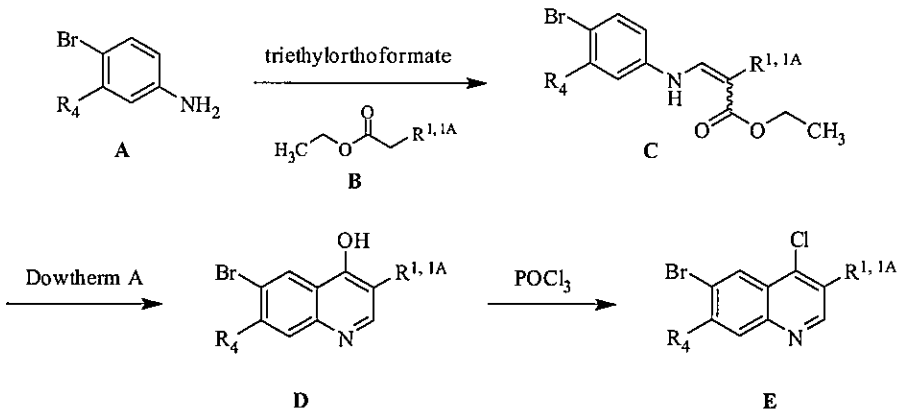
extraction, washing, drying, concentration, recrystallization, and various types of chromatographies. Alternatively, intermediates can be subjected to the next reaction without purification.

Furthermore, in the Examples shown below, unless otherwise specified, if a defined group becomes altered under the conditions of the production method or is unsuitable for carrying out the method, the compound of interest can be produced by using the methods for introducing and removing protecting groups commonly used in synthetic organic chemistry (for example, "Protective Groups in Organic Synthesis", T. W. Greene, John Wiley & Sons Inc., 1999). Furthermore, the order of the reaction processes such as substituent introduction can be changed as necessary.

Examples

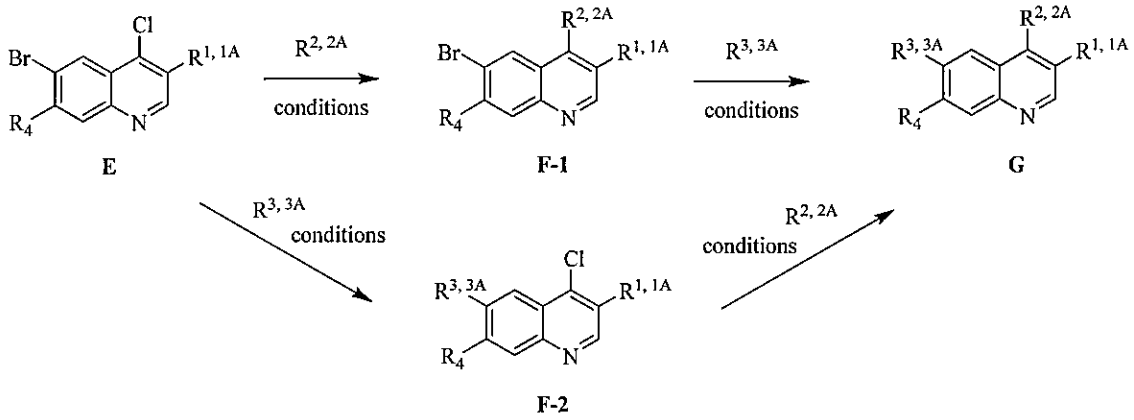
Specific methods for producing the above-mentioned compounds will be indicated below.

**Scheme 1**



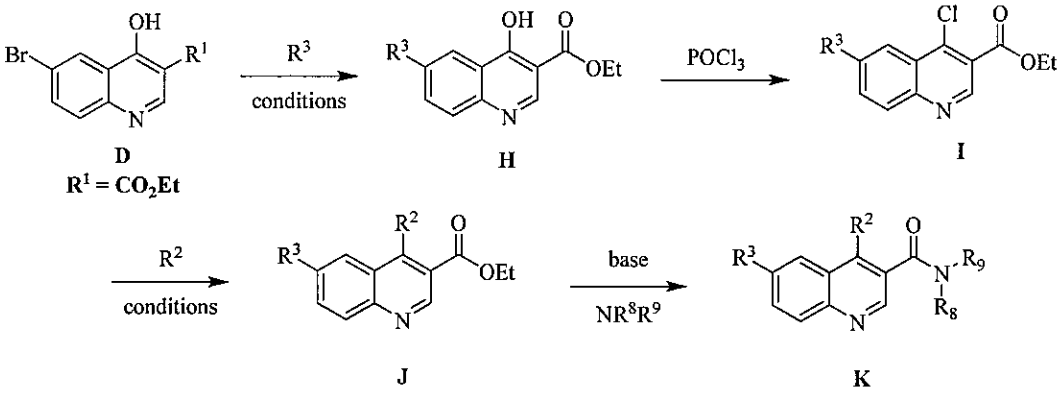

The requisite anilines **A** were heated in the presence of triethylorthoformate and the appropriately substituted esters **B** to afford the condensation products **C** (Scheme 1). Intermediates **C** were heated in Dowtherm A to facilitate the intramolecular cyclization and provide substituted quinolines **D**. Finally, the 4-position alcohol was converted to the chloride using phosphorus oxychloride to provide key intermediates **E** (Scheme 1).

**Scheme 2**



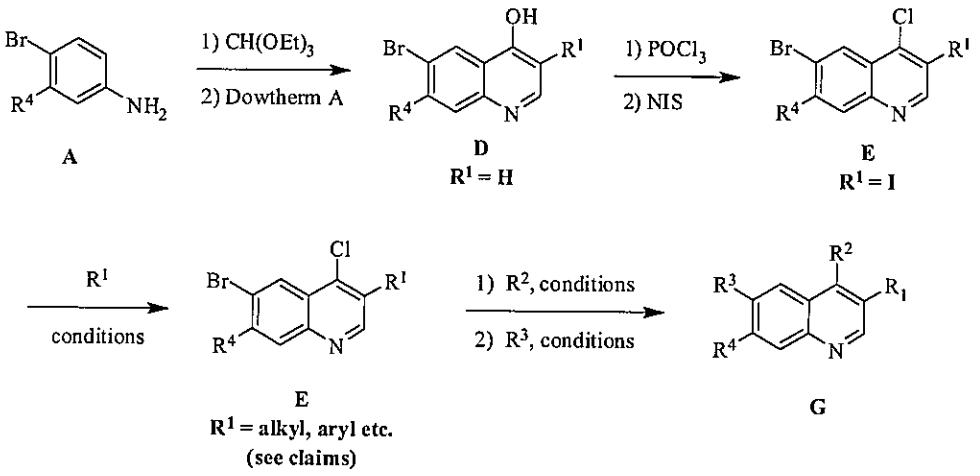

The chloride present in intermediates **E** was reacted under various reaction conditions (e.g. displacement with amines $R^6R^7N$ or metal mediated cross-couplings) to place the requisite substituents ($R^{2,2A}$) at the 4-position of the quinoline ring and afford compounds **F-1**. Optionally, intermediates **E** could be reacted under the appropriate conditions (e.g. metal mediated cross-couplings) to place the appropriate substituents ($R^{3,3A}$) at the 6-position of the quinoline ring and provide compounds **F-2**. Finally, the intermediates **F-1** and **F-2** could be elaborated with the requisite $R^3$ and $R^2$ susbtituent , respectively, to provide the quinoline compounds **G** (Scheme 2).

**Scheme 3**




The intermediates **D** ( where $R^1$ = ethyl ester) were converted to intermediates **H** by replacing the bromide with the appropriate $R^3$ group. A subsequent reaction with phosphorus oxychloride afforded the 4-chloro quinoline intermediates **I** (Scheme 3). These intermediates were reacted under various reaction conditions to install the requisite $R^2$ substituents and afford compounds **J**. Finally, the ethyl ester was saponified and the acid intermediate was reacted with the requisite amines ($R^8R^9N$) to afford quinoline compounds **K** (Scheme 3).

**Scheme 4**




The requisite anilines **A** were condensed with triethylorthoformate and the intermediate was cyclized to afford the quinoline intermediates **D** where $R^1$ is a proton (Scheme 4). Treatment of intermediates **D** with phosphorus oxychloride and subsequently *N*-iodosuccinimide provided compounds **E** where $R^1$ is an iodide. The iodides were converted to alternate $R^1$ groups as described by the claims section. Finally, the 4- and 6-positions were converted to the appropriate $R^2$ and $R^3$ susbtituents to provide quinoline compounds **G** (Scheme 4).

**General procedure A-1 (boc-deprotection protocol)**

To a suspension of boc-protected amines in THF (0.1 M) was added excess aqueous HCl and the reaction mixture was heated at 65 °C until the reaction was complete, as observed by LCMS analysis. The reaction mixture was cooled and concentrated to obtain the desired compounds **G** as the HCl salt.

**General procedure A-2 (boc-deprotection protocol)**

To a suspension of boc-protected amines in THF (0.1 M) was added trifluoroacetic acid and the reaction mixture was heated at 65 °C until the reaction was complete, as observed by LCMS analysis. The reaction mixture was cooled, concentrated and the residue was purified by preparative HPLC (C18 silica, 10–90% methanol/water with 0.05% TFA). The desired fractions were combined, concentrated and eluted through an ion-exchange column (using methanol as the initial eluent and 7 N methanol in ammonia as the next eluent) to obtain products **G** as the free base.

**General procedure B (4-position chloro displacement)**

To a suspension of intermediate **E** (1.0 equiv) in dioxane was added the requisite amine (1.0 – 2.0 equiv) and *N,N*-diisopropylethylamine (2.0 – 5.0 equiv) and the reaction mixture was heated at 80 °C for 16 h. The reaction mixture was cooled to room temperature, diluted with satd. aq. sodium bicarbonate and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate, concentrated and the residue was purified by column chromatography (silica, 0–20% methanol/dichloromethane) to afford the desired products **F**.

**General procedure C (4-position chloro displacement)**

To a suspension of intermediates **E** (1.0 equiv) in a 2:1 mixture of dioxane:DMF was added the requisite amine (1.0 – 2.0 equiv), *N*,*N*-diisopropylethylamine (2.0–5.0 equiv) and finely ground $K_2CO_3$ (2.0–3.0 equiv) and the reaction mixture was heated at 100 °C for 16 h. The reaction mixture was cooled, diluted with satd. aq. sodium bicarbonate and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate, concentrated and the residue was purified by column chromatography (silica, 0–20% methanol/dichloromethane) to afford the desired products **F**.

**General procedure D (6-position substitution using microwave conditions)**

To a suspension of intermediates **F** (1.0 equiv), the requisite boronic ester (1.5 – 2.0 equiv) and $Pd(dppf)Cl_2$ (0.1 – 0.2 equiv) in dioxane was added $Cs_2CO_3$ (1.0 M in $H_2O$, 3.0 – 4.0 eq). The reaction mixture was degassed with nitrogen and placed in a microwave reactor at 120 – 140 °C for 30 – 60 min. The reaction mixture was cooled and purified by column chromatography (silica, 0–20% methanol/dichloromethane) to afford the desired products **G**.

**General procedure E (synthesis of boronic esters)**

To a suspension of the appropriate aryl bromide (1.0 equiv), bis(pinacolado)diboron (1.5 – 2.0 equiv) and $K_2CO_3$ (2.0–3.0 equiv) in dioxane was added $Pd(dppf)Cl_2$ (0.05 – 0.1 equiv). The reaction mixture was degassed with nitrogen followed by heating at 80 °C for 2 – 16 h. The reaction mixture was cooled, concentrated and the residue was purified by column chromatography (silica, ethyl acetate/hexanes gradient) to afford the desired product. In some instances the product was re-crystallized from hexanes or a hexanes/dichloromethane mixture.

**General procedure F (6-position substitution)**

To a suspension of intermediates **F** (1.0 equiv), the requisite boronic ester (1.5–2.0 equiv) and $Pd(dppf)Cl_2$ (0.1–0.2 equiv) in dioxane was added $Cs_2CO_3$ (1.0 M in $H_2O$, 3.0 equiv). The reaction mixture was degassed with nitrogen followed by heating at 80 °C for 2 – 3 h. The reaction mixture was cooled, diluted with ethyl acetate, filtered and concentrated. The residue was purified by column chromatography (silica, 0–20% methanol/dichloromethane) to afford the desired product.

**General procedure A-2 (4-position substitution under acidic conditions)**

To a solution of the appropriate 6-bromo-4-chloroquinoline in a 2:1 mixture of dioxane:DMF was added the requisite amine and *p*-toluenesulfonic acid (0.8 equiv). The reaction mixture was heated at 80 °C for 2–16 h then cooled to room temperature, diluted with satd. aq. sodium bicarbonate and extracted with ethyl acetate or a $CHCl_3$/isopropanol 3:1 mixture. The combined organic layers were dried over anhydrous sodium sulfate, concentrated and purified by column chromatography (silica, 0–20% methanol/dichloromethane) to afford the desired product.

**General procedure H (substituted pyridine and pyrimidine containing 4-positions)**

To a solution of 2-chloro-5-nitropyridine or 2-chloro-5-nitropyrimidine in THF (0.1 M) was added the requisite amine (1.1 – 1.6 equiv) and triethylamine (1.1 – 1.6 equiv) and the reaction

mixture was stirred room temperature until completion, as observed by LCMS analysis. The reaction mixture was concentrated, the residue was dissolved in dichloromethane, washed with aqueous 1 N HCl and then water. The organic layer was dried over anhydrous sodium sulfate, filtered and concentrated. The residue was dissolved in tetrahydrofuran or ethanol (0.1-0.3 M), degassed and placed in a Parr shaker with Pd/C (10%, 0.1 equiv) and hydrogen gas at 40-50 psi. The reaction was allowed to proceed at room temperature until complete, as indicated by LCMS analysis. The reaction mixture was filtered over diatomaceous earth and the filtrate was concentrated to obtain the desired aniline.

**General procedure I (substituted pyridine and pyrimidine containing 4-positions)**

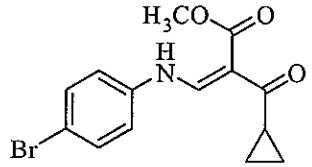
To a solution of 2-chloro-5-nitropyridine or 2-chloro-5-nitropyrimidine in dioxane (0.1 M) was added the requisite alcohol (1.1 equiv) and sodium hydride (60% dispersion in oil, 1.1 equiv) and the reaction mixture was stirred at room temperature until the reaction was complete, as observed by LCMS analysis. The reaction mixture was poured onto ice water and the product was extracted with dichloromethane. The combined organic layers were dried over anhydrous sodium sulfate, filtered, and concentrated. The residue was dissolved in tetrahydrofuran or ethanol (0.1-0.3 M), degassed and placed in a Parr shaker with Pd/C (10%, 0.1 equiv) and hydrogen gas at 40-50 psi. The reaction was allowed to proceed at room temperature until complete, as indicated by LCMS analysis. The reaction mixture was filtered over diatomaceous earth and the filtrate was concentrated to obtain the desired aniline.

**General procedure J(one-pot preparation of the 4 position amine via reductive amination)**

To a solution of the requisite amine (1.4 equiv) in dichloromethane (0.1 M), under nitrogen atmosphere, was added sodium acetate (1.4 equiv) and the mixture was stirred for 15 min followed by the addition of tert-butyl 4-oxocyclohexylcarbamate. The reaction mixture was stirred for an additional 15 min, then sodium triacetoxyborohydride (1.5 equiv) was added carefully and the reaction mixture was stirred until the reaction was complete, as observed by LCMS analysis. The reaction mixture was filtered and the filtrate was concentrated. The crude product was dissolved in a 1:1 mixture of tetrahydrofuran and aqueous HCl (3 N) and the mixture was stirred at room temperature for 12 h. The reaction mixture was concentrated and aqueous sodium hydroxide (6 N) was added until basic pH was achieved. The product was extracted with a 3:1 mixture of chloroform and isopropanol, the organic layer was dried and the solvent removed to obtain the desired amine.

Example 384

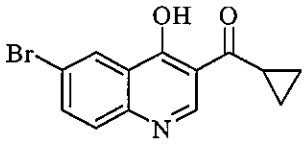
Methyl 3-(4-bromophenylamino)-2-(cyclopropanecarbonyl)acrylate



A stirred mixture of methyl 3-cyclopropyl-3-oxopropanoate (20 g, 0.141 mol), triethyl orthoformate (28 mL, 0.169 mol), and 4-bromoaniline (24.2 g, 0.141 mol) were heated at 130 °C for 5 h with a Dean Stark trap. After this time the reaction was cooled to room temperature, diluted with methylene chloride and filtered through a pad of silica. The filtrate was concentrated to afford the desired product (26.5 g, 55%) as a yellow solid: ESI MS *m/z* 324 $[C_{14}H_{14}BrNO_2 + H]^+$.

Example 385

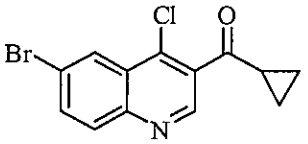
(6-Bromo-4-hydroxyquinolin-3-yl)(cyclopropyl)methanone



Dowtherm was heated to 250 °C, methyl 3-(4-bromophenylamino)-2-(cyclopropanecarbonyl)acrylate (24 g, 74.1 mmol) was added portionwise and upon complete addition the reaction mixture was stirred for 20 min. The reaction mixture was cooled to room temperature, diluted with 2:1 hexanes/diethyl ether and filtered to afford the desired product (9.71 g, 45%) as an off-white solid: $^1$H NMR (300 MHz, DMSO-$d_6$) $\delta$ 12.65 (s, 1H), 8.51 (s, 1H), 8.32 (d, $J$ = 2.3 Hz, 1H), 7.89 (dd, $J$ = 8.8, 2.3 Hz, 1H), 7.62 (d, $J$ = 8.8 Hz, 1H), 3.73–3.49 (m, $J$ = 7.5, 5.0 Hz, 1H), 1.15–0.76 (m, 4H).

Example 386

(6-Bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone

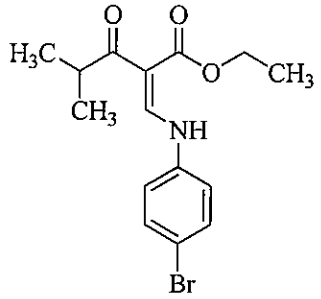


Phosphoryl chloride (50 mL, 0.547 mol) was cooled to 0 °C and (6-bromo-4-hydroxyquinolin-3-yl)(cyclopropyl)methanone (21 g, 67.7 mmol) was added. The reaction mixture was stirred at 0 °C for 2 h, at room temperature for 2 h and concentrated. The residue was dissolved in methylene chloride and poured into cold 30% aq. ammonium hydroxide. The aqueous layer was separated and extracted with methylene chloride. The combined organics were dried over anhydrous sodium sulfate, filtered, and concentrated. The residue was purified by a silica plug to afford the desired product (5.8 g, 22%) as a brown solid: $^1$H NMR (300 MHz, $CDCl_3$) $\delta$ 8.91 (s, $J$ = 6.4 Hz, 1H), 8.55–8.49 (m, 1H), 8.07–7.97 (m, 1H), 7.91 (dd, $J$ = 8.9, 2.1 Hz, 1H),

2.69–2.54 (m, 1H), 1.50–1.40 (m, 2H), 1.28–1.19 (m, 2H).

Example 387

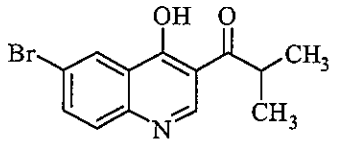
Ethyl 2-[(4-bromophenylamino)methylene]-4-methyl-3-oxopentanoate



A mixture of ethyl 4-methyl-3-oxopentanoate (31.6 g, 0.200 mol), triethyl orthoformate (41.6 mL, 0.250 mol), and 4-bromoaniline (36.1 g, 0.210 mol) was heated at 150 °C for 2 h with a Dean Stark trap. After this time triethyl orthoformate (20.8 mL) was added and the reaction mixture was stirred for 16 h. The reaction was cooled to room temperature, diluted with 1:1 methylene chloride/ hexanes (200 mL), and filtered through a plug of silica. The filtrate was concentrated, triturated with hexanes and filtered to afford the desired product (33.2 g, 53%) as a pale yellow solid: $^1$H NMR (300 MHz, $CDCl_3$) $\delta$ 12.80 (d, $J$ = 11.9 Hz, 1H), 8.46 (d, $J$ = 13.0 Hz, 1H), 7.55–7.42 (m, 2H), 7.12–6.96 (m, 2H), 4.27 (q, $J$ = 7.1 Hz, 2H), 3.89–3.72 (m, 1H), 1.35 (t, $J$ = 7.1 Hz, 3H), 1.13 (d, $J$ = 6.8 Hz, 6H).

Example 388

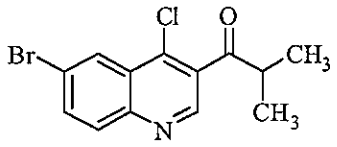
1-(6-Bromo-4-hydroxyquinolin-3-yl)-2-methylpropan-1-one



To Dowtherm at 250 °C was added ethyl 2-[(4-bromophenylamino)methylene]-3-oxobutanoate (33.2 g, 97.6 mmol) portionwise and the reaction mixture was stirred for 1.5 h. The reaction mixture was cooled to room temperature, diluted with hexanes and the resulting precipitate was filtered to afford the desired product (17 g, 59%) as a yellow solid: $^1$H NMR (300 MHz, DMSO-$d_6$) $\delta$ 12.66 (s, 1H), 8.54 (s, 1H), 8.31 (s, 1H), 7.89 (d, $J$ = 8.7 Hz, 1H), 7.61 (d, $J$ = 8.7 Hz, 1H), 4.11–3.89 (m, 1H), 1.06 (dd, $J$ = 6.8, 1.6 Hz, 6H).

Example 389

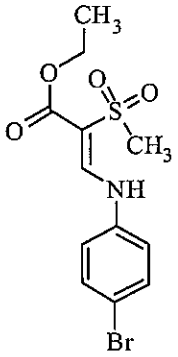
1-(6-Bromo-4-chloroquinolin-3-yl)-2-methylpropan-1-one



1-(6-Bromo-4-hydroxyquinolin-3-yl)-2-methylpropan-1-one (16.0 g, 54.4 mmol) was added to phosphoryl chloride (160 mL) and the reaction was stirred at 85 °C for 1.5 h. The reaction mixture was cooled and slowly poured into a 2:1 solution of satd. aq. sodium bicarbonate/ ethyl acetate at 0 °C. The organic layer was separated and was washed with satd. aq. sodium bicarbonate and brine, dried over anhydrous sodium sulfate, filtered, and concentrated to afford the desired product (14.8 g, 89%) as a yellow solid: ESI MS *m/z* 312 $[C_{13}H_{11}BrClNO + H]^+$.

Example 390

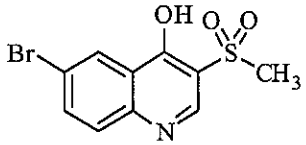
Ethyl 3-(4-bromophenylamino)-2-(methylsulfonyl)acrylate



A mixture of ethyl 2-(methylsulfonyl)acetate (1.9 g, 11.4 mmol), triethyl orthoformate (5.64 mL, 34.2 mmol), and acetic anhydride (5 mL) were heated at 130 °C for 5 h with a Dean Stark trap. The reaction was cooled, 4-bromoaniline (3.1 g, 18.0 mmol) was added and the reaction mixture was heated at 150 °C for 2 h. The reaction mixture was cooled, concentrated and the residue was purified by column chromatography to afford the desire product (1.08 g, 27% over 2 steps) as a tan solid: $^1$H NMR (300 MHz, $CDCl_3$) $\delta$ 10.58 (d, $J$ = 13.5 Hz, 1H), 8.39 (d, $J$ = 13.7 Hz, 1H), 7.59–7.48 (m, 2H), 7.15–7.02 (m, 2H), 4.41 (q, $J$ = 7.1 Hz, 2H), 3.19 (s, 3H), 1.43 (t, $J$ = 7.1 Hz, 3H).

Example 391

6-Bromo-3-(methylsulfonyl)quinolin-4-ol

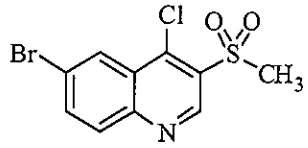


To Dowtherm at 250 °C was added ethyl 3-(4-bromophenylamino)-2-(methylsulfonyl)acrylate (1.08 g, 3.10 mmol) portionwise and the reaction mixture was stirred for 2 h. The reaction mixture was cooled to room temperature, diluted with hexanes and the resulting precipitate was

filtered to afford the desired product (573 mg, 61%) as a tan solid: ESI MS *m/z* 302 $[C_{10}H_8BrNO_3S + H]^+$.

Example 392

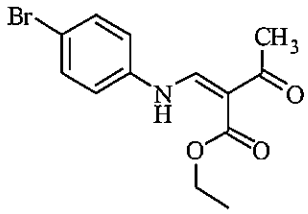
6-Bromo-4-chloro-3-(methylsulfonyl)quinoline



6-Bromo-3-(methylsulfonyl)quinolin-4-ol (573 mg, 1.90 mmol) was added to phosphoryl chloride (19 mL) and the reaction was stirred at 100 °C 16 h. Additional THF (5 mL) was added and the reaction mixture was stirred at 100 °C for 4 h. The reaction mixture was cooled and slowly poured into a 2:1 solution of satd. aq sodium bicarbonate/ ethyl acetate that was pre-cooled to 0 °C. The layers were separated and the aqueous layer was extracted with ethyl acetate. The combined organic layers were washed with satd. aq.sodium bicarbonate, dried over anhydrous sodium sulfate, filtered, and concentrated to afford the desired product (360 mg, 59%) as a white solid: ESI MS *m/z* 321 $[C_{10}H_7BrClNO_2S + H]^+$.

Example 393

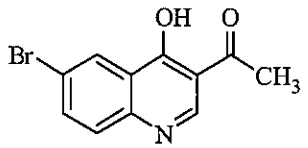
Ethyl 2-[(4-bromophenylamino)methylene]-3-oxobutanoate



A stirred mixture of ethyl 3-oxobutanoate (3.16 mL, 25.0 mmol), triethyl orthoformate (4.99 mL, 30.0 mmol), and bromoaniline (4.47 g, 26.0 mmol) were heated at 150 °C for 4 h with a Dean Stark trap. After this time the reaction was cooled to room temperature and the resulting precipitate was suspended in 1:1 ether/hexanes, and filtered to afford the desired product (3.4 g, 44%) as a brown solid: ESI MS *m/z* 312 $[C_{13}H_{14}BrNO_3 + H]^+$.

Example 394

1-(6-Bromo-4-hydroxyquinolin-3-yl)ethanone

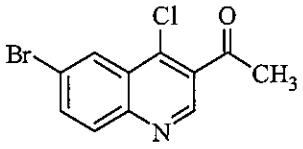


To Dowtherm at 250 °C was added Ethyl 2-[(4-bromophenylamino)methylene]-3-oxobutanoate (3.4 g, 10.9 mmol) portionwise and the reaction mixture was stirred for 1.5 h. The reaction

mixture was cooled to room temperature, diluted with hexanes and the resulting precipitate was filtered to afford the desired product (2.2 g, 76%) as a brown solid: ESI MS *m/z* 266 $[C_{11}H_8BrNO_2 + H]^+$.

Example 395

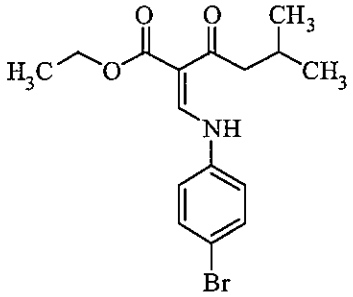
1-(6-Bromo-4-chloroquinolin-3-yl)ethanone



1-(6-Bromo-4-hydroxyquinolin-3-yl)ethanone (2.2 g, 8.27 mmol) was suspended in phosphoryl chloride (30 mL) and the reaction was heated to 85 °C and stirred for 3 h. After this time the reaction mixture was cooled to room temperature and slowly poured into a 2:1 solution of satd. aq. sodium bicarbonate/ ethyl acetate that was cooled to 0 °C. The organic layer was separated, washed with satd. aq. sodium bicarbonate, dried over anhydrous sodium sulfate, filtered, and concentrated under reduced pressure. The residue was purified by column chromatography to afford the desired product (710 mg, 72%) as a light brown solid: ESI MS *m/z* 280 $[C_{11}H_7BrClNO + H]^+$.

Example 396

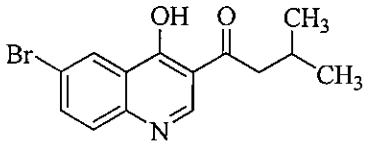
Ethyl 2-[(4-Bromophenylamino)methylene]-5-methyl-3-oxohexanoate



A stirred mixture of methyl 5-methyl-3-oxohexanoate (2.14 g, 13.5 mmol), triethyl orthoformate (2.64 mL, 16.2 mmol), and bromoaniline (2.32 g, 13.5 mmol) were heated at 150 °C for 3 h with a Dean Stark trap. After this time triethyl orthoformate (2.69 mL) was added and the mixture continued to stir for 2 h. After this time the reaction was cooled to room temperature, diluted with methylene chloride and filtered through a pad of silica. The plug was washed with 1:1 methylene chloride/ hexanes, the filtrate was concentrated and the residue was purified by column chromatography to afford the desired product (2.37 g, 50%) as an off-white solid: ESI MS *m/z* 354 $[C_{16}H_{20}BrNO_3 + H]^+$.

Example 397

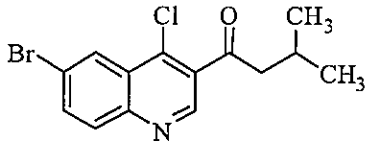
1-(6-bromo-4-hydroxyquinolin-3-yl)-3-methylbutan-1-one



To Dowtherm at 250 °C was added a solution of ethyl 2-[(4-bromophenylamino)methylene]-5-methyl-3-oxohexanoate (700 mg, 6.75 mmol) in Dowtherm (5 mL) portionwise and the reaction mixture was stirred for 1.5 h. The reaction mixture was cooled to room temperature, diluted with hexanes and the resulting precipitate was filtered to afford the desired product (490 mg, 23%) as a white solid: $^1$H NMR (500 MHz, DMSO-$d_6$) $\delta$ 12.65 (s, 1H), 8.55 (d, $J$ = 6.4 Hz, 1H), 8.30 (d, $J$ = 2.3 Hz, 1H), 7.88 (dd, $J$ = 8.7, 2.3 Hz, 1H), 7.61 (d, $J$ = 8.8 Hz, 1H), 2.99 (d, $J$ = 6.8 Hz, 2H), 2.21–2.04 (m, 1H), 0.91 (d, $J$ = 6.7 Hz, 6H).

Example 398

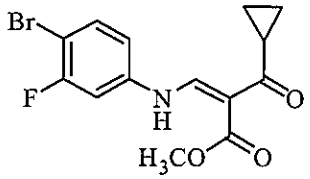
1-(6-Bromo-4-chloroquinolin-3-yl)-3-methylbutan-1-one



1-(6-Bromo-4-hydroxyquinolin-3-yl)-3-methylbutan-1-one (300 mg, 0.970 mmol) was added to phosphoryl chloride (9.7 mL) and the reaction was stirred at 85 °C for 1 h. After this time the reaction mixture was cooled to room temperature and slowly poured into a 2:1 solution of satd. aq. sodium bicarbonate/ ethyl acetate that was cooled to 0 °C. The organic layer was separated and was washed with satd. aq. sodium bicarbonate, dried over anhydrous sodium sulfate, filtered, and concentrated under reduced pressure to afford the desired product (309 mg, 98%) as a yellow oil: $^1$H NMR (500 MHz, $CDCl_3$) $\delta$ 8.86 (s, 1H), 8.51 (d, $J$ = 2.0 Hz, 1H), 8.01 (d, $J$ = 8.9 Hz, 1H), 7.91 (dd, $J$ = 8.9, 2.0 Hz, 1H), 2.96 (d, $J$ = 6.9 Hz, 2H), 2.39–2.23 (m, 1H), 1.03 (d, $J$ = 6.7 Hz, 6H).

Example 399

Methyl 3-(4-bromo-3-fluorophenylamino)-2-(cyclopropanecarbonyl)acrylate

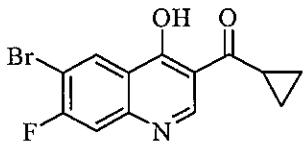


A stirred mixture of methyl 3-cyclopropyl-3-oxopropanoate (3.49 g, 26.3 mmol), triethyl orthoformate (5.2 mL, 31.6 mmol), and 4-bromo-3-fluoroaniline (4.47 g, 26.0 mmol) was heated at 140 °C overnight with a Dean Stark trap. After this time the reaction was cooled to room temperature, diluted with methylene chloride and filtered through a pad of silica. The filtrate

was concentrated to afford the desired product (7.5 g, 85%) as a light yellow solid: ESI MS *m/z* 343 $[C_{14}H_{13}BrFNO_3 + H]^+$.

Example 400

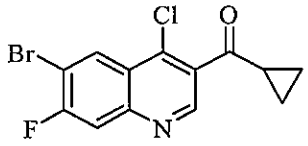
(6-Bromo-7-fluoro-4-hydroxyquinolin-3-yl)(cyclopropyl)methanone



To Dowtherm at 250 °C was added methyl 3-(4-bromo-3-fluorophenylamino)-2-(cyclopropanecarbonyl)acrylate (7.5 g, 21.9 mmol) portionwise and the reaction mixture was stirred for 1.5 h. The reaction mixture was cooled to room temperature, diluted with hexanes and the resulting precipitate was filtered to afford the desired product (5.38 g, 79%) as a brown solid: ESI MS *m/z* 311 $[C_{13}H_9BrFNO_2 + H]^+$.

Example 401

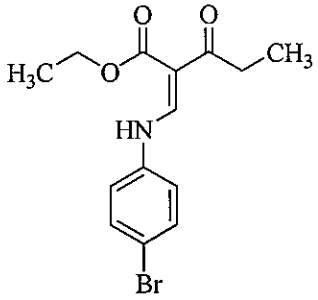
(6-Bromo-4-chloro-7-fluoroquinolin-3-yl)(cyclopropyl)methanone



(6-Bromo-7-fluoro-4-hydroxyquinolin-3-yl)(cyclopropyl)methanone (3.35 g, 10.8 mmol) was suspended in phosphoryl chloride (10 mL) at 0 °C. The reaction was warmed to room temperature and stirred overnight. After this time 2M ammonium hydroxide was added dropwise until a solid formed. Ethyl acetate was added and the layers were separated. The organic layer was dried over anhydrous sodium sulfate, filtered, and concentrated under reduced pressure. The residue was purified by column chromatography to afford the desired product (1.5 g, 42%) as an off-white solid: $^1$H NMR (300 MHz, $CDCl_3$) $\delta$ 8.92 (s, 1H), 8.63 (d, $J$ = 7.2 Hz, 1H), 7.84 (d, $J$ = 8.9 Hz, 1H), 2.70–2.45 (m, 1H), 1.55–1.35 (m, 2H), 1.35–1.05 (m, 2H).

Example 1001

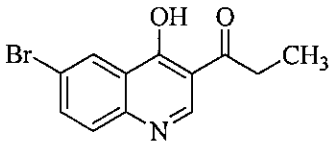
ethyl 2-(((4-bromophenyl)amino)methylene)-3-oxopentanoate



A stirred mixture of ethyl propionylacetate (33 g, 0.23 mol), triethyl orthoformate (46 mL, 0.28 mol), and 4-bromoaniline (42 g, 0.24 mol) were heated at 150 °C for 2 h with a Dean Stark trap. The reaction was cooled to room temperature. Trituration with 1:1 hexanes/diethyl ether afforded the desired product (25.1 g, 33%) as a tan solid: $^1$H NMR (300 MHz, DMSO - $d_6$) $\delta$ 12.44 (d, $J$ = 13.1 Hz, 1H), 8.42 (d, $J$ = 13.1 Hz 1H), 7.64 – 7.51 (m, 2H), 7.50 – 7.34 (m, 2H), 4.17 (q, $J$ = 7.1 Hz, 2H), 2.86 (q, $J$ = 7.3 Hz, 2H), 1.27 (t, $J$ = 7.1 Hz, 3H), 1.02 (t, $J$ = 7.3 Hz, 3H).

Example 1002

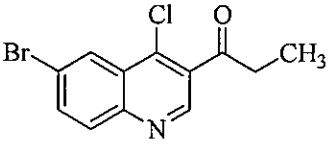
1-(6-bromo-4-hydroxyquinolin-3-yl)propan-1-one




Dowtherm A (200 mL) was heated to 240 °C. Ethyl 2-(((4-bromophenyl)amino) methylene)-3-oxopentanoate (25.1 g, 77 mmol) was added portionwise. The reaction was then heated to 250 °C and stirred for 1.25 h. The reaction mixture was slowly cooled to room temperature and a precipitate formed. The suspension was diluted with hexanes (500 mL) and filtered to afford the desired product (15.9 g, 73%) as a tan solid: $^1$H NMR (300 MHz, DMSO - $d_6$) $\delta$ 12.64 (br s, 1H), 8.56 (s, 1H), 8.30 (d, $J$ = 2.3 Hz, 1H), 7.88 (dd, $J$ = 8.8, 2.4 Hz, 1H), 7.61 (d, $J$ = 8.8 Hz, 1H), 3.10 (q, $J$ = 7.2 Hz, 2H), 1.05 (t, $J$ = 7.2 Hz, 3H).

Example 1003

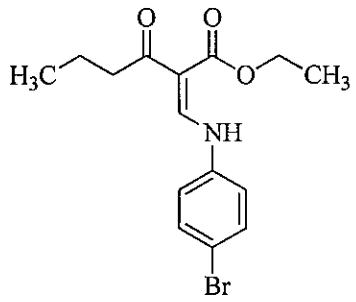
1-(6-bromo-4-chloroquinolin-3-yl)propan-1-one




1-(6-Bromo-4-hydroxyquinolin-3-yl)propan-1-one (21 g, 67.7 mmol) was added to phosphoryl chloride (80 mL). The resultant suspension was then heated to 85 °C and stirred for 1.5 h. The reaction mixture was cooled to room temperature and poured carefully into a mixture of saturated sodium bicarbonate (250 mL) and 2N aqueous sodium hydroxide (250 mL). The solution was then extracted with ethyl acetate, the combined organics were washed with water and brine, dried over anhydrous sodium sulfate and concentrated under reduced pressure to afford the desired product (16 g, 96%) as a tan solid: APCI MS $m/z$ 298 $[C_{12}H_9BrClNO + H]^+$.

Example 1004

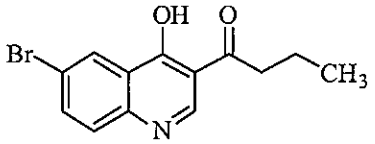
ethyl 2-(((4-bromophenyl)amino)methylene)-3-oxohexanoate



A stirred mixture of ethyl 3-oxohexanoate (12.1 mL, 75 mmol), triethyl orthoformate (16.6 mL, 100 mmol), and 4-bromoaniline (12.9 g, 75 mmol) were heated at 120 °C for 4 h with a Dean Stark trap. After this time the reaction was cooled to room temperature. The resultant solid was triturated with diethyl ether to afford the desired product (8.17 g, 32%) as a white solid. ESI MS *m/z* 340 $[C_{15}H_{18}BrNO_3 + H]^+$

Example 1005

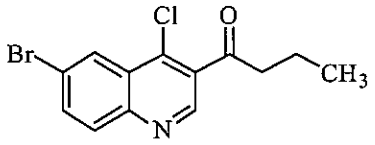
1-(6-bromo-4-hydroxyquinolin-3-yl)butan-1-one



To Dowtherm (82 mL) at 250 °C was added ethyl 2-(((4-bromophenyl)amino)methylene) -3-oxohexanoate (700 mg, 6.75 mmol) portionwise and the reaction mixture was stirred for 1.5 h. The reaction mixture was cooled to room temperature, and the precipitate was filtered and rinsed with hexanes to afford the desired product (3.73 g, 53%) as a light brown solid. ESI MS *m/z* 294 $[C_{13}H_{12}BrNO_2 + H]^+$

Example 1006

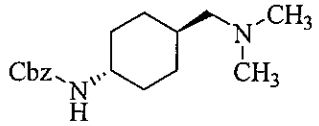
1-(6-bromo-4-chloroquinolin-3-yl)butan-1-one



1-(6-bromo-4-hydroxyquinolin-3-yl)butan-1-one (3.73 g, 12.7 mmol) was added to phosphoryl chloride (37 mL) and the reaction was stirred at 75 °C for 2 h. After this time the reaction mixture was cooled to room temperature and slowly poured into a solution of satd. aq. sodium carbonate that was cooled to 0 °C. The resultant mixture was extracted with ethyl acetate, dried over anhydrous sodium sulfate, filtered, and concentrated. Purification by column chromatography (silica, ethyl acetate) afforded the desired product (3.90 g, 98%) as an off-white solid. ESI MS *m/z* 312 $[C_{13}H_{13}BrClNO + H]^+$

Example 1007

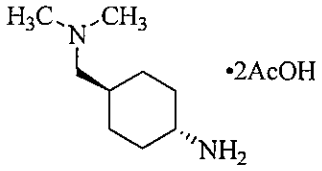
Benzyl 4-((dimethylamino)methyl)cyclohexylcarbamate



To a suspension of benzyl 4-(aminomethyl)cyclohexylcarbamate (15.0 g, 57 mmol) in water (150 mL) was added formaldehyde (14.0 mL, 0.17 mol, 37% solution) and formic acid (6.5 mL, 0.17 mol). The mixture was heated to reflux for 2h, cooled to rt, neutralized with 2 N NaOH, and extracted with $CH_2Cl_2$. The organic extract was dried over anhydrous sodium sulfate, filtered, and concentrated to give desired product (15.87 g, 96%) as a tan, waxy solid. APCI MS *m/z* 291 $[C_{17}H_{26}N_2O_2 + H]^+$.

Example 1008

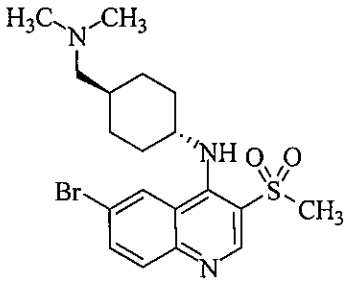
*trans*-4-((Dimethylamino)methyl)cyclohexanamine diacetic acid



To a flask containing Pd/C (1.5 g, Degussa type E101) was added methanol / acetic acid (100 mL, 3:1). Benzyl 4-((dimethylamino)methyl)cyclohexylcarbamate (15.8 g, 54 mmol) in methanol / acetic acid (300 mL, 3:1) was added. A balloon of $H_2$ was added and the reaction stirred at rt for 6 h. The reaction was filtered through celite, the filtrate concentrated, and azeotroped with toluene. The thick oil was dried under vacuum to give desired product (17.9 g, crude) as a waxy solid. $^1$H NMR (300 MHz, MeOD) $\delta$ 3.11 – 2.98 (m, 1H), 2.78 (d, $J$ = 7.0 Hz, 2H), 2.69 (s, 6H), 2.07 (br d, $J$ = 13.9 Hz, 4H), 2.02 – 1.86 (m, 2H), 1.92 (s, 6H), 1.79 – 1.67 (m, 1H), 1.53 – 1.35 (m, 2H), 1.20 – 1.05 (m, 2H).

Example 1009

6-bromo-N-(1R,4R)-4-((dimethylamino)methyl)cyclohexyl)-3-(methylsulfonyl) quinolin-4-amine

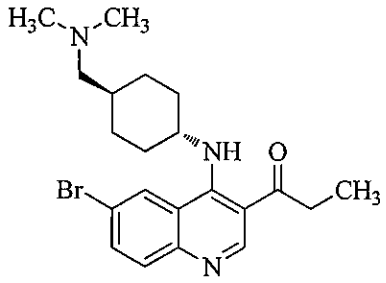


Following general procedure C, 6-bromo-4-chloro-3-(methylsulfonyl)quinoline (6.5 g, 20 mmol) was reacted with (1r,4r)-4-((dimethylamino)methyl)cyclohexanamine hydrochloride (6.0 g, 26 mmol) to obtain the desired product (5.7 g, 64%) as an off-white solid: ESI MS *m/z* 440

$[C_{19}H_{26}BrN_3O_2S+H]^+$.

Example 1010

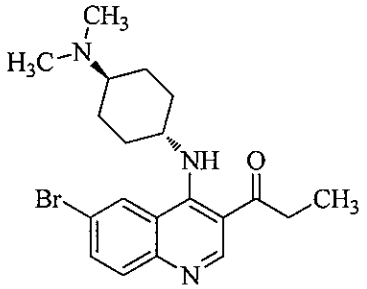
1-(6-bromo-4-((trans-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)propan-1-one



To a suspension of 1-(6-bromo-4-chloroquinolin-3-yl)propan-1-one (500 mg, 1.67 mmol) in dioxane (10 mL) and DMF (4 mL) was added *trans*-4-((dimethylamino)methyl)cyclohexanamine diacetic acid salt (583 mg, 2.11 mmol) and $Cs_2CO_3$ (3.27 g, 10.0 mmol). The resultant suspension was then heated to 90 °C and stirred for 5.5 h. The reaction mixture was cooled to room temperature and diluted with ethyl acetate. The solution was then washed with saturated sodium bicarbonate, water and then brine, dried over anhydrous sodium sulfate and concentrated under reduced pressure. Purification by column chromatography (silica, 0–10% methanol/dichloromethane) afforded the desired product (403 mg, 58%) as a tan solid. $^1$H NMR (300 MHz, $CDCl_3$) $\delta$ 10.79 (d, $J$ = 8.4 Hz, 1H), 9.00 (s, 1H), 8.27 (d, $J$ = 2.0 Hz, 1H), 7.83 – 7.67 (m, 2H), 4.01 – 3.88 (m, 1H), 3.08 (q, $J$ = 7.2 Hz, 2H), 2.24 (s, 6H), 2.21 – 2.12 (m, 2H), 1.98 (d, $J$ = 13.4 Hz, 2H), 1.61 – 1.42 (m, 3H), 1.25 (t, $J$ = 7.3 Hz, 3H), 1.19 – 1.00 (m, 2H).

Example 1011

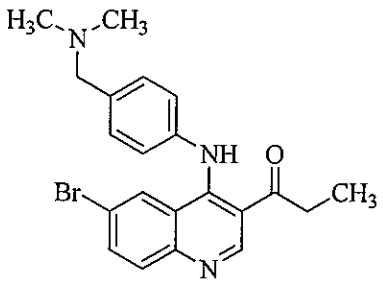
1-(6-bromo-4-((trans-4-(dimethylamino)cyclohexyl)amino)quinolin-3-yl)propan-1-one



Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)propan-1-one (800 mg, 2.68 mmol) was reacted with *trans*-$N^1$,$N^1$-dimethylcyclohexane-1,4-diamine dihydrochloride (692 mg, 3.21 mmol) to afford the desired product (629 mg, 58%) as an off-white solid. $^1$H NMR (300 MHz, $CDCl_3$) $\delta$ 10.77 (br d, $J$ = 8.1 Hz, 1H), 9.01 (s, 1H), 8.27 (d, $J$ = 2.0 Hz, 1H), 7.84 – 7.68 (m, 2H), 4.05 – 3.89 (m, 1H), 3.08 (q, $J$ = 7.2 Hz, 2H), 2.33 (s, 6H), 2.33 – 2.23 (m, 2H), 2.12 – 1.99 (m, 2H), 1.63 – 1.31 (m, 4H), 1.25 (t, $J$ = 7.2 Hz, 3H).

Example 1012

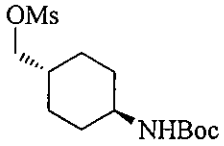
1-(6-bromo-4-((4-((dimethylamino)methyl)phenyl)amino)quinolin-3-yl)propan-1-one



Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)propan-1-one (750 mg, 2.51 mmol) was reacted with 4-(dimethylaminomethyl)aniline (377 mg, 2.51 mmol) to afford the desired product (889 mg, 86%) as a yellow solid. APCI MS *m/z* 412 $[C_{21}H_{22}BrN_3O + H]^+$.

Example 1013

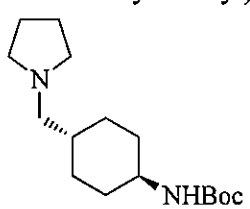
*trans*-4-((*tert*-butoxycarbonyl)amino)cyclohexyl)methyl methanesulfonate



To a suspension of *tert*-butyl (*trans*-4-(hydroxymethyl)cyclohexyl)carbamate (5.05 g, 22 mmol) in dichloromethane (70 mL) was added triethylamine (3.8 mL, 27.3 mmol). The resultant suspension was cooled to 0 °C and methanesulfonyl chloride (1.78 mL, 23 mmol) was added dropwise. The reaction mixture was allowed to warm to room temperature and stir for 2 h. The solution was then diluted with saturated sodium bicarbonate solution and extracted with dichloromethane. The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, ethyl acetate/hexanes) afforded the desired product (6.65 g, 98%) as a white solid. $^1$H NMR (300 MHz, $CDCl_3$) $\delta$ 4.39 (br s, 1H), 4.03 (d, $J$ = 7.5 Hz, 1H), 3.39 (br s, 1H), 3.00 (s, 3H), 2.13–2.00 (m, 2H), 1.93–1.79 (m, 2H), 1.79–1.62 (m, 1H), 1.20–1.02 (m, 4H).

Example 1014

*tert*-butyl (*trans*-4-(pyrrolidin-1-ylmethyl)cyclohexyl)carbamate

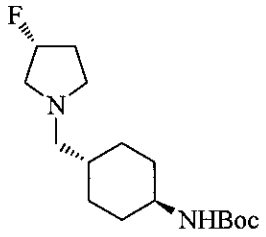


To a suspension of *trans*-4-((*tert*-butoxycarbonyl)amino)cyclohexyl)methyl methanesulfonate (1.84 g, 6.0 mmol) in acetonitrile (30 mL) was added $K_2CO_3$ (1.66 g, 12 mmol) and KI (600 mg,

3.6 mmol). Pyrrolidine (5.01 mL, 60 mmol) was added dropwise. The reaction mixture was heated at 85 °C for 16 h. The solution was cooled to room temperature, diluted with a saturated $NaHCO_3$ solution and extracted with a mixture of $CHCl_3$/isopropanol (3:1). The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, 0–20% methanol/dichloromethane) afforded the desired product (1.28 g, 76%) as a white solid. ESI MS *m/z* 283 $[C_{16}H_{30}N_2O_2 + H]^+$

Example 1015

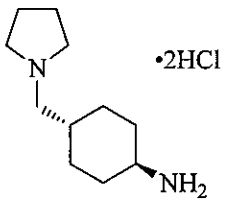
*tert*-butyl (*trans*-4-(((*R*)-3-fluoropyrrolidin-1-yl)methyl)cyclohexyl)carbamate




To a suspension of *trans*-4-((*tert*-butoxycarbonyl)amino)cyclohexyl)methyl methanesulfonate (942 mg, 3.07 mmol) in acetonitrile (15 mL) was added $K_2CO_3$ (1.27 g, 9.21 mmol) and KI (100 mg, 0.60 mmol). (*R*)-3-fluoropyrrolidine hydrochloride (385 mg, 3.07 mmol) was added. The reaction mixture was heated at 50 °C for 72 h. The solution was cooled to room temperature, diluted with a saturated $NaHCO_3$ solution and extracted with dichloromethane. The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, 0–20% methanol/dichloromethane) afforded the desired product (265 mg, 29%) as a white solid. ESI MS *m/z* 301 $[C_{16}H_{29}FN_2O_2 + H]^+$

Example 1016

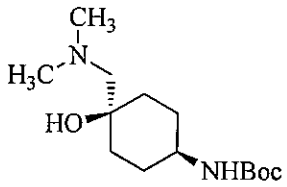
*trans*-4-(pyrrolidin-1-ylmethyl)cyclohexanamine dihydrochloride




To a solution of *tert*-butyl (*trans*-4-(pyrrolidin-1-ylmethyl)cyclohexyl)carbamate (1.28 g, 4.53 mmol) in THF (15 mL) was added aqueous 6 N HCl (6 mL) and water (6 mL) and the reaction mixture was heated at 65 °C for 3 h. The reaction mixture was cooled to room temperature and concentrated to afford the desired product (1.2 g, >99%) as an off-white solid. ESI MS *m/z* 183 $[C_{11}H_{22}FN_2 + H]^+$

Example 1017

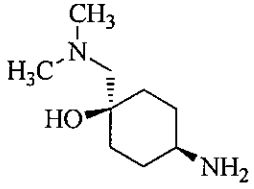
*tert*-butyl (*cis*-4-((dimethylamino)methyl)-4-hydroxycyclohexyl)carbamate



To a solution of dimethylamine (33% in ethanol, 7 mL) was added *tert*-butyl *cis*-1-oxaspiro[2.5] octan-6-ylcarbamate (700 mg, 3.08 mmol). The resulting solution was stirred at room temperature for 4 h and concentrated to give the desired product (840 mg, 100%) as a white solid. ESI MS *m/z* 273 $[C_{14}H_{28}N_2O_3 + H]^+$

Example 1018

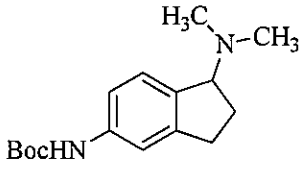
*cis*-4-amino-1-((dimethylamino)methyl)cyclohexanol



To a solution of HCl (2.0 M in diethyl ether, 10 mL, 20 mmol) was added *tert*-butyl (*cis*-4-((dimethylamino)methyl)-4-hydroxycyclohexyl)carbamate (840 mg, 3.08 mmol). The resulting solution was stirred at room temperature for 16 h and concentrated. Saturated sodium bicarbonate solution (100 mL) and 1 M aqueous sodium hydroxide solution (50 mL) were added, and the resultant solution extracted with a mixture of $CHCl_3$/isopropanol (3:1). The combined organic layers were dried over anhydrous sodium sulfate and concentrated to afford the desired product (90 mg, 12%) as a white semisolid. ESI MS *m/z* 173 $[C_9H_{20}N_2O + H]^+$

Example 1019

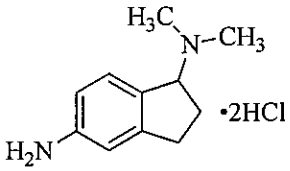
*tert*-butyl (1-(dimethylamino)-2,3-dihydro-1*H*-inden-5-yl)carbamate



To a solution of *tert*-butyl (1-oxo-2,3-dihydro-1*H*-inden-5-yl)carbamate (371 mg, 1.5 mmol) in dimethylamine (2.0 M solution in THF, 5 mL, 10 mmol) was added sodium triacetoxyborohydride (636 mg, 3.0 mmol). The resultant suspension was stirred at room temperature for 16 h, diluted with a saturated $NaHCO_3$ solution and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, 0–20% methanol/dichloromethane) afforded the desired product (225 mg, 54%) as an off-white solid. ESI MS *m/z* 277 $[C_{16}H_{24}N_2O_2 + H]^+$

Example 1020

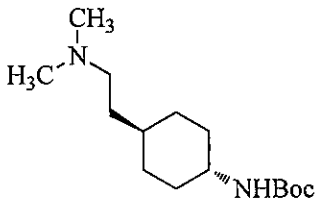
*N1,N1*-dimethyl-2,3-dihydro-1*H*-indene-1,5-diamine dihydrochloride




Following general procedure A-1, *tert*-butyl (1-(dimethylamino)-2,3-dihydro-1H-inden-5-yl) carbamate (225 mg, 0.814 mmol) was reacted with 6 N aqueous HCl (2 mL) to afford the desired product as a light brown solid that was used in the next step without further purification. ESI MS *m/z* 177 $[C_{11}H_{16}N_2 + H]^+$

Example 1021

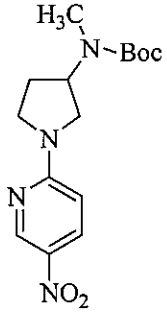
*tert*-butyl (*trans*-4-(2-(dimethylamino)ethyl)cyclohexyl)carbamate




To a suspension of *tert*-butyl (*trans*-4-(2-aminoethyl)cyclohexyl)carbamate (970 mg, 4 mmol) and paraformaldehyde (360 mg, 12 mmol) in methanol (40 mL) was added sodium cyanoborohydride (754 mg, 12 mmol) and acetic acid (1 drop). The resultant suspension was stirred at room temperature for 16 h, diluted with a saturated $NaHCO_3$ solution and extracted with a mixture of $CHCl_3$/isopropanol (3:1). The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, 0–20% methanol/dichloromethane) afforded the desired product (336 mg, 31%) as a white solid. ESI MS *m/z* 271 $[C_{15}H_{30}N_2O_2 + H]^+$

Example 1022

*tert*-butyl methyl(1-(5-nitropyridin-2-yl)pyrrolidin-3-yl)carbamate

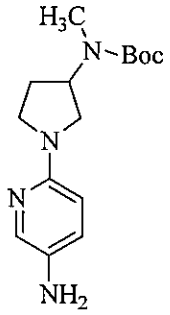



To a solution of *tert*-butyl methyl(pyrrolidin-3-yl)carbamate (1.00 g, 5.0 mmol) in THF (25 mL)

was added triethylamine (0.70 mL, 5.0 mmol) and 2-chloro-5-nitropyridine (500 mg, 3.15 mmol). The reaction mixture was then stirred at room temperature for 16 h, diluted with a saturated $NaHCO_3$ solution and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, ethyl acetate/hexanes) afforded the desired product (1.02 g, 100%) as a yellow solid. ESI MS *m/z* 323 $[C_{15}H_{22}N_4O_4 + H]^+$

Example 1023

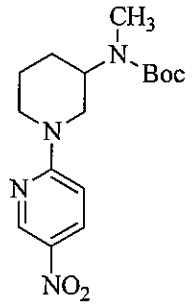
*tert*-butyl (1-(5-aminopyridin-2-yl)pyrrolidin-3-yl)(methyl)carbamate



To a solution of *tert*-butyl methyl(1-(5-nitropyridin-2-yl)pyrrolidin-3-yl)carbamate (1.02 g, 3.2 mmol) in THF (50 mL) was added Pd/C (10 wt. %, 500 mg). The reaction mixture was stirred under 1 atm of hydrogen for 16 h, filtered through celite and concentrated to afford the desired product (940 mg, 100%) as a red oil. ESI MS *m/z* 293 $[C_{15}H_{24}N_4O_2 + H]^+$

Example 1024

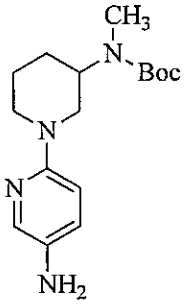
*tert*-butyl methyl(1-(5-nitropyridin-2-yl)piperidin-3-yl)carbamate



To a solution of *tert*-butyl methyl(piperidin-3-yl)carbamate (1.00 g, 4.67 mmol) in THF (25 mL) was added triethylamine (0.70 mL, 5.0 mmol) and 2-chloro-5-nitropyridine (500 mg, 3.1 mmol). The reaction mixture was then stirred at room temperature for 16 h, diluted with a saturated $NaHCO_3$ solution and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, ethyl acetate/hexanes) afforded the desired product (1.03 g, 99%) as a yellow solid. ESI MS *m/z* 337 $[C_{16}H_{24}N_4O_4 + H]^+$

Example 1025

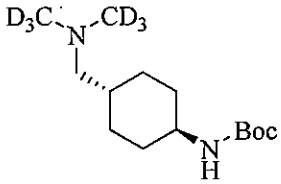
*tert*-butyl (1-(5-aminopyridin-2-yl)piperidin-3-yl)(methyl)carbamate



To a solution of *tert*-butyl methyl(1-(5-nitropyridin-2-yl)piperidin-3-yl)carbamate (1.03 g, 3.1 mmol) in THF (50 mL) was added Pd/C (10 wt. %, 500 mg). The reaction mixture was stirred under 1 atm of hydrogen for 16 h, filtered through celite and concentrated to afford the desired product (902 mg, 96%) as a red oil. ESI MS *m/z* 307 $[C_{16}H_{26}N_4O_2 + H]^+$

Example 1026

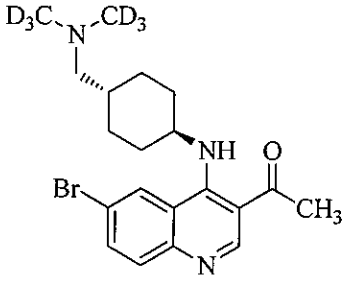
*tert*-butyl (*trans*-4-((dimethyl-$d_6$-amino)methyl)cyclohexyl)carbamate



To a suspension of *trans*-4-((*tert*-butoxycarbonyl)amino)cyclohexyl)methyl methanesulfonate (307 mg, 1.0 mmol) in acetonitrile (4 mL) was added KI (332 mg, 2.0 mmol), *N*,*N*-diisopropylethylamine (1.78 mL, 10 mmol) and finally dimethyl-$d_6$-amine hydrochloride (350 mg, 4.0 mmol). The reaction mixture was heated in a microwave at 100 °C for 1 h. The reaction was cooled to room temperature, diluted with a satd. aq $NaHCO_3$ solution and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate and concentrated to afford the desired product (236 mg, 90%) as a light brown solid. ESI MS *m/z* 263 $[C_{14}H_{22}D_6N_2O_2 + H]^+$

Example 1027

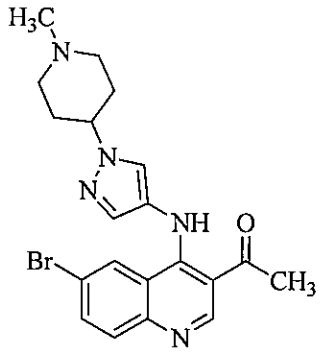
1-(6-bromo-4-((*trans*-4-((dimethyl-$d_6$-amino)methyl)cyclohexyl)amino) quinolin-3-yl)ethanone



To a solution of *tert*-butyl (*trans*-4-((dimethyl-$d_6$-amino)methyl)cyclohexyl)carbamate (750 mg, 2.85 mmol) in THF (10 mL) was added water (5 mL) and HCl (6.0 M in $H_2O$, 5.0 mL, 30 mmol) and the reaction mixture was heated at 65 °C for 2 h. After cooling to room temperature the reaction mixture was concentrated and the residue was dissolved in dioxane (40 mL) followed by the addition of *N*,*N*-diisopropylethylamine (5.0 mL, 28.7 mmol), $K_2CO_3$ (1.0 g, 7.24 mmol) and 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (0.59 g, 2.0 mmol). The reaction mixture was heated at 100 °C for 16 h, cooled to room temperature, diluted with satd. aq $NaHCO_3$ and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate and concentrated to afford the desired product (273 mg, 33%) as an off-white solid. ESI MS *m/z* 410 $[C_{20}H_{20}D_6BrN_3O + H]^+$

Example 1028

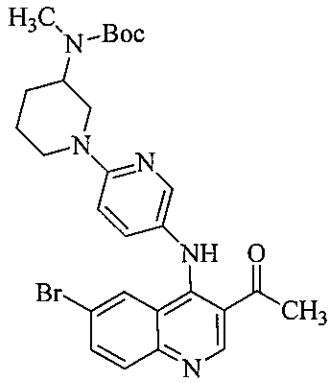
1-(6-bromo-4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)quinolin-3-yl)ethanone



Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (285 mg, 1.0 mmol) was reacted with 1-(1-methylpiperidin-4-yl)-1*H*-pyrazol-4-amine (0.30 g, 1.66 mmol) to afford the desired product (223 mg, 52%) as a light yellow solid. ESI MS *m/z* 428 $[C_{20}H_{22}BrN_5O + H]^+$

Example 1029

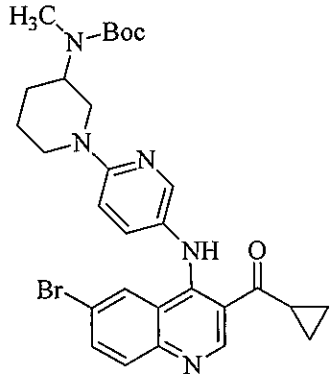
*tert*-butyl (1-(5-((3-acetyl-6-bromoquinolin-4-yl)amino)pyridin-2-yl) piperidin-3-yl)(methyl)carbamate



Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (285 mg, 1.0 mmol) was reacted with *tert*-butyl (1-(5-aminopyridin-2-yl)piperidin-3-yl)(methyl)carbamate (442 mg, 1.45 mmol) to afford the desired product (446 mg, 80%) as an orange-red solid. ESI MS *m/z* 554 $[C_{27}H_{32}BrN_5O_3 + H]^+$

Example 1030

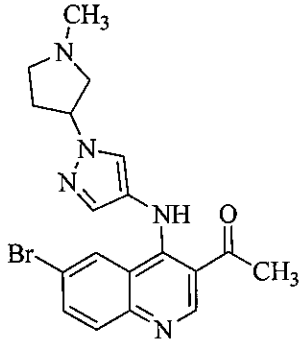
*tert*-butyl (1-(5-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl)amino) pyridin-2-yl)piperidin-3-yl)(methyl)carbamate



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (310 mg, 1.0 mmol) was reacted with *tert*-butyl (1-(5-aminopyridin-2-yl)piperidin-3-yl)(methyl) carbamate (460 mg, 1.51 mmol) to afford the desired product (590 mg, 100%) as an orange-red solid. ESI MS *m/z* 580 $[C_{29}H_{34}BrN_5O_3 + H]^+$

Example 1031

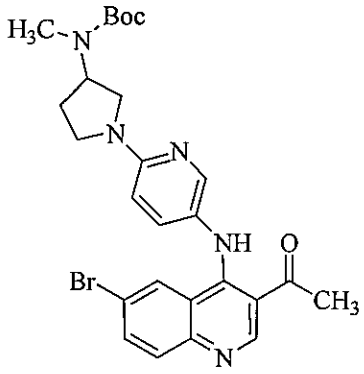
1-(6-bromo-4-((1-(1-methylpyrrolidin-3-yl)-1*H*-pyrazol-4-yl)amino)quinolin-3-yl)ethanone



Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (285 mg, 1.0 mmol) was reacted with 1-(1-methylpyrrolidin-3-yl)-1*H*-pyrazol-4-amine (0.28 g, 1.68 mmol) to afford the desired product (360 mg, 87%) as a light yellow solid. ESI MS *m/z* 414 $[C_{19}H_{20}BrN_5O + H]^+$

Example 1032

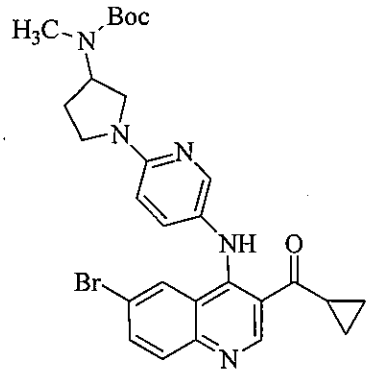
*tert*-butyl (1-(5-((3-acetyl-6-bromoquinolin-4-yl)amino)pyridin-2-yl) pyrrolidin-3-yl)(methyl)carbamate



Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (285 mg, 1.0 mmol) was reacted with *tert*-butyl (1-(5-aminopyridin-2-yl)pyrrolidin-3-yl)(methyl)carbamate (440 mg, 1.50 mmol) to afford the desired product (273 mg, 51%) as an orange solid. ESI MS *m/z* 540 $[C_{26}H_{30}BrN_5O_3 + H]^+$

Example 1033

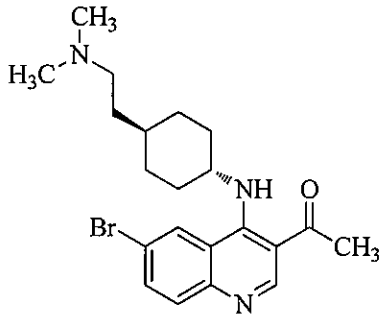
*tert*-butyl (1-(5-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl)amino) pyridin-2-yl)pyrrolidin-3-yl)(methyl)carbamate



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (310 mg, 1.0 mmol) was reacted with *tert*-butyl (1-(5-aminopyridin-2-yl)pyrrolidin-3-yl)(methyl) carbamate (500 mg, 1.71 mmol) to afford the desired product (350 mg, 62%) as an orange-red solid. ESI MS *m/z* 566 $[C_{28}H_{32}BrN_5O_3 + H]^+$

Example 1034

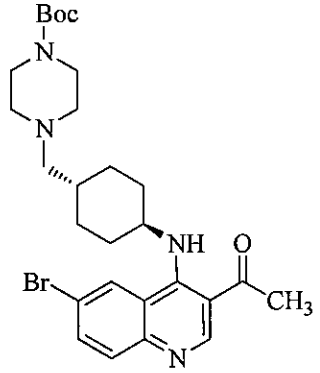
1-(6-bromo-4-((*trans*-4-(2-(dimethylamino)ethyl)cyclohexyl)amino)quinolin-3-yl)ethanone



Following general procedure A-1, *tert*-butyl (*trans*-4-(2-(dimethylamino)ethyl)cyclohexyl) carbamate (336 mg, 1.24 mmol) was reacted with 6 N aqueous HCl (2 mL) to afford a viscous colorless oil. The oil was dissolved in dioxane (10 mL) and DMF (5 mL) followed by the addition of 1-(6-bromo -4-chloroquinolin-3-yl)ethanone (285 mg, 1.0 mmol), $K_2CO_3$ (0.55 g, 4.0 mmol), and *N,N*-diisopropylethylamine (1.0 mL, 5.8 mmol) and the resultant suspension was heated at 100 °C for 16 h. The reaction mixture was cooled to room temperature, diluted with satd. aq. $NaHCO_3$ and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, 0–20% methanol/dichloromethane) afforded the desired product (227 mg, 54%) as a light yellow-brown solid. ESI MS *m/z* 418 $[C_{21}H_{28}BrN_3O + H]^+$

Example 1035

*tert*-butyl 4-((*trans*-4-((3-acetyl-6-bromoquinolin-4-yl)amino)cyclohexyl) methyl)piperazine-1-carboxylate

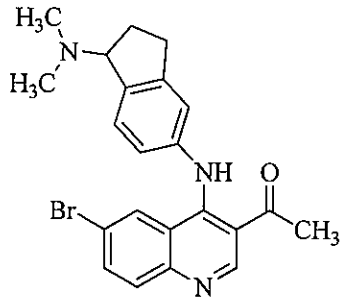


To a solution of ((*trans*-4-((3-acetyl-6-bromoquinolin-4-yl)amino)cyclohexyl)methyl methanesulfonate (300 mg, 0.66 mmol) and *tert*-butyl piperazine-1-carboxylate (566 mg, 3.0 mmol) in acetonitrile (5 mL) and dioxane (5 mL) was added KI (500 mg, 3.0 mmol) and *N,N*-diisopropylethylamine (0.60 mL, 3.44 mmol) and the reaction mixture was heated at 70 °C for 16 h. The solution was cooled to room temperature, diluted with satd. aq. $NaHCO_3$ and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate, concentrated and purified by column chromatography (silica, 0–20% methanol/dichloromethane) to afford the desired product (248 mg, 69%) as an off-white solid.

ESI MS *m/z* 545 $[C_{27}H_{37}BrN_4O_3 + H]^+$

Example 1036

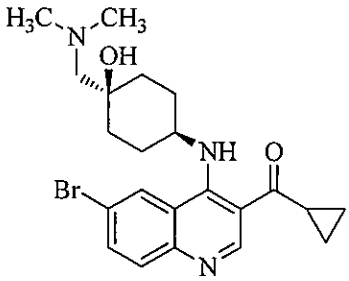
1-(6-bromo-4-((1-(dimethylamino)-2,3-dihydro-1*H*-inden-5-yl)amino)quinolin-3-yl)ethanone



Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (256 mg, 0.90 mmol) was reacted with *N1,N1*-dimethyl-2,3-dihydro-1H-indene-1,5-diamine dihydrochloride (0.814 mmol) to afford the desired product (19 mg, 5.5%) as a yellow-brown solid. ESI MS *m/z* 424 $[C_{22}H_{22}BrN_3O + H]^+$

Example 1037

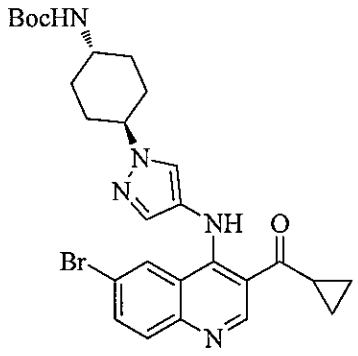
(6-bromo-4-((*cis*-4-((dimethylamino)methyl)-4-hydroxycyclohexyl)amino) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (155 mg, 0.5 mmol) was reacted with *cis*-4-amino-1-((dimethylamino)methyl)cyclohexanol (90 mg, 0.37 mmol) to afford the desired product (72 mg, 44%) as an off-white solid. ESI MS *m/z* 446 $[C_{22}H_{28}BrN_3O_2 + H]^+$

Example 1038

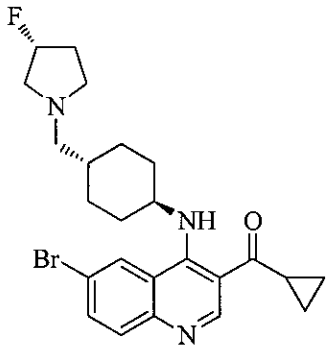
*tert*-butyl (*trans*-4-(4-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl) amino)-1*H*-pyrazol-1-yl)cyclohexyl)carbamate




Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (310 mg, 1.0 mmol) was reacted with *tert*-butyl (*cis*-4-(4-amino-1*H*-pyrazol-1-yl)cyclohexyl) carbamate (610 mg, 2.18 mmol) to afford the desired product (90 mg, 16%) as a yellow solid. ESI MS *m/z* 554 $[C_{27}H_{32}BrN_5O_3 + H]^+$

Example 1039

(6-bromo-4-((*trans*-4-(((*R*)-3-fluoropyrrolidin-1-yl)methyl)cyclohexyl)amino) quinolin-3-yl)(cyclopropyl)methanone

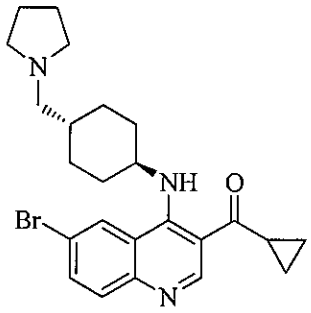



To a solution of *tert*-butyl (*trans*-4-(((*R*)-3-fluoropyrrolidin-1-yl)methyl)cyclohexyl)carbamate (265 mg, 0.88 mmol) in THF (6 mL) was added aqueous 6 N HCl (6 mL) and water (6 mL) and the reaction mixture was heated at 65 °C for 3 h. The reaction mixture was cooled to room temperature, diluted with satd. aq. sodium bicarbonate (50 mL) and 1 M aqueous sodium hydroxide (50 mL) and extracted with a mixture of $CHCl_3$/isopropanol (3:1). The combined organic layers were dried over anhydrous sodium sulfate and concentrated to afford a white semisolid. The residue was dissolved in dioxane followed by the addition of (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (225 mg, 0.724 mmol), $K_2CO_3$ (415 mg, 3.0 mmol), and *N*,*N*-diisopropylethylamine (0.39 mL, 3.0 mmol) and the resultant suspension was heated at 80 °C for 16 h. The reaction was cooled to room temperature, diluted with satd. aq. $NaHCO_3$ and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, 0–20%

methanol/dichloromethane) afforded the desired product (180 mg, 52%) as an off-white solid. ESI MS *m/z* 474 $[C_{24}H_{29}BrFN_3O + H]^+$

Example 1040

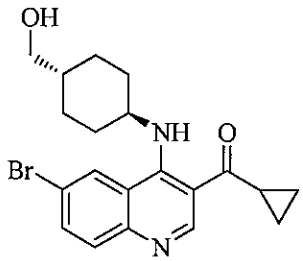
(6-bromo-4-((*trans*-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (466 mg, 1.5 mmol) was reacted with *trans*-4-(pyrrolidin-1-ylmethyl)cyclohexanamine dihydrochloride (847 mg, 3.0 mmol) to afford the desired product (180 mg, 52%) as an off-white solid. ESI MS *m/z* 456 $[C_{24}H_{30}BrN_3O + H]^+$

Example 1041

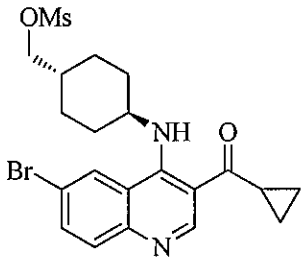
(6-bromo-4-((*trans*-4-(hydroxymethyl)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (1.16 g, 3.75 mmol) was reacted with (*trans*-4-aminocyclohexyl)methanol (726 mg, 5.61 mmol) to afford the desired product (1.23 g, 81%) as a white solid. ESI MS *m/z* 403 $[C_{20}H_{23}BrN_2O_2 + H]^+$

Example 1042

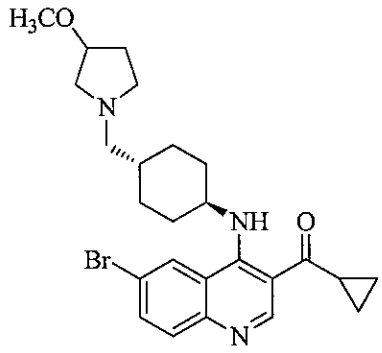
(*trans*-4-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl)amino) cyclohexyl)methyl methanesulfonate



To a suspension of (6-bromo-4-((*trans*-4-(hydroxymethyl)cyclohexyl)amino)quinolin-3-yl) (cyclopropyl)methanone (1.23 g, 3.05 mmol) in dichloromethane (60 mL) was added triethylamine (2.09 mL, 15 mmol) and methanesulfonyl chloride (0.35 mL, 4.5 mmol) was added dropwise. The reaction mixture was stirred for 2 h. The solution was then diluted with saturated sodium bicarbonate solution and extracted with dichloromethane. The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, ethyl acteate/hexanes) afforded the desired product (0.98 g, 67%) as a white solid. ESI MS *m/z* 481 $[C_{21}H_{25}BrN_2O_4S + H]^+$

Example 1043

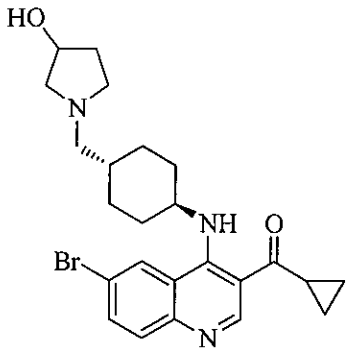
(6-bromo-4-((*trans*-4-((3-methoxypyrrolidin-1-yl)methyl)cyclohexyl)amino) quinolin-3-yl)(cyclopropyl)methanone



To a solution of (*trans*-4-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl)amino) cyclohexyl)methyl methanesulfonate (362 mg, 0.75 mmol) and 3-methoxypyrrolidine hydrochloride (410 mg, 2.98 mmol) in acetonitrile (15 mL) was added $K_2CO_3$ (1.24 g, 9 mmol) and KI (300 mg, 1.81 mmol) and *N,N*-diisopropylethylamine (0.5 mL, 2.9 mmol) and the reaction mixture was heated at 50 °C for 16 h and 80 °C for 24 h. The solution was cooled to room temperature, diluted with satd. aq. $NaHCO_3$ and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate, concentrated and purification by column chromatography (silica, 0–20% methanol/dichloromethane) to afford the desired product (155 mg, 42%) as an off-white solid. ESI MS *m/z* 486 $[C_{25}H32BrN_3O_2 + H]^+$

Example 1044

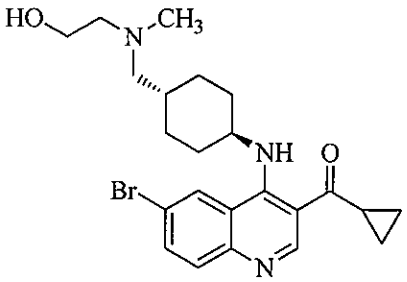
(6-bromo-4-((*trans*-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexyl)amino) quinolin-3-yl)(cyclopropyl)methanone



To a solution of (*trans*-4-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl)amino) cyclohexyl)methyl methanesulfonate (362 mg, 0.75 mmol) and 3-hydroxypyrrolidine (262 mg, 3.0 mmol) in acetonitrile (15 mL) was added *N,N*-diisopropylethylamine (1.0 mL, 5.8 mmol) and the reaction mixture was heated at 80 °C for 16 h. The solution was cooled to room temperature, diluted satd. aq. $NaHCO_3$ and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate, concentrated and purified by column chromatography (silica, 0–20% methanol/dichloromethane) to afford the desired product (174 mg, 49%) as an off-white solid. ESI MS *m/z* 472 $[C_{24}H_{30}BrN_3O_2 + H]^+$

Example 1045

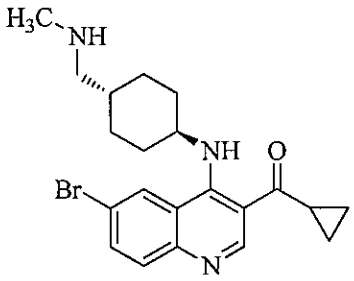
(6-bromo-4-((*trans*-4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexyl)amino) quinolin-3-yl)(cyclopropyl)methanone



To a solution of (*trans*-4-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl)amino) cyclohexyl)methyl methanesulfonate (361 mg, 0.75 mmol) and 2-(methylamino)ethanol (0.30 mL, 3.75 mmol) in acetonitrile (15 mL) was added *N,N*-diisopropylethylamine (1.0 mL, 5.8 mmol) and the reaction mixture was heated at 70 °C for 16 h. The solution was cooled to room temperature, diluted with a saturated $NaHCO_3$ solution and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, 0–20% methanol/dichloromethane) afforded the desired product (150 mg, 43%) as an off-white solid. ESI MS *m/z* 460 $[C_{23}H_{30}BrN_3O_2 + H]^+$

Example 1046

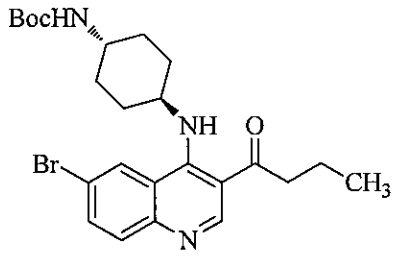
(6-bromo-4-((*trans*-4-((methylamino)methyl)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone



A suspension of (*trans*-4-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl)amino) cyclohexyl)methyl methanesulfonate (175 mg, 0.36 mmol) in methylamine (2.0 M solution in THF, 4.0 mL, 8.0 mmol) in a sealed vessel was heated under microwave irradiation conditions to 120 °C for 2 h. The solution was cooled to room temperature and concentrated. The resultant residue was purified by preparative HPLC (C18 silica, 10–90% methanol/water with 0.05% TFA). The residue was eluted through an ion-exchange column (using methanol and 7 N methanol in ammonia) to obtain the desired product (42 mg, 28%) a white solid. ESI MS *m/z* 416 $[C_{21}H_{26}BrN_3O + H]^+$

Example 1047

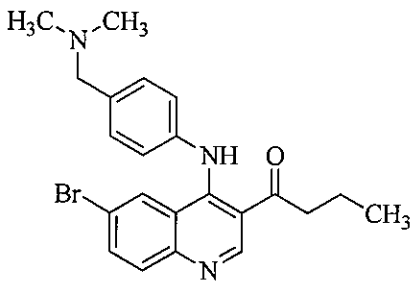
*tert*-butyl (*trans*-4-((6-bromo-3-butyrylquinolin-4-yl)amino)cyclohexyl)carbamate



Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)butan-1-one (470 mg, 1.50 mmol) was reacted with *tert*-butyl (*trans*-4-aminocyclohexyl)carbamate (643 mg, 3 mmol) to afford the desired product (498 mg, 68%) as a light orange solid. ESI MS *m/z* 490 $[C_{24}H_{32}BrN_3O_3 + H]^+$

Example 1048

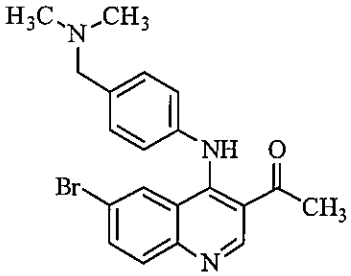
1-(6-bromo-4-((4-((dimethylamino)methyl)phenyl)amino)quinolin-3-yl)butan-1-one



Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)butan-1-one (470 mg, 1.50 mmol) was reacted with 4-((dimethylamino)methyl)aniline (451 mg, 3 mmol) to afford the desired product (402 mg, 63%) as a yellow solid. ESI MS *m/z* 426 $[C_{22}H_{24}BrN_3O + H]^+$

Example 1049

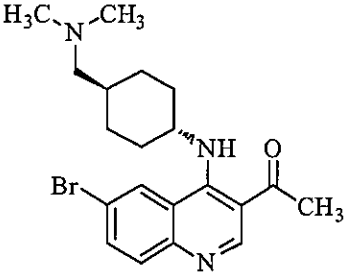
1-(6-bromo-4-((4-((dimethylamino)methyl)phenyl)amino)quinolin-3-yl)ethanone



Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (500 mg, 1.76 mmol) was reacted with 4-((dimethylamino)methyl)aniline hydrochloride (479 mg, 2.56 mmol) to afford the desired product (491 mg, 70%) as a yellow solid. ESI MS *m/z* 398 $[C_{20}H_{20}BrN_3O + H]^+$

Example 1050

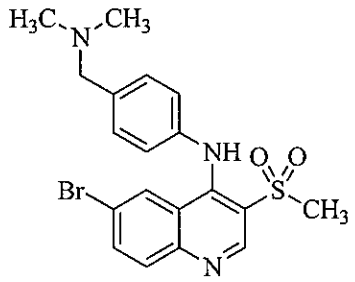
1-(6-bromo-4-((*trans*-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)ethanone



Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (256 mg, 0.90 mmol) was reacted with *trans*-4-((dimethylamino)methyl)cyclohexanamine dihydrochloride (320 mg, 1.40 mmol) to afford the desired product (149 mg, 70%) as a light orange solid. ESI MS *m/z* 404 $[C_{20}H_{26}BrN_3O + H]^+$

Example 1051

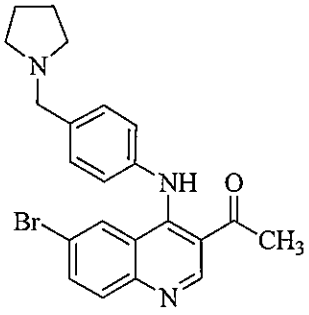
6-bromo-N-(4-((dimethylamino)methyl)phenyl)-3-(methylsulfonyl)quinolin-4-amine



To a suspension of 6-bromo-4-chloro-3-(methylsulfonyl)quinoline (250 mg, 0.78 mmol) in dioxane (8 mL) was added 4-((dimethylamino)methyl)cyclohexanamine (233 mg, 1.55 mmol) and *N*,*N*-diisopropylethylamine (0.42 mL, 2.4 mmol). The reaction mixture was heated at 90 °C for 4 h. The reaction mixture was cooled to room temperature, diluted with saturated sodium bicarbonate solution and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, 0–20% methanol/dichloromethane) afforded the desired product (225 mg, 66%) as a yellow solid. ESI MS *m/z* 434 $[C_{29}H_{20}BrN_3O_2 + H]^+$

Example 1052

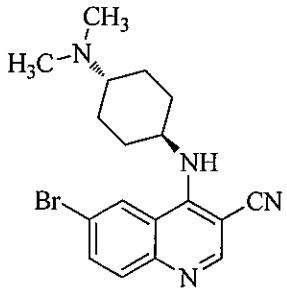
1-(6-bromo-4-((4-(pyrrolidin-1-ylmethyl)phenyl)amino)quinolin-3-yl)ethanone



Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (285 mg, 1.00 mmol) was reacted with 4-(pyrrolidin-1-ylmethyl)aniline (374 mg, 1.50 mmol) to afford the desired product (182 mg, 43%) as a light orange solid. ESI MS *m/z* 424 $[C_{22}H_{22}BrN_3O + H]^+$

Example 1053

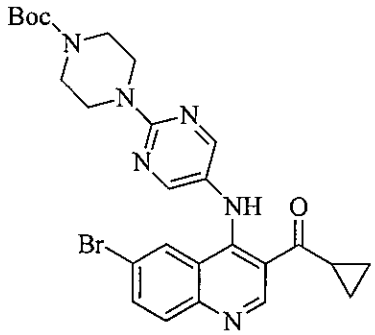
6-bromo-4-((*trans*-4-(dimethylamino)cyclohexyl)amino)quinoline-3-carbonitrile



Following general procedure C, 6-bromo-4-chloroquinoline-3-carbonitrile (262 mg, 0.98 mmol) was reacted with *trans*-$N^1$,$N^1$-dimethylcyclohexane-1,4-diamine dihydrochloride (422 mg, 1.96 mmol) to afford the desired product (56 mg, 15%) as a yellow solid. ESI MS *m/z* 373 $[C_{18}H_{21}BrN_4 + H]^+$

Example 1054

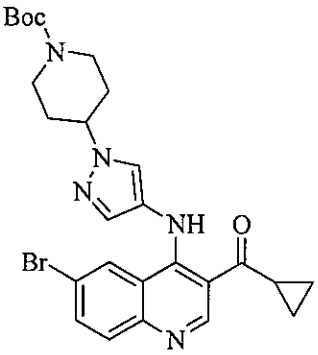
*tert*-butyl 4-(5-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl)amino) pyrimidin-2-yl)piperazine-1-carboxylate



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1.0 mmol) was reacted with *tert*-butyl 4-(5-aminopyrimidin-2-yl)piperazine-1-carboxylate (419 mg, 1.5 mmol) to afford the desired product (215 mg, 39%) as a yellow solid. ESI MS *m/z* 553 $[C_{26}H_{29}BrN_6O_3 + H]^+$

Example 1055

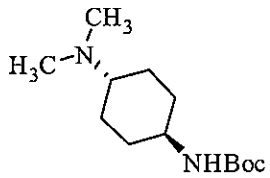
*tert*-butyl 4-(4-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl)amino) -1H-pyrazol-1-yl)piperidine-1-carboxylate



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1.0 mmol) was reacted with *tert*-butyl 4-(4-amino-1H-pyrazol-1-yl)piperidine-1-carboxylate (400 mg, 1.5 mmol) to afford the desired product (441 mg, 82%) as a yellow solid. ESI MS *m/z* 540 $[C_{26}H_{30}BrN_5O_3 + H]^+$

Example 402

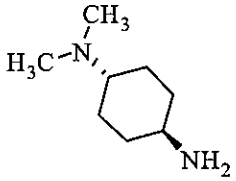
*tert*-Butyl *trans*-4-(dimethylamino)cyclohexylcarbamate




To a solution of *tert*-butyl *trans*-4-aminocyclohexylcarbamate (750 mg, 3.50 mmol), paraformaldehyde (318 mg, 10.5 mmol), and sodium cyanoborohydride (660 mg, 13.5 mmol) in methanol (30 mL) was added acetic acid (catalytic) and the reaction stirred at room temperature for 18 h. The reaction mixture was quenched with water and the layers were separated. The pH of the aqueous layer was adjusted to 10 using 1 M sodium hydroxide followed by extraction with methylene chloride. The combined organic layers were dried over anhydrous sodium sulfate, filtered, and concentrated to afford the desired product (805 mg, 95%) as a white solid: ESI MS *m/z* 243 $[C_{13}H_{26}N_2O_2 + H]^+$.

Example 403

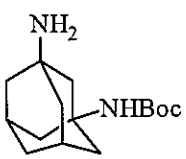
*trans*-$N^1$,$N^1$-Dimethylcyclohexane-1,4-diamine




To a solution of *tert*-butyl *trans*-4-(dimethylamino)cyclohexylcarbamate (805 mg, 3.33 mmol) was added TFA (5 mL) and the reaction mixture was heated at 75 °C for 18 h. The reaction mixture was concentrated and the residue was eluted through an ion-exchange column (using methanol and 7 N methanol in ammonia) to obtain the desired product as the free base (400 mg, 85%) as an orange oil: ESI MS *m/z* 143 $[C_8H_{18}N_2 + H]^+$.

Example 404

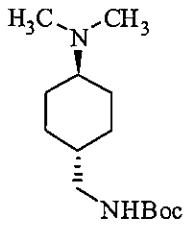
*tert*-Butyl 1-(3-aminoadamantane)carbamate



To a mixture of 1,3-diaminoadamantane dihydrochloride (500 mg, 2.09 mmol) and sodium carbonate (1.10 g, 10.5 mmol) in 1,4 dioxane (20 mL) and water (10 mL) at 0 °C was added di-*tert*-butyl dicarbonate (450 mg, 2.09 mmol) in 1,4 dioxane (10 mL) portionwise over 10 min. The reaction mixture was warmed to room temperature, stirred for 18 h, diluted with methylene chloride and the layers were separated. The organic layer was dried over anhydrous sodium sulfate, filtered, and concentrated to afford the desired product (420 mg, 76%) as a white solid: ESI MS *m/z* 267 $[C_{15}H_{26}N_2O_2 + H]^+$.

Example 405

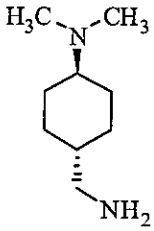
*tert*-Butyl [*trans*-4-(dimethylamino)cyclohexyl]methylcarbamate




To a solution of *tert*-butyl [*trans*-4-aminocyclohexyl]methylcarbamate (1.15 g, 5.00 mmol), paraformaldehyde (454 mg, 15.0 mmol), and sodium cyanoborohydride (940 mg, 15.0 mmol) in methanol (40 mL) was added acetic acid (catalytic) and the reaction mixture stirred at room temperature for 18 h. The reaction mixture was quenched with water and concentrated to remove methanol. The pH of the aqueous layer was adjusted to 10 with 1 M aqueous sodium hydroxide followed by extraction with methylene chloride. The organic layers were dried over anhydrous sodium sulfate, filtered, and concentrated to afford the desired product (1.23 g, 96%) as a thick oil: ESI MS *m/z* 257 $[C_{14}H_{28}N_2O_2 + H]^+$.

Example 406

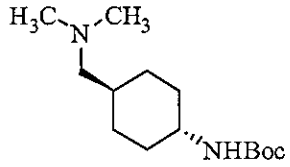
*trans*-4-(Aminomethyl)-*N*,*N*-dimethylcyclohexanamine




Following general procedure A-1, *tert*-butyl [*trans* -4-(dimethylamino)cyclohexyl]methyl carbamate (1.23 g, 4.80 mmol) was reacted with 3 M hydrochloric acid (10 mL) to afford the desired product (1.15 g, >99%) as white solid: ESI MS *m/z* 230 $[C_9H_{20}N_2 + H]^+$.

Example 407

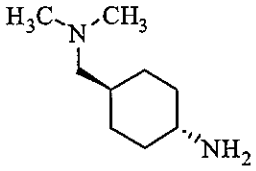
*tert*-Butyl *trans*-4-[(dimethylamino)methyl]cyclohexylcarbamate



To a solution of *tert*-butyl *trans*-4-(aminomethyl)cyclohexylcarbamate (1.02 g, 4.47 mmol), paraformaldehyde (407 mg, 13.4 mmol), and sodium cyanoborohydride (842 mg, 13.4 mmol) in methanol (40 mL) was added acetic acid (catalytic) and the reaction mixture stirred at room temperature for 18 h. The reaction mixture was quenched with water and concentrated to remove methanol. The pH of the aqueous layer was adjusted to 10 with 1 M aqueous sodium hydroxide followed by extraction with methylene chloride. The organic layer was dried over anhydrous sodium sulfate, filtered, and concentrated to afford the desired product (1.1 g, 96%) as an oil: ESI MS *m/z* 257 $[C_{14}H_{28}N_2O_2 + H]^+$.

Example 408

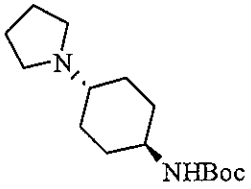
*trans*-4-[(Dimethylamino)methyl]cyclohexanamine



Following general procedure A-1, *tert*-butyl *trans*-4-[(dimethylamino)methyl] cyclohexylcarbamate (1.1 g, 4.30 mmol) was reacted with 3 M hydrochloric acid (10 mL) to afford the desired product (1.0 g, >99%) as a glass: ESI MS *m/z* 230 $[C_9H_{20}N_2 + H]^+$.

Example 409

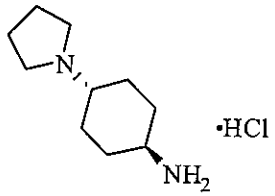
*tert*-Butyl *trans*-4-(pyrrolidin-1-yl)cyclohexylcarbamate



A stirred solution of *tert*-butyl *trans*-4-aminocyclohexylcarbamate (2.0 g, 9.33 mmol), 1,4-dibromobutane (1.33 mL, 11.2 mmol), and potassium hydrogen carbonate (4.67 g, 46.7 mmol) in DMF (90 mL) was stirred at room temperature overnight. After this time the reaction was diluted with aqueous lithium chloride and extracted with diethyl ether. The combined organics were dried over anhydrous sodium sulfate and concentrated under reduced pressure to afford the desired product (399 mg, 16%) as an off-white solid: ESI MS *m/z* 269 $[C_{15}H_{28}N_2O_2 + H]^+$.

Example 410

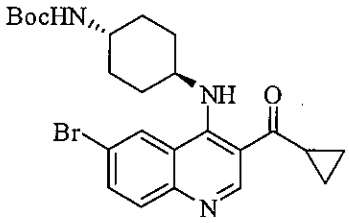
*trans*-4-(Pyrrolidin-1-yl)cyclohexanamine hydrochloride



To a solution of *tert*-butyl *trans*-4-(pyrrolidin-1-yl)cyclohexylcarbamate (399 mg, 1.44 mmol) in THF (12 mL) was added aqueous 6 N HCl (6 mL) and water (6 mL) and the reaction mixture was heated at 65 °C for 18 ht. The reaction mixture was cooled and concentrated to afford the desired product (350 mg, >99%) as an off-white solid: ESI MS *m/z* 169 $[C_{10}H_{20}N_2 + H]^+$.

Example 411

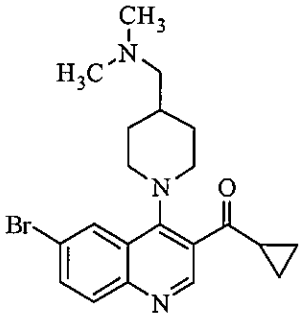
*tert*-Butyl *trans*-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexylcarbamate



Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (581 mg, 1.87 mmol) was reacted with *tert*-butyl *trans*-4-aminocyclohexylcarbamate (865 mg, 4.00 mmol) to afford the desired product (525 mg, 56%): ESI MS *m/z* 488 $[C_{24}H_{30}BrN_3O_3 + H]^+$.

Example 412

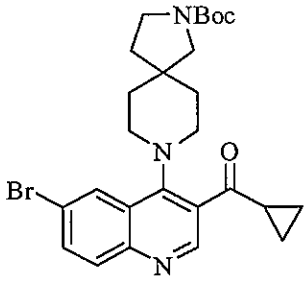
(6-Bromo-4-{4-[(dimethylamino)methyl]piperidin-1-yl}quinolin-3-yl)(cyclopropyl)methanone



Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (211 mg, 0.680 mmol) was reacted with *N*,*N*-dimethyl-1-(piperidin-4-yl)methanamine (97 mg, 0.680 mmol) to afford the desired product (160 mg, 46%) as a yellow glass: ESI MS *m/z* 417 $[C_{21}H_{26}BrN_3O + H]^+$.

Example 413

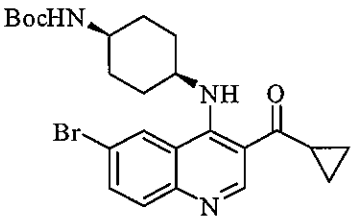
*tert*-Butyl 8-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl]-2,8-diazaspiro [4,5]decane-2-carboxylate




Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (200 mg, 0.640 mmol) was reacted with *tert*-butyl 2,8-diazaspiro[4,5]decane-2-carboxylate (169 mg, 0.704 mmol) to afford the desired product (240 mg, 73%) as a yellow foam: ESI MS *m/z* 514 $[C_{26}H_{32}BrN_3O_3 + H]^+$.

Example 414

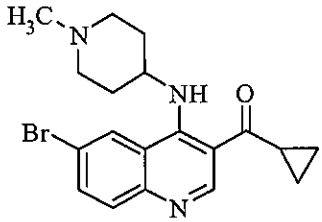
*tert*-Butyl *cis*-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexylcarbamate




Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (200 mg, 0.640 mmol) was reacted with *tert*-butyl *cis*-4-aminocyclohexylcarbamate (164 mg, 0.767 mmol) to afford the desired product (259 mg, 83%) as a brown solid: ESI MS *m/z* 489 $[C_{24}H_{30}BrN_3O_3 + H]^+$.

Example 415

[6-Bromo-4-(1-methylpiperidin-4-ylamino)quinolin-3-yl](cyclopropyl)methanone

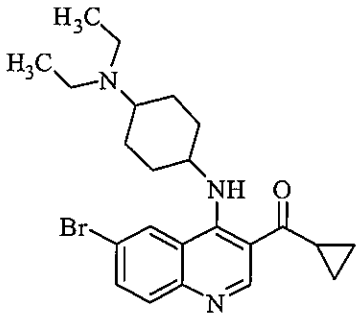



Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (510 mg, 1.64 mmol) was reacted with 1-methylpiperidin-4-amine (375 mg, 3.28 mmol) to afford the desired product (552 mg, 87%) as a brown solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.12 (s, 1H), 8.38 (d, $J$ = 2.0 Hz, 1H), 7.84 (dd, $J$ = 8.9, 2.1 Hz, 1H), 7.79–7.71 (m, 1H), 4.20–3.97 (m, 1H), 2.93–2.69 (m, 3H), 2.47–2.19 (m, 5H), 2.19–2.03 (m, 2H), 1.86–1.60 (m, 2H), 1.32–1.16 (m,

2H), 1.16–1.00 (m, 2H).

Example 416

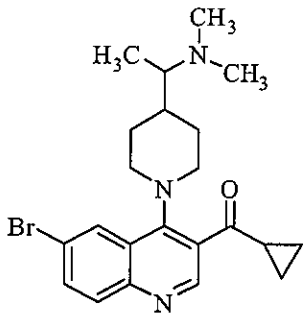
{6-Bromo-4-[4-(diethylamino)cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (1.01 g, 3.25 mmol) was reacted with $N^1$,$N^1$-diethylcyclohexane-1,4-diamine (660 mg, 3.90 mmol) to afford the desired product (1.12 g, 78%) as a yellow wax: ESI MS *m/z* 523 $[C_{23}H_{30}BrN_3O + H]^+$.

Example 417

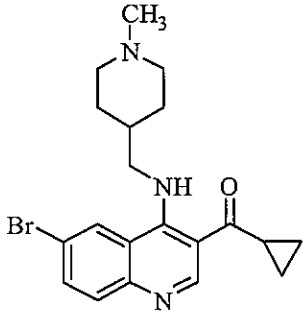
(6-Bromo-4-{4-[1-(dimethylamino)ethyl]piperidin-1-yl}quinolin-3-yl)(cyclopropyl)methanone



Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (300 mg, 0.965 mmol) was reacted with *N*,*N*-dimethyl-1-(piperidin-4-yl)ethanamine (332 mg, 1.45 mmol) to afford the desired product (264 mg, 63%) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 8.78 (s, 1H), 8.32 (s, 1H), 7.95–7.80 (m, 2H), 3.57–3.39 (m, 2H), 3.21 3.05 (m, 2H), 2.59–2.42 (m, 2H), 2.31 (s, 6H), 2.11–1.97 (m, 1H), 1.89 (d, $J$ = 12.4 Hz, 1H), 1.80–1.67 (m, 1H), 1.68–1.49 (m, 2H), 1.36–1.16 (m, 4H), 1.06 (d, $J$ = 6.6 Hz, 3H).

Example 418

{6-Bromo-4-[(1-methylpiperidin-4-yl)methylamino]quinolin-3-yl}(cyclopropyl)methanone

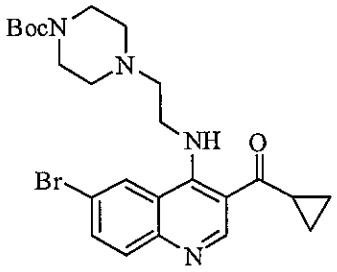


Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (0.880 g, 2.83 mmol) was reacted with (1-methylpiperidin-4-yl)methanamine (435 mg, 3.39 mmol) to afford the desired product (970 mg, 85%) as a light brown solid: $^1$H NMR (300 MHz, $CDCl_3$) $\delta$ 10.87 (s, 1H), 9.22 (s, 1H), 8.36 (d, $J$ = 1.9 Hz, 1H), 7.80 (d, $J$ = 8.9 Hz, 1H), 7.73 (dd, $J$ = 8.9, 2.0 Hz, 1H), 3.69 (dd, $J$ = 6.4, 5.2 Hz, 2H), 2.93 (d, $J$ = 11.4 Hz, 2H), 2.79–2.60 (m, 1H), 2.31 (s, $J$ = 9.0 Hz, 3H), 2.01 (t, $J$ = 11.7 Hz, 2H), 1.89 (d, $J$ = 12.7 Hz, 2H), 1.76–1.60 (m, 1H), 1.53–1.30 (m, 2H), 1.30–1.17 (m, 2H), 1.10–0.95 (m, 2H).

Example 419

*tert*-Butyl

4-{2-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]ethyl}piperazine-1-carboxylate

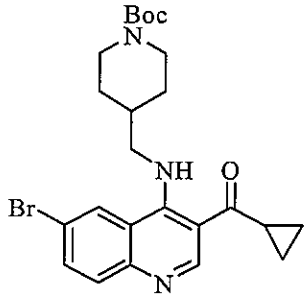


Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (940 mg, 3.03 mmol) was reacted with *tert*-butyl 4-(2-aminoethyl)piperazine-1-carboxylate (830 mg, 86%) to afford the desired product as an orange solid: $^1$H NMR (300 MHz, $CDCl_3$) $\delta$ 10.69 (s, 1H), 9.21 (s, 1H), 8.39 (d, $J$ = 2.0 Hz, 1H), 7.81 (d, $J$ = 8.9 Hz, 1H), 7.73 (dd, $J$ = 8.9, 2.0 Hz, 1H), 3.87 (dd, $J$ = 11.1, 5.5 Hz, 2H), 3.49 (t, $J$ = 4.9 Hz, 4H), 2.76–2.59 (m, 3H), 2.50 (t, $J$ = 4.9 Hz, 4H), 1.47 (s, $J$ = 11.3 Hz, 9H), 1.32–1.16 (m, 2H), 1.10–0.95 (m, 2H).

Example 420

*tert*-Butyl

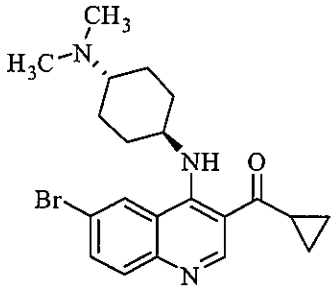
4-{[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]methyl}piperidine-1-carboxylate



Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (500 mg, 1.60 mmol) was reacted with *tert*-butyl 4-(aminomethyl)piperidine-1-carboxylate (516 mg, 2.41 mmol) to afford the desired product (80 mg, >99%) as an orange foam: ESI MS *m/z* 489 $[C_{24}H_{30}BrN_3O_3 + H]^+$.

Example 421

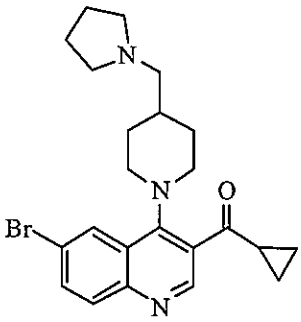
{6-Bromo-4-[*trans*-4-(dimethylamino)cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (870 mg, 2.80 mmol) was reacted with *trans*-$N^1$,$N^1$-dimethylcyclohexane-1,4-diamine (400 mg, 2.80 mmol) to afford the desired product (398 mg, 36%) as a light yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.12 (s, 1H), 8.41 (d, $J$ = 2.0 Hz, 1H), 7.85 (dd, $J$ = 8.9, 2.0 Hz, 1H), 7.76 (d, $J$ = 8.9 Hz, 1H), 4.10–3.84 (m, 1H), 2.93–2.70 (m, 1H), 2.56–2.40 (m, 1H), 2.37 (s, 6H), 2.25 (d, $J$ = 12.0 Hz, 2H), 2.05 (d, $J$ = 11.4 Hz, 2H), 1.62–1.31 (m, 4H), 1.31–1.01 (m, 4H).

Example 422

{6-Bromo-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone

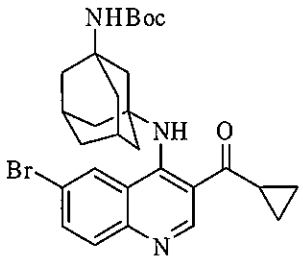


Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (210

mg, 0.680 mmol) was reacted with 4-(pyrrolidin-1-ylmethyl)piperidine (229 mg, 1.36 mmol) to afford the desired product (210 mg, 70%) as a yellow semisolid: ESI MS *m/z* 443 [$C_{23}H_{28}BrN_3O$ + H]$^+$.

Example 423

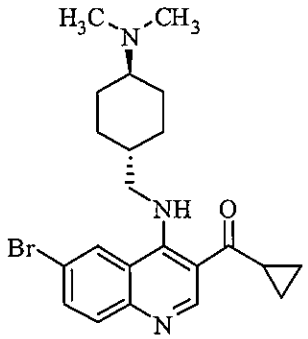
*tert*-Butyl 4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]adamantylcarbamate




Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (326 mg, 1.05 mmol) was reacted with *tert*-butyl 1-(3-aminoadamantane)carbamate (420 mg, 1.58 mmol) to afford the desired product (230 mg, 40%) as a yellow foam: ESI MS *m/z* 541 [$C_{23}H_{26}BrN_3O$ + H]$^+$.

Example 424

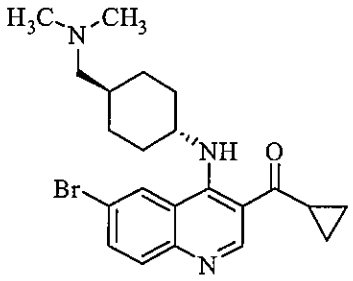
(6-Bromo-4-{[*trans*-4-(dimethylamino)cyclohexyl]methylamino}quinolin-3-yl) (cyclopropyl)methanone




Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (537 mg, 1.73 mmol) was reacted with *trans*-4-(aminomethyl)-*N*,*N*-dimethylcyclohexanamine (595 mg, 2.60 mmol) to afford the desired product (440 mg, 59%) as a white solid: $^1$H NMR (300 MHz, $CH_3OD$) $\delta$ 9.13 (s, 1H), 8.48 (d, $J$ = 2.0 Hz, 1H), 7.83 (dd, $J$ = 9.0, 2.0 Hz, 1H), 7.73 (d, $J$ = 8.9 Hz, 1H), 3.65 (d, $J$ = 6.4 Hz, 2H), 2.91–2.67 (m, 1H), 2.41–2.18 (m, 7H), 1.99 (d, $J$ = 10.1 Hz, 4H), 1.67 (d, $J$ = 3.3 Hz, 1H), 1.43–0.99 (m, 8H).

Example 425

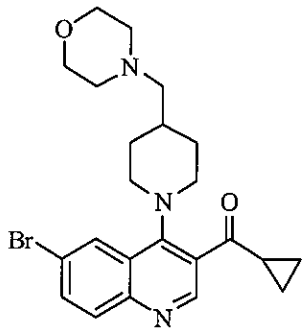
{6-Bromo-4-[*trans*-4-{(dimethylamino)methyl}cyclohexylamino]quinolin-3-yl} (cyclopropyl)methanone



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (560 mg, 1.80 mmol) was reacted with *trans*-4-[(dimethylamino)methyl]cyclohexanamine (620 mg, 2.70 mmol) to afford the desired product (335 mg, 43%) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.12 (s, 1H), 8.41 (d, $J$ = 2.0 Hz, 1H), 7.84 (dd, $J$ = 8.9, 2.1 Hz, 1H), 7.75 (d, $J$ = 8.9 Hz, 1H), 4.12–3.84 (m, 1H), 2.91–2.72 (m, 1H), 2.42–2.26 (m, $J$ = 6.6 Hz, 8H), 2.21 (d, $J$ = 11.6 Hz, 2H), 1.94 (d, $J$ = 12.1 Hz, 2H), 1.75–1.59 (m, 1H), 1.59–1.35 (m, 2H), 1.25–0.98 (m, 6H).

Example 426

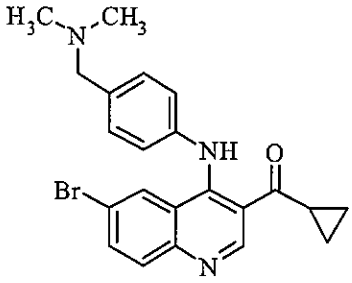
{6-Bromo-4-[4-(morpholinomethyl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (144 mg, 0.460 mmol) was reacted with 4-(piperidin-4-ylmethyl)morpholine (102 mg, 0.552 mmol) to afford the desired product (177 mg, 84%) as a yellow solid: ESI MS *m/z* 458 [$C_{23}H_{28}BrN_3O_2$ + H]$^+$.

Example 427

(6-Bromo-4-{4-[(dimethylamino)methyl]phenylamino}quinolin-3-yl)(cyclopropyl)methanone

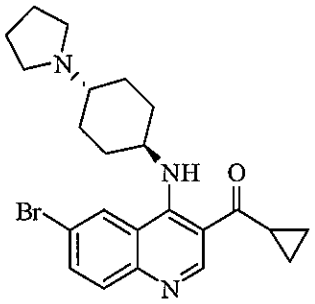


Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (320 mg, 1.03 mmol) was reacted with 4-[(dimethylamino)methyl]aniline (210 mg, 1.54 mmol) to

afford the desired product (218 mg, 50%) as a yellow solid: ESI MS *m/z* 425 [$C_{22}H_{22}BrN_3O$ + H]$^+$.

Example 428

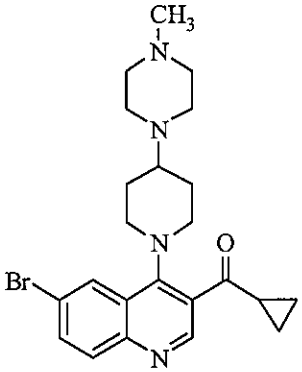
{6-Bromo-4-[*trans*-4-(pyrrolidin-1-yl)cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (220 mg, 0.708 mmol) was reacted with *trans*-4-(pyrrolidin-1-yl)cyclohexanamine hydrochloride (350 mg, 2.08 mmol) to afford the desired product (75 mg, 24%) as an off-white solid: ESI MS *m/z* 442 [$C_{23}H_{28}BrN_3O$ + H]$^+$.

Example 429

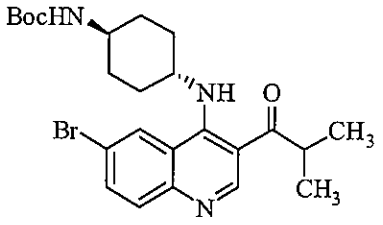
{6-Bromo-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (155 mg, 0.500 mmol) was reacted with 3-(4-methylpiperazin-1-yl)butan-1-amine (183 mg, 1.00 mmol) to afford the desired product (102 mg, 45%) as a pale yellow solid: ESI MS *m/z* 457 [$C_{23}H_{29}BrN_4O$ + H]$^+$.

Example 430

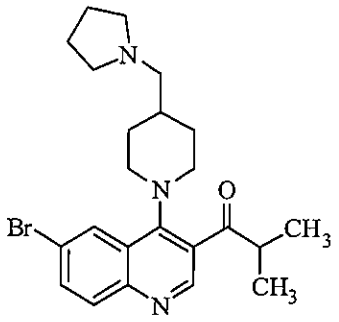
*tert*-Butyl *trans*-4-(6-bromo-3-isobutyrylquinolin-4-ylamino)cyclohexylcarbamate



Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)-2-methylpropan-1-one (10 g, 32.0 mmol) was reacted with *tert*-butyl *trans*-4-aminocyclohexylcarbamate (10.3 g, 48.0 mmol) to afford the desired product (12.8 g, 81%) as an off-white solid: ESI MS *m/z* 491 $[C_{24}H_{32}BrN_3O_3 + H]^+$.

Example 431

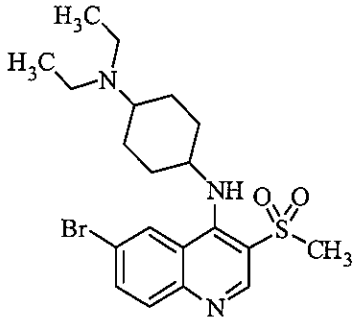
1-{6-Bromo-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}-2-methylpropan-1-one



Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)-2-methylpropan-1-one (250 mg, 0.800 mmol) was reacted with 4-(pyrrolidin-1-ylmethyl)piperidine (168 mg, 1.00 mmol) to afford the desired product (243 mg, 68%) as a yellow solid: ESI MS *m/z* 444 $[C_{23}H_{30}BrN_3O + H]^+$.

Example 432

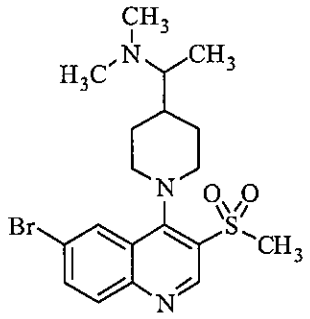
$N^1$-[6-Bromo-3-(methylsulfonyl)quinolin-4-yl]-$N^4$,$N^4$-diethylcyclohexane-1,4-diamine



Following general procedure B, 6-bromo-4-chloro-3-(methylsulfonyl)quinoline (161 mg, 0.500 mmol) was reacted with $N^1$,$N^1$-diethylcyclohexane-1,4-diamine (170 mg, 1.00 mmol) to afford the desired product (197 mg, 87%) as a white solid: ESI MS *m/z* 454 $[C_{20}H_{28}BrN_3O_2S + H]^+$.

Example 433

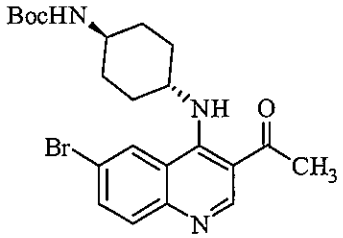
1-{1-[6-Bromo-3-(methylsulfonyl)quinolin-4-yl]piperidin-4-yl}-*N*,*N*-dimethylethanamine



Following general procedure B, 6-bromo-4-chloro-3-(methylsulfonyl)quinoline (100 mg, 0.311 mmol) was reacted with *N*,*N*-dimethyl-1-(piperidin-4-yl)ethanamine (229 mg, 1.00 mmol) to afford the desired product (93 mg, 68%) as a white solid: $^1$H NMR (300 MHz, $CDCl_3$) $\delta$ 9.24 (s, 1H), 8.50 (d, $J$ = 1.5 Hz, 1H), 8.11–7.93 (m, 2H), 3.67–3.55 (m, 2H), 3.44 (s, 3H), 3.34 (s, 2H), 2.75–2.62 (m, 1H), 2.46 (s, 6H), 2.07–1.96 (m, 1H), 1.90 (d, $J$ = 12.3 Hz, 2H), 1.73–1.53 (m, 2H), 1.15 (d, $J$ = 6.6 Hz, 3H).

Example 434

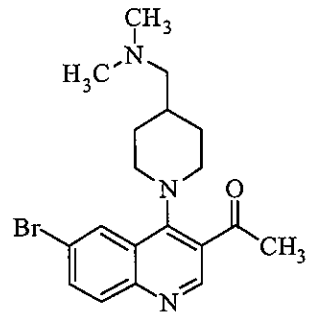
*tert*-Butyl *trans*-4-(3-acetyl-6-bromoquinolin-4-ylamino)cyclohexylcarbamate



Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (420 mg, 1.48 mmol) was reacted with *tert*-butyl *trans*-4-aminocyclohexylcarbamate (642 mg, 3.00 mmol) to afford the desired product (550 mg, 80%) as an off-white solid: ESI MS *m/z* 462 [$C_{22}H_{28}BrN_3O_3$ + H]$^+$.

Example 435

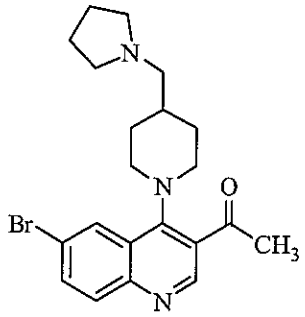
1-(6-Bromo-4-{4-[(dimethylamino)methyl]piperidin-1-yl}quinolin-3-yl)ethanone



Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (160 mg, 0.560 mmol) was reacted with *N*,*N*-dimethyl-1-(piperidin-4-yl)methanamine (172 mg, 0.800 mmol) to afford the desired product (17.7 mg, 8%) as an off-white solid: ESI MS *m/z* 390 $[C_{19}H_{24}BrN_3O + H]^+$.

Example 436

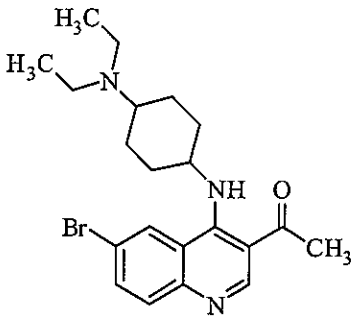
1-{6-Bromo-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}ethanone



Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (200 mg, 0.703 mmol) was reacted with 4-(pyrrolidin-1-ylmethyl)piperidine (168 mg, 1.00 mmol) to afford the desired product (233 mg, 80%) as a yellow solid: ESI MS *m/z* 416 $[C_{21}H_{26}BrN_3O + H]^+$.

Example 437

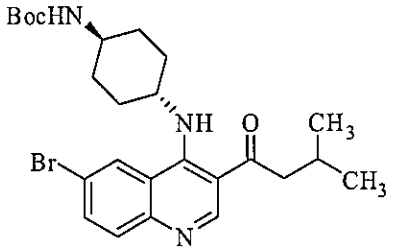
1-{6-Bromo-4-[4-(diethylamino)cyclohexylamino]quinolin-3-yl}ethanone



Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (116 mg, 0.408 mmol) was reacted with $N^1$,$N^1$-diethylcyclohexane-1,4-diamine (138 mg, 0.812 mmol) to afford the desired product (157 mg, 51%) as an off-white solid: ESI MS *m/z* 418 $[C_{21}H_{28}BrN_3O + H]^+$.

Example 438

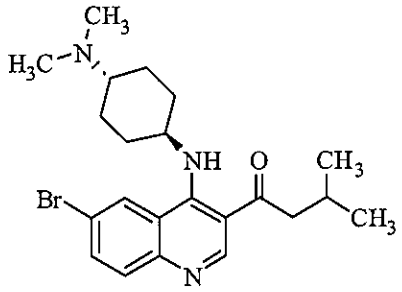
*tert*-Butyl *trans*-4-{6-bromo-3-(3-methylbutanoyl)quinolin-4-ylamino} cyclohexylcarbamate



Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)-3-methylbutan-1-one (309 mg, 0.950 mmol) was reacted with *tert*-butyl *trans*-4-aminocyclohexylcarbamate (407 mg, 1.90 mmol) to afford the desired product (267 mg, 56%) as a yellow solid: ESI MS *m/z* 504 $[C_{20}H_{26}BrN_3O + H]^+$.

Example 439

1-{6-Bromo-4-[*trans*-4-(dimethylamino)cyclohexylamino]quinolin-3-yl}-3-methylbutan-1-one

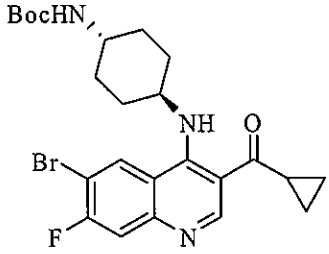


Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)-3-methylbutan-1-one (44 mg, 0.14 mmol) was reacted with *trans*-$N^1$,$N^1$-dimethylcyclohexane-1,4-diamine (92 mg, 0.43 mmol) to afford the desired product (13 mg, 21%) as an off-white solid: ESI MS *m/z* 433 $[C_{22}H_{30}BrN_3O + H]^+$.

Example 440

*tert*-Butyl

*trans*-4-{6-bromo-3-(cyclopropanecarbonyl)-7-fluoroquinolin-4-ylamino}cyclohexylcarbamate

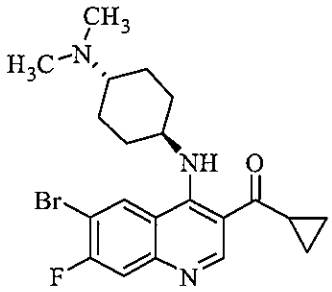


Following general procedure B, (6-bromo-4-chloro-7-fluoroquinolin-3-yl)(cyclopropyl) methanone (350 mg, 1.06 mmol) was reacted with *tert*-butyl *trans*-4-aminocyclohexylcarbamate (270 mg, 1.27 mmol) to afford the desired product (400 mg, 75%) as a light yellow solid: $^1$H NMR (300 MHz, $CDCl_3$) $\delta$ 10.67 (d, $J$ = 8.3 Hz, 1H), 9.22 (s, 1H), 8.32 (d, $J$ = 7.3 Hz, 1H),

7.62 (d, $J$ = 9.5 Hz, 1H), 4.42 (s, 1H), 3.91 (d, $J$ = 8.1 Hz, 1H), 3.52 (s, 1H), 2.75–2.56 (m, 1H), 2.18 (t, $J$ = 13.4 Hz, 4H), 1.72–1.62 (m, 1H), 1.59–1.50 (m, 2H), 1.45 (s, 9H), 1.30–1.18 (m, 3H), 1.13–1.01 (m, 2H).

Example 441

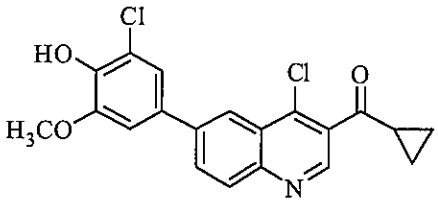
{6-Bromo-4-[*trans*-4-(dimethylamino)cyclohexylamino]-7-fluoroquinolin-3-yl}(cyclopropyl)methanone



Following general procedure C, (6-bromo-4-chloro-7-fluoroquinolin-3-yl)(cyclopropyl) methanone (297 mg, 0.900 mmol) was reacted with *trans*-$N^1$,$N^1$-dimethylcyclohexane-1,4-diamine (290 mg, 1.35 mmol) to afford the desired product (212 mg, 54%) as an off-white solid: ESI MS *m/z* 435 $[C_{21}H_{25}BrFN_3O + H]^+$.

Example 442

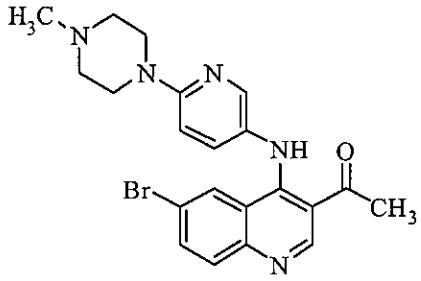
[4-Chloro-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl](cyclopropyl)methanone



To a suspension of (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (104 mg, 0.320 mmol), $Pd(dppf)Cl_2$ (23 mg, 0.03 mmol), and $Cs_2CO_3$ (0.95 mL, 1.0 M in $H_2O$) in dioxane (5 mL) was added 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (109 mg, 0.384 mmol). The reaction mixture was degassed with $N_2$ gas and the vessel was sealed and heated to 40 °C for 18 h. The reaction mixture was cooled, diluted with ethyl acetate, and filtered. The solution was concentrated and subjected to column chromatography (silica, hexanes/ethyl acetate) to afford the desired product (21 mg, 13%) as a light brown solid: $^1$H NMR (300 MHz, $CDCl_3$) $\delta$ 8.91 (s, 1H), 8.43 (d, $J$ = 1.9 Hz, 1H), 8.19 (t, $J$ = 7.5 Hz, 1H), 8.10–7.91 (m, 1H), 7.36 (d, $J$ = 1.9 Hz, 1H), 7.13 (d, $J$ = 1.8 Hz, 1H), 6.03 (s, 1H), 4.04 (s, 3H), 2.77–2.50 (m, 1H), 1.50–1.37 (m, 2H), 1.35–1.10 (m, 2H).

Example 1056

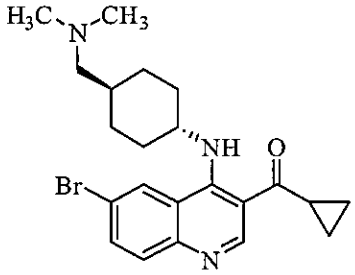
1-(6-Bromo-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone



Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (200 mg, 0.704 mmol) was reacted with 6-(4-methylpiperazin-1-yl)pyridin-3-amine (163 mg, 0.845 mmol) to afford the desired product (90 mg, 29%) as a yellow solid: ESI MS *m/z* 440, $[C_{21}H_{22}BrN_5O + H]^+$

Example 1057

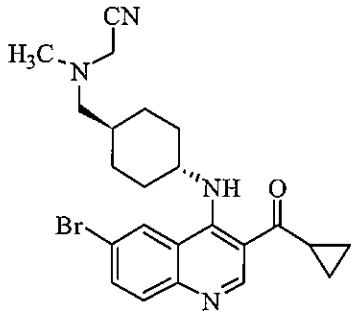
{6-Bromo-4-[(1r,4r)-4-[(dimethylamino)methyl]cyclohexylamino]quinolin-3-yl} (cyclopropyl)methanone



Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (300 mg, 0.967 mmol) was reacted with (1r,4r)-4-((dimethylamino)methyl)cyclohexanamine (153 mg, 1.16 mmol) to afford the desired product (220 mg, 53%) as a yellow solid: ESI MS *m/z* 431, $[C_{22}H_{28}BrN_3O + H]^+$

Example 1058

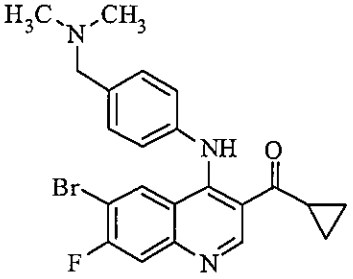
2-(((1R,4R)-4-(6-Bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)cyclohexyl) methyl)(methyl)amino)acetonitrile



Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (200 mg, 0.645 mmol) was reacted with 2-(((1R,4R)-4-aminocyclohexyl)methyl)(methyl)amino) acetonitrile (140 mg, 0.774 mmol) to afford the desired product (100 mg, 34%) as a yellow solid: ESI MS *m/z* 455, $[C_{23}H_{27}BrN_4O+ H]^+$

Example 1059

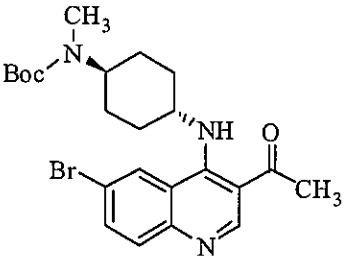
(6-Bromo-4-(4-((dimethylamino)methyl)phenylamino)-7-fluoroquinolin-3-yl) (cyclopropyl)methanone



Following general procedure B, (6-bromo-4-chloro-7-fluoroquinolin-3-yl)(cyclopropyl) methanone (328 mg, 1.00 mmol) was reacted with 2-(((1R,4R)-4-aminocyclohexyl) methyl)(methyl)amino)acetonitrile (180 mg, 1.2 mmol) to afford the desired product (150 mg, 34%) as a off-white solid: ESI MS *m/z* 442, $[C_{22}H_{21}BrFN_3O+ H]^+$

Example 1060

tert-Butyl (1r,4r)-4-(3-acetyl-6-bromoquinolin-4-ylamino)cyclohexyl(methyl)carbamate

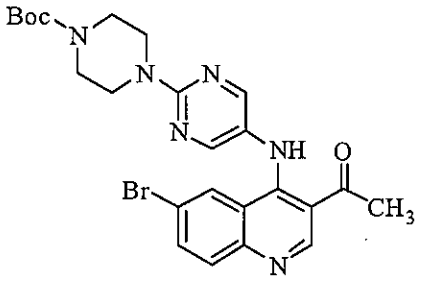


Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (300 mg, 1.06 mmol) was reacted with tert-butyl (1r,4r)-4-aminocyclohexyl(methyl)carbamate (362 mg, 1.59 mmol) to afford the desired product (250 mg, 47%) as a yellow solid: ESI MS *m/z* 501,

$[C_{25}H_{32}BrN_3O_3 + H]^+$

Example 1061

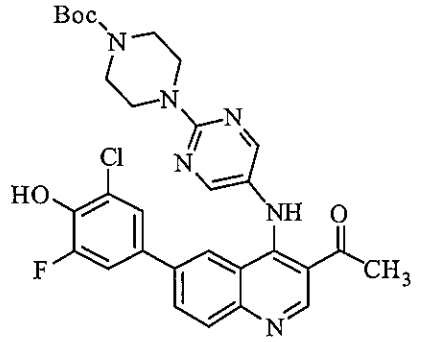
tert-butyl 4-(5-(3-acetyl-6-bromoquinolin-4-ylamino)pyrimidin-2-yl)piperazine-1-carboxylate



Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (300 mg, 1.06 mmol) was reacted with tert-butyl 4-(5-aminopyrimidin-2-yl)piperazine-1-carboxylate (495 mg, 1.59 mmol) to afford the desired product (250 mg, 44%) as a yellow solid: ESI MS *m/z* 527, $[C_{24}H_{27}BrN_6O_3 + H]^+$

Example 1062

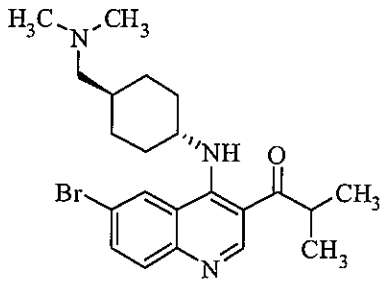
tert-butyl 4-(5-(3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-ylamino) pyrimidin-2-yl)piperazine-1-carboxylate



Following general procedure D, tert-butyl tert-butyl 4-(5-(3-acetyl-6-bromoquinolin-4 -ylamino)pyrimidin-2-yl)piperazine-1-carboxylate (60 mg, 0.114 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (46 mg, 0.171 mmol) to afford the desired product (50 mg, 74%) as an orange solid: ESI MS *m/z* 593, $[C_{30}H_{30}ClFN_6O_4 + H]^+$

Example 1063

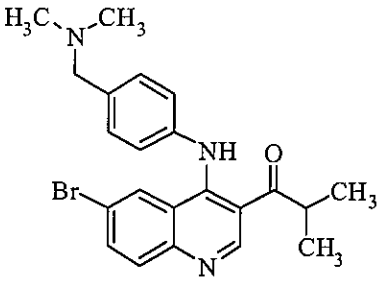
1-(6-bromo-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino) quinolin-3-yl)-2-methylpropan-1-one



Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)-2-methylpropan-1-one (604 mg, 1.93 mmol) was reacted with (1r,4r)-4-((dimethylamino)methyl)cyclohexanamine (882 mg, 3.87 mmol) to afford the desired product (224 mg, 27%) as a yellow solid: ESI MS *m/z* 432, $[C_{22}H_{30}BrN_3O + H]^+$

Example 1064

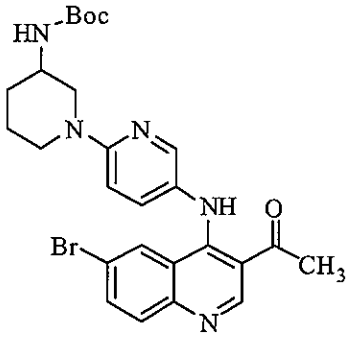
1-(6-bromo-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)-2-methylpropan-1-one



Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)-2-methylpropan-1-one (604 mg, 1.93 mmol) was reacted with 4-((dimethylamino)methyl)aniline (882 mg, 3.87 mmol) to afford the desired product (224 mg, 27%) as a yellow solid: ESI MS *m/z* 432, $[C_{22}H_{30}BrN_3O + H]^+$

Example 1065

tert-butyl 1-(5-(3-acetyl-6-bromoquinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate

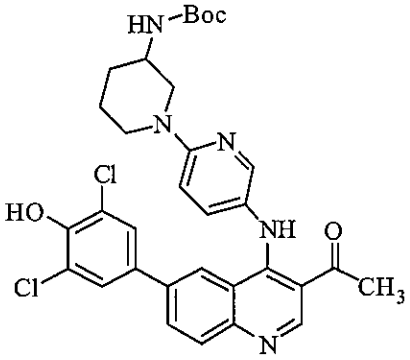


Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (194 mg, 0.681 mmol) was reacted with tert-butyl 1-(5-aminopyridin-2-yl)piperidin-3-ylcarbamate (210 mg,

0.821 mmol) to afford the desired product (205 mg, 55%) as a brown solid: ESI MS *m/z* 540, $[C_{26}H_{30}BrN_5O_3 + H]^+$

Example 1066

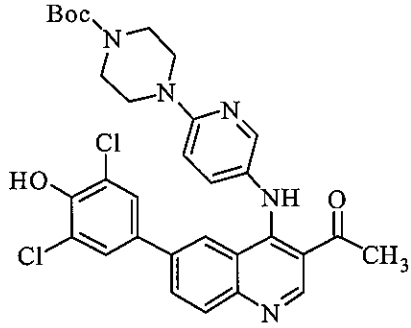
tert-butyl 1-(5-(3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino) pyridin-2-yl)piperidin-3-ylcarbamate




Following general procedure D, tert-butyl 1-(5-(3-acetyl-6-bromoquinolin-4-ylamino)pyridin -2-yl)piperidin-3-ylcarbamate (60 mg, 0.110 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (48 mg, 0.166 mmol) to afford the desired product (52 mg, 76%) as an brown solid: ESI MS *m/z* 622, $[C_{32}H_{33}Cl_2N_5O_4 + H]^+$

Example 1067

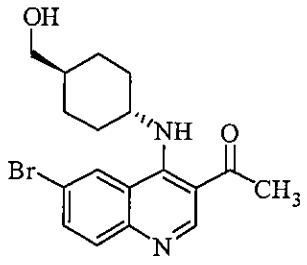
tert-butyl 4-(5-(3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino) pyridin-2-yl)piperazine-1-carboxylate




Following general procedure D, tert-butyl 4-(5-(3-acetyl-6-bromoquinolin-4-ylamino)pyridin -2-yl)piperazine-1-carboxylate (55 mg, 0.104 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (36 mg, 0.125 mmol) to afford the desired product (65 mg, 72%) as an green oil: ESI MS *m/z* 608, $[C_{31}H_{31}Cl_2N_5O_4 + H]^+$

Example 1068

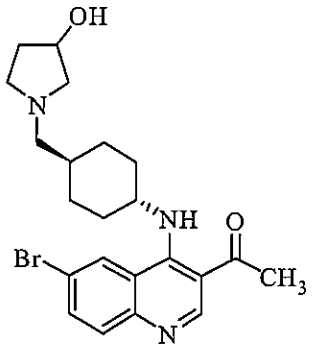
1-(6-bromo-4-(1R,4R)-4-(hydroxymethyl)cyclohexylamino)quinolin-3-yl)ethanone



Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (1.4 g, 4.89 mmol) was reacted with (1R,4R)-4-aminocyclohexyl)methanol (970 mg, 5.87 mmol) to afford the desired product (877 mg, 48%) as a brown solid: ESI MS *m/z* 377, $[C_{18}H_{21}BrN_2O_2 + H]^+$

Example 1069

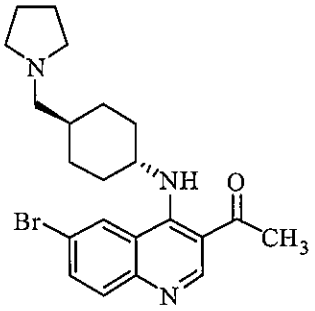
1-(6-bromo-4-(1R,4R)-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino) quinolin-3-yl)ethanone



To a solution of 1-(6-bromo-4-(1R,4R)-4-(hydroxymethyl)cyclohexylamino)quinolin-3-yl) ethanone (210 mg, 0.550 mmol) in dichloromethane (20 mL) was added triethylamine (229 μL, 1.65 mmol) and methanesulfonyl chloride (64 μL, 0.835 mmol) and the reaction was stirred at room temperature for 2 h. To the reaction mixture was added pyrrolidin-3-ol (222 μL, 2.75 mmol) and the reaction was stirred at 85 °C for 16 h. The reaction was concentrated and the residue was purified by flash chromatography to yield the expected product (150 mg, 61%) as a brown solid. ESI MS *m/z* 446, $[C_{22}H_{28}BrN_3O_2 + H]^+$

Example 170

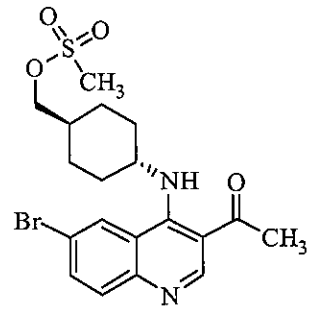
1-(6-bromo-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone



To a solution of 1-(6-bromo-4-(1R,4R)-4-(hydroxymethyl)cyclohexylamino)quinolin-3-yl) ethanone (200 mg, 0.530 mmol) in dichloromethane (20 mL) was added triethylamine (216 μL, 1.59 mmol) and methanesulfonyl chloride (60 μL, 0.795 mmol) and the reaction was stirred at room temperature for 2 h. To the reaction mixture was added pyrrolidine (213 μL, 2.65 mmol) and the reaction was stirred at 85 °C for 16 h. The reaction was concentrated and the residue was purified by flash chromatography to yield the expected product (127 mg, 56%) as a brown solid. ESI MS *m/z* 430, $[C_{22}H_{28}BrN_3O + H]^+$

Example 1071

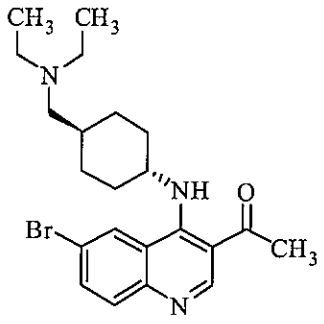
(1R,4R)-4-(3-acetyl-6-bromoquinolin-4-ylamino)cyclohexyl)methyl methanesulfonate



To a solution of 1-(6-bromo-4-(1R,4R)-4-(hydroxymethyl)cyclohexylamino)quinolin-3-yl) ethanone (1.0 g, 2.65 mmol) in dichloromethane (70 mL) was added triethylamine (1.1mL, 7.95 mmol) and methanesulfonyl chloride (306 μL, 3.97 mmol) and the reaction was stirred at room temperature for 16 h. The completed reaction was concentrated and purified by flash chromatography to yield the expected product (990 mg, 82%) as a off-white solid. ESI MS *m/z* 455, $[C_{19}H_{23}BrN_2O_4S + H]^+$

Example 1072

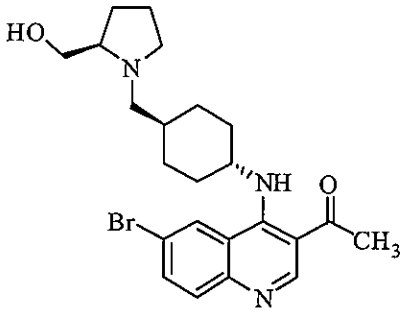
1-(6-bromo-4-(1R,4R)-4-((diethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone



In 5 mL of DMF, (1R,4R)-4-(3-acetyl-6-bromoquinolin-4-ylamino)cyclohexyl)methyl methanesulfonate (200 mg, 0.437 mmol) was combined with diethylamine (95 mg, 1.31 mmol) in the presence of triethylamine (183 μL, 1.31 mmol). The reaction mixture was stirred at 80 °C for 20 hrs in a sealed tube. The completed reaction was diluted in 50 mL of ethyl acetate or a $CHCl_3$/isopropanol 3:1 mixture and washed with brine (2 x 50 mL) and water (50 mL). The organic layer was isolated and dried over anhydous sodium sulfate and reduced to a orange residue. The material was purified by flash chromatography to afford the expected product (120 mg, 63%) as a yellow solid. ESI MS *m/z* 432, $[C_{22}H_{30}BrN_3O+ H]^+$

Example 1073

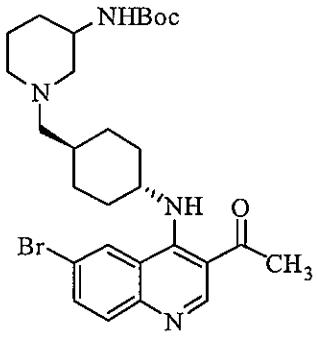
1-(6-bromo-4-(1R,4R)-4-(((R)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino) quinolin-3-yl)ethanone



To a solution of ((1R,4R)-4-(3-acetyl-6-bromoquinolin-4-ylamino)cyclohexyl)methyl methanesulfonate (350 mg, 0.765 mmol) and (R)-pyrrolidin-2-ylmethanol (400 mg, 3.82 mmol) in DMF (5 mL) was added triethylamine (531 μL, 3.82 mmol). The reaction mixture was stirred at 80 °C for 20 hrs in a sealed tube. The completed reaction was diluted in 50 mL of ethyl acetate or a $CHCl_3$/isopropanol 3:1 mixture and washed with brine (2 x 50 mL) and water (50 mL). The organic layer was isolated and dried over anhydous sodium sulfate and reduced to a orange residue. The material was purified by flash chromatography to afford the expected product (314 mg, 89%) as a yellow solid. ESI MS *m/z* 460, $[C_{23}H_{30}BrN_3O_2+ H]^+$

Example 1074

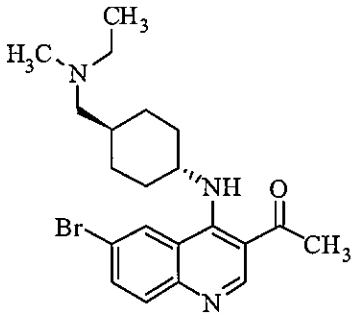
tert-butyl 1-((1R,4R)-4-(3-acetyl-6-bromoquinolin-4-ylamino) cyclohexyl)methyl)piperidin-3-ylcarbamate




To a solution of (1R,4R)-4-(3-acetyl-6-bromoquinolin-4-ylamino)cyclohexyl)methyl methanesulfonate (350 mg, 0.765 mmol) in DMF (5 mL) was added (tert-butyl piperidin-3-ylcarbamate (460 mg, 2.29 mmol) and triethylamine (318 μL, 2.29 mmol). The reaction mixture was stirred at 80 °C for 20 h in a sealed tube. The completed reaction was diluted in 50 mL of ethyl acetate or a $CHCl_3$/isopropanol 3:1 mixture and washed with brine (2 x 50 mL) and water (50 mL). The organic layer was isolated and dried over anhydous sodium sulfate and reduced to a orange residue. The material was purified by flash chromatography to afford the expected product (238 mg, 55%) as a yellow solid. ESI MS *m/z* 559, $[C_{28}H_{39}BrN_4O_3+ H]^+$

Example 1075

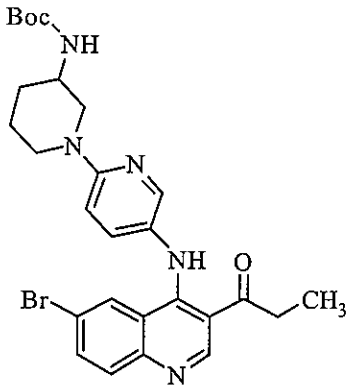
1-(6-bromo-4-(1R,4R)-4-((ethyl(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)ethanone




To a solution of (1R,4R)-4-(3-acetyl-6-bromoquinolin-4-ylamino)cyclohexyl)methyl methanesulfonate (300 mg, 0.656 mmol) was added N-methylethanamine (190 mg, 3.28 mmol) and triethylamine (331 μL, 3.28 mmol). The reaction mixture was stirred at 80 °C for 20 hrs in a sealed tube. The completed reaction was diluted in 50 mL of ethyl acetate or a $CHCl_3$/isopropanol 3:1 mixture and washed with brine (2 x 50 mL) and water (50 mL). The organic layer was isolated and dried over anhydous sodium sulfate and reduced to a orange residue. The material was purified by flash chromatography to afford the expected product (206 mg, 75%) as a yellow solid. ESI MS *m/z* 418, $[C_{21}H_{28}BrN_3O + H]^+$

Example 1076

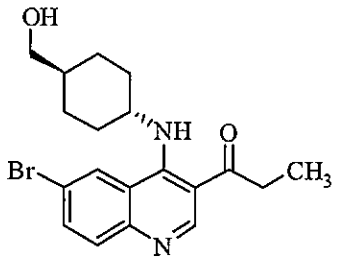
tert-butyl 1-(5-(6-bromo-3-propionylquinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate




Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)propan-1-one (235 mg, 0.792 mmol) was reacted with tert-butyl 1-(5-aminopyridin-2-yl)piperidin-3-ylcarbamate (348 mg, 1.19 mmol) to afford the desired product (94 mg, 21%) as an orange solid: ESI MS *m/z* 554, $[C_{27}H_{32}BrN_5O_3 + H]^+$

Example 1077

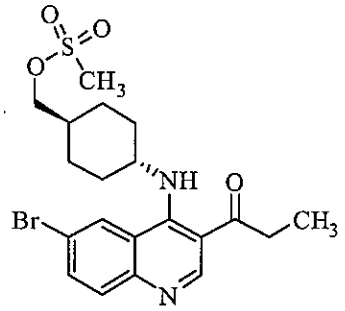
1-(6-bromo-4-(1R,4R)-4-(hydroxymethyl)cyclohexylamino)quinolin-3-yl)propan-1-one




Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)propan-1-one (894 mg, 3.0 mmol) was reacted with (1R,4R)-4-aminocyclohexyl)methanol (633 mg, 4.89 mmol) to afford the desired product (630 mg, 53%) as an yellow solid: ESI MS *m/z* 391, [C19H23BrN2O2 + H]$^+$

Example 1078

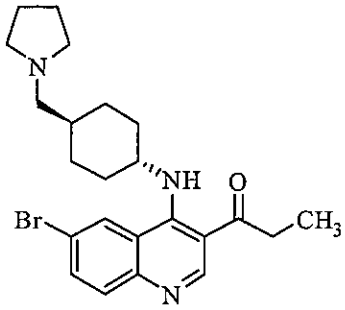
(1R,4R)-4-(6-bromo-3-propionylquinolin-4-ylamino)cyclohexyl)methyl methanesulfonate



To a solution of 1-(6-bromo-4-(1R,4R)-4-(hydroxymethyl)cyclohexylamino)quinolin-3-yl) propan-1-one (630 mg, 1.6 mmol) and triethylamine (670 µL, 4.8 mmol) in 20 mL of dichloromethane was added dropwise methanesulfonyl chloride (186 µL, 2.4 mmol) and the reaction was stirred at room temperature for 16 h. The completed reaction was reduced to a yellow oil and purified by flash chromatography to yield the expected product (591 mg, 78%) as a white solid. ESI MS *m/z* 469, $[C_{20}H_{25}BrN_2O_4S + H]^+$

Example 1079

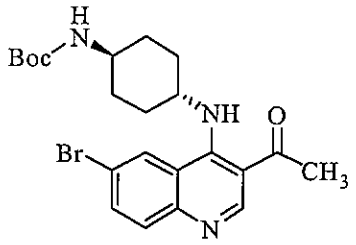
1-(6-bromo-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)propan-1-one



To a solution of (1R,4R)-4-(6-bromo-3-propionylquinolin-4-ylamino)cyclohexyl)methyl methanesulfonate(295 mg, 0.629 mmol), N-methylethanamine (223 mg, 3.14 mmol) and triethylamine (436 µL, 3.14 mmol) in DMF (5 mL) and the reaction mixture was stirred at 80 °C for 20 h in a sealed tube. The completed reaction was diluted in 50 mL of ethyl acetate or a $CHCl_3$/isopropanol 3:1 mixture and washed with brine (2 x 50 mL) and water (50 mL). The organic layer was isolated and dried over anhydous sodium sulfate and reduced to a orange residue. The material was purified by flash chromatography to afford the expected product (210 mg, 75%) as a yellow solid. ESI MS *m/z* 444, $[C_{23}H_{30}BrN_3O + H]^+$

Example 1080

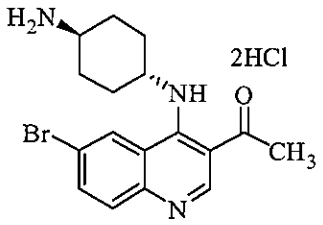
tert-butyl (1r,4r)-4-(3-acetyl-6-bromoquinolin-4-ylamino)cyclohexylcarbamate



Following general procedure B, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (425 mg, 1.49 mmol) was reacted with tert-butyl (1r,4r)-4-aminocyclohexylcarbamate (400 mg, 1.87 mmol) to afford the desired product (501 mg, 73%) as an yellow solid: ESI MS *m/z* 462, $[C_{22}H_{28}BrN_3O_3 + H]^+$

Example 1081

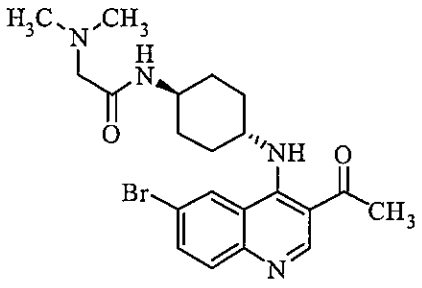
1-(4-(1R,4R)-4-aminocyclohexylamino)-6-bromoquinolin-3-yl)ethanone



Following general procedure A-1, tert-butyl (1r,4r)-4-(3-acetyl-6-bromoquinolin-4-ylamino) cyclohexylcarbamate (501 mg, 1.08 mmol) afforded the desired product (450 mg, 96%) as an white solid: ESI MS *m/z* 362, $[C_{17}H_{20}BrN_3O + H]^+$

Example 1081

N-(1R,4R)-4-(3-acetyl-6-bromoquinolin-4-ylamino)cyclohexyl)-2-(dimethylamino)acetamide

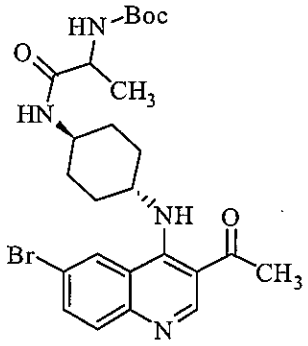


A solution of 2-(dimethylamino)acetic acid (58 mg, 0.568 mmol) and HATU (215 mg, 0.568 mmol) in DMF (5 mL) was stirred at rt for 10 min followed by the addition of *N,N*-diisopropylethylamine (443 μL, 2.73 mmol) and 1-(4-(1R,4R)-4-aminocyclohexylamino) -6-bromoquinolin -3-yl)ethanone (210 mg, 0.474 mmol) and the resulting solution was stirred at room temperature for 16 h. The completed reaction was diluted in 50 mL of

$CHCl_3$/isopropanol 3:1 mixture and washed with 5% LiCl solution (2 x 50 mL) and water (50 mL). The organic layer was separated, dried over anhydous sodium sulfate and concentrated to a orange residue. The material was purified by flash chromatography ($MeOH/CH_2Cl_2$) to afford the expected product (102 mg, 48%) as a yellow solid. ESI MS *m/z* 447, $[C_{21}H_{27}BrN_4O_2 + H]^+$

Example 1082

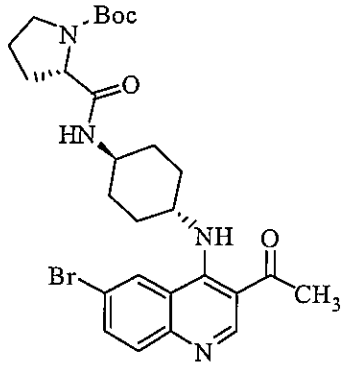
tert-butyl 1-(1R,4R)-4-(3-acetyl-6-bromoquinolin-4-ylamino)cyclohexylamino)-1-oxopropan-2-ylcarbamate




A solution of 2-(tert-butoxycarbonylamino)propanoic acid (153 mg, 0.812 mmol) and HATU (308 mg, 0.812 mmol) in DMF (5 mL) was stirred at rt for 10 min followed by the addition of *N,N*-diisopropylethylamine (650 µL, 3.38 mmol) and 1-(4-(1R,4R)-4-aminocyclohexylamino) -6-bromoquinolin-3-yl)ethanone (300 mg, 0.677 mmol) and the resulting solution was stirred at room temperature for 16 h. The completed reaction was diluted in 50 mL of $CHCl_3$/isopropanol 3:1 mixture and washed with 5% LiCl solution (2 x 50 mL) and water (50 mL). The organic layer was dried over anhydous sodium sulfate concentrated to an orange residue. The material was purified by flash chromatography ($MeOH/CH_2Cl_2$) to afford the expected product (140 mg, 38%) as a yellow solid. ESI MS *m/z* 533, $[C_{25}H_{33}BrN_4O_4 + H]^+$

Example 1083

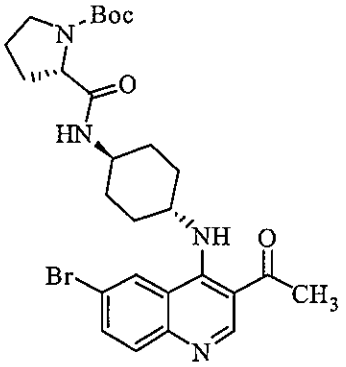
(S)-tert-butyl 2-((1r,4S)-4-(3-acetyl-6-bromoquinolin-4-ylamino)cyclohexylcarbamoyl) pyrrolidine-1-carboxylate



A solution of (S)-1-(tert-butoxycarbonyl)pyrrolidine-2-carboxylic acid (174 mg, 0.812 mmol) and HATU (308 mg, 0.812 mmol) was stirred at rt for 10 min followed by the addition of *N,N*-diisopropylethylamine (650 μL, 3.38 mmol) and 1-(4-(1R,4R)-4-aminocyclohexylamino) -6-bromoquinolin-3-yl)ethanone (300 mg, 0.677 mmol) and the resulting solution was stirred at room temperature for 16 h. The completed reaction was diluted in 50 mL of $CHCl_3$/isopropanol 3:1 mixture and washed with 5% LiCl solution (2 x 50 mL) and water (50 mL). The organic layer was isolated and dried over anhydous sodium sulfate and reduced to a orange residue. The material was purified by flash chromatography ($MeOH/CH_2Cl_2$) to afford the expected product (273 mg, 72%) as a yellow solid. ESI MS *m/z* 559, $[C_{27}H_{35}BrN_4O_4 + H]^+$

Example 1084

(S)-tert-butyl 2-((1r,4S)-4-(3-acetyl-6-bromoquinolin-4-ylamino)cyclohexylcarbamoyl) pyrrolidine-1-carboxylate

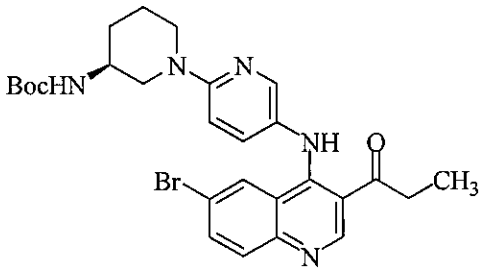


A solution of (S)-1-(tert-butoxycarbonyl)pyrrolidine-2-carboxylic acid (174 mg, 0.812 mmol) and HATU (308 mg, 0.812 mmol) in DMF (5 mL) was stirred at rt for 10 min followed by the addition of *N,N*-diisopropylethylamine (650 μL, 3.38 mmol) and 1-(4-((1R,4R)-4-aminocyclohexylamino) -6-bromoquinolin-3-yl)ethanone (300 mg, 0.677 mmol) and the resulting solution was stirred at room temperature for 16h. The completed reaction was diluted in 50 mL of $CHCl_3$/isopropanol 3:1 mixture and washed with 5% LiCl solution (2 x 50 mL) and water (50 mL). The organic layer was isolated and dried over

anhydous sodium sulfate and reduced to a orange residue. The material was purified by flash chromatography ($MeOH/CH_2Cl_2$) to afford the expected product (273 mg, 72%) as a yellow solid. ESI MS *m/z* 559, $[C_{27}H_{35}BrN_4O_4 + H]^+$

Example 1085

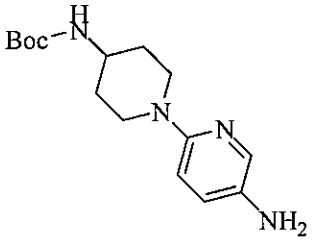
(S)-tert-butyl 1-(5-(6-bromo-3-propionylquinolin-4-ylamino)pyridin-2-yl) piperidin-3-ylcarbamate




Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)propan-1-one (301 mg, 1.02 mmol) was reacted with (S)-tert-butyl 1-(5-aminopyridin-2-yl)piperidin-3-ylcarbamate (600 mg, 2.05 mmol) to obtain the desired product (168 mg, 30%) as an purple semi-solid.: ESI MS *m/z* 554 $[C_{27}H_{32}BrN_5O_3 + H]^+$.

Example 1086

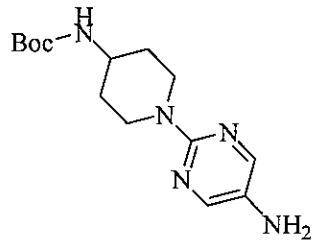
tert-butyl 1-(5-aminopyridin-2-yl)piperidin-4-ylcarbamate




Following General procedure H, 2-chloro-5-nitropyridine (500 mg, 3.1 mmol) was reacted with tert-butyl piperidin-4-ylcarbamate (695 mg, 3.5 mmol) followed by reduction to afford the desired product (744 mg, 80%) as a purple solid: ESI MS m/z 293 $[C_{15}H_{24}N_4O_2 + H]^+$.

Example 1087

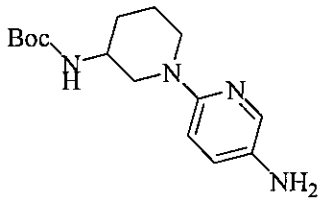
tert-butyl 1-(5-aminopyrimidin-2-yl)piperidin-4-ylcarbamate



Following General procedure H, 2-chloro-5-nitropyrimidine (500 mg, 3.1 mmol) was reacted with tert-butyl piperidin-4-ylcarbamate (683 mg, 3.5 mmol) followed by reduction to afford the desired product (792 mg, 87%) as a purple solid: ESI MS m/z 294 $[C_{14}H_{23}N_5O_2 + H]^+$.

Example 1088

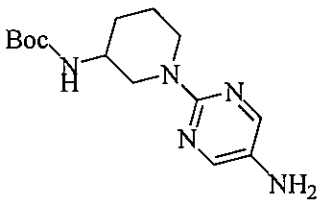
tert-butyl 1-(5-aminopyridin-2-yl)piperidin-3-ylcarbamate



Following General procedure H, 2-chloro-5-nitropyridine (500 mg, 3.1 mmol) was reacted with tert-butyl piperidin-3-ylcarbamate (695 mg, 3.5 mmol) followed by reduction to afford the desired product (847 mg, 93%) as a purple solid: ESI MS m/z 293 $[C_{15}H_{24}N_4O_2 + H]^+$.

Example 1089

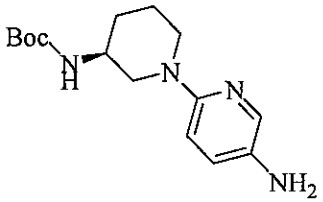
tert-butyl 1-(5-aminopyrimidin-2-yl)piperidin-3-ylcarbamate



Following General procedure H, 2-chloro-5-nitropyrimidine (500 mg, 3.1 mmol) was reacted with tert-butyl piperidin-3-ylcarbamate (683 mg, 3.5 mmol) followed by reduction to afford the desired product (762 mg, 84%) as a purple solid: ESI MS m/z 294 $[C_{14}H_{23}N_5O_2 + H]^+$.

Example 1090

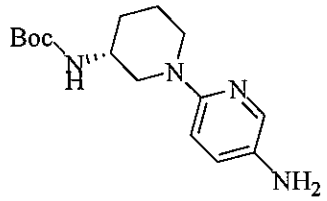
(S)-tert-butyl 1-(5-aminopyridin-2-yl)piperidin-3-ylcarbamate



Following General procedure H, 2-chloro-5-nitropyridine (500 mg, 3.1 mmol) was reacted with (S)-tert-butyl piperidin-4-ylcarbamate (695 mg, 3.5 mmol) followed by reduction to afford the desired product (945 mg, quant.) as a purple solid: ESI MS m/z 293 $[C_{15}H_{24}N_4O_2 + H]^+$.

Example 1091

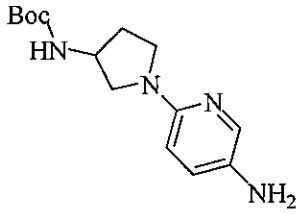
(R)-tert-butyl 1-(5-aminopyridin-2-yl)piperidin-3-ylcarbamate



Following General procedure H, 2-chloro-5-nitropyridine (500 mg, 3.1 mmol) was reacted with tert-butyl piperidin-4-ylcarbamate (695 mg, 3.5 mmol) followed by reduction to afford the desired product (872 mg, 96%) as a purple solid: ESI MS m/z 293 $[C_{15}H_{24}N_4O_2 + H]^+$.

Example 1092

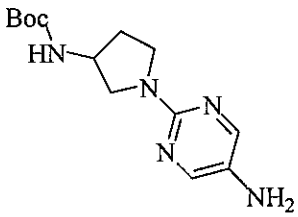
tert-butyl 1-(5-aminopyridin-2-yl)pyrrolidin-3-ylcarbamate



Following General procedure H, 2-chloro-5-nitropyridine (500 mg, 3.1 mmol) was reacted with tert-butyl pyrrolidin-3-ylcarbamate (931 mg, 5 mmol) followed by reduction to afford the desired product (813 mg, 94%) as a purple solid: ESI MS m/z 279 $[C_{14}H_{22}N_4O_2 + H]^+$.

Example 1093

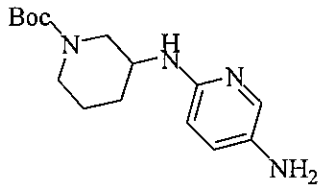
tert-butyl 1-(5-aminopyrimidin-2-yl)pyrrolidin-3-ylcarbamate



Following General procedure H, 2-chloro-5-nitropyrimidine (500 mg, 3.1 mmol) was reacted with tert-butyl pyrrolidin-3-ylcarbamate (632 mg, 3.5 mmol) followed by reduction to afford the desired product (565 mg, 65%) as a purple solid: ESI MS m/z 280 $[C_{13}H_{21}N_5O_2 + H]^+$.

Example 1094

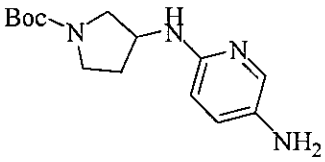
tert-butyl 3-(5-aminopyridin-2-ylamino)piperidine-1-carboxylate



Following General procedure H, 2-chloro-5-nitropyridine (500 mg, 3.1 mmol) was reacted with tert-butyl 3-aminopiperidine-1-carboxylate (695 mg, 3.5 mmol) followed by reduction to afford the desired product (337 mg, 35%) as a purple solid: ESI MS m/z 293 $[C_{15}H_{24}N_4O_2 + H]^+$.

Example 1095

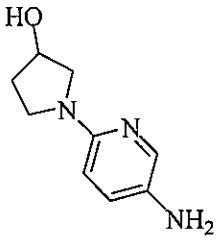
tert-butyl 3-(5-aminopyridin-2-ylamino)pyrrolidine-1-carboxylate



Following General procedure H, 2-chloro-5-nitropyridine (500 mg, 3.1 mmol) was reacted with tert-butyl 3-aminopyrrolidine-1-carboxylate (632 mg, 3.5 mmol) followed by reduction to afford the desired product (407 mg, 47%) as a purple solid: ESI MS m/z 279 $[C_{14}H_{22}N_4O_2 + H]^+$.

Example 1096

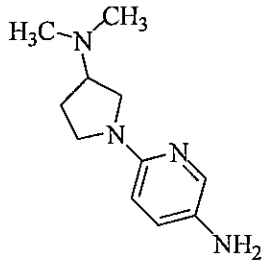
1-(5-aminopyridin-2-yl)pyrrolidin-3-ol



Following General procedure H, 2-chloro-5-nitropyridine (500 mg, 3.1 mmol) was reacted with pyrrolidin-3-ol (330 mg, 3.5 mmol) followed by reduction to afford the desired product (440 mg, 52%) as a purple solid: ESI MS m/z 180 $[C_9H_{13}N_3O + H]^+$.

Example 1097

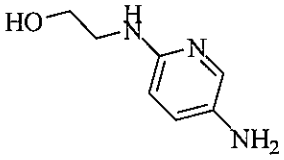
6-(3-(dimethylamino)pyrrolidin-1-yl)pyridin-3-amine



Following General procedure H, 2-chloro-5-nitropyridine (500 mg, 3.1 mmol) was reacted with N,N-dimethylpyrrolidin-3-amine (400 mg, 3.5 mmol) followed by reduction to afford the desired product (360 mg, 56%) as a purple solid: ESI MS m/z 207 $[C_{11}H_{18}N_4 + H]^+$.

Example 1098

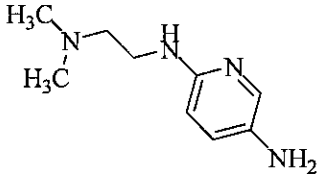
2-(5-aminopyridin-2-ylamino)ethanol



Following General procedure H, 2-chloro-5-nitropyridine (500 mg, 3.1 mmol) was reacted with 2-aminoethanol (213 mg, 3.5 mmol) followed by reduction to afford the desired product (306 mg, 65%) as a purple solid: ESI MS m/z 154 $[C_7H_{11}N_3O + H]^+$.

Example 1099

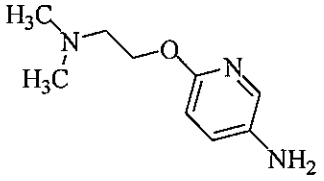
$N^2$-(2-(dimethylamino)ethyl)pyridine-2,5-diamine



Following General procedure H, 2-chloro-5-nitropyridine (500 mg, 3.1 mmol) was reacted with $N^1$,$N^1$-dimethylethane-1,2-diamine (308 mg, 3.5 mmol) followed by reduction to afford the desired product (280 mg, 50%) as a purple solid: ESI MS m/z 181 $[C_9H_{16}N_4 + H]^+$.

Example 1100

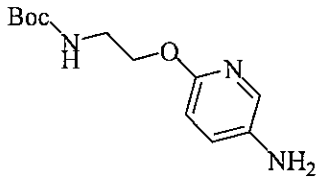
6-(2-(dimethylamino)ethoxy)pyridin-3-amine



Following General procedure I, 2-chloro-5-nitropyridine (500 mg, 3.1 mmol) was reacted with 2-(dimethylamino)ethanol (309 mg, 3.5 mmol) followed by reduction to afford the desired product (340 mg, 61%) as a purple solid: ESI MS m/z 182 $[C_9H_{15}N_3O + H]^+$.

Example 1101

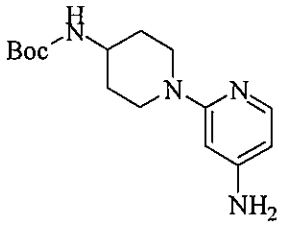
tert-butyl 2-(5-aminopyridin-2-yloxy)ethylcarbamate



Following General procedure I, 2-chloro-5-nitropyridine (500 mg, 3.1 mmol) was reacted with tert-butyl 2-hydroxyethylcarbamate (560 mg, 3.5 mmol) followed by reduction to afford the desired product (410 mg, 52%) as a purple solid: ESI MS m/z 254 $[C_{12}H_{19}N_3O_3 + H]^+$.

Example 1102

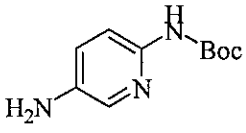
tert-butyl 1-(4-aminopyridin-2-yl)piperidin-4-ylcarbamate



Following General procedure H, 2-chloro-4-nitropyridine (500 mg, 3.1 mmol) was reacted with tert-butyl piperidin-4-ylcarbamate (695 mg, 3.5 mmol) followed by reduction to afford the desired product (300 mg, 33%) as a purple solid: ESI MS m/z 293 $[C_{15}H_{24}N_4O_2 + H]^+$.

Example 1103

tert-butyl 5-aminopyridin-2-ylcarbamate

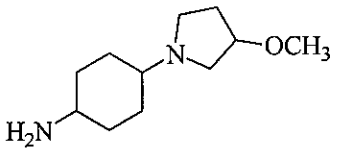


A solution of 5-nitropyridin-2-amine (500 mg, 3.5 mmol) in acetonitrile (10 mL) , triethylamine (2.5 equiv) and dimethylaminopyridine (0.05 equiv) was stirred for 10 min followed by addition of di-tert-butyl dicarbonate (1 equiv). The reaction mixture was stirred at room temperature until the reaction was complete ( by LCMS analysis). The reaction was concentrated and the residue was suspended in methanol and filtered. The n a glass clave, the crude product was dissolved in tertrahydrofuran (0.1 M), degassed with nitrogen and Pd/C (10%, 0.1 equiv) was added to the

mixture. The clave was charged with hydrogen (40 Psi) and shaked at room temperature until the reduction was completed as indicated by LCMS analysis. The pressure was released and the reaction mixture was filtrated over a pad of celite. The filtrate was concentrated to obtain the desired product (437 mg, 60%) as a white solid: ESI MS m/z 210 [C10H15N3O2 + H]$^+$.

Example 1104

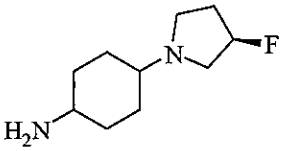
4-(3-methoxypyrrolidin-1-yl)cyclohexanamine



Following General procedure I, 3-methoxypyrrolidine hydrochloride (448 mg, 3.26 mmol) was reacted with tert-butyl 4-oxocyclohexylcarbamate (500 mg, 2.34 mmol) to afford the desired product (452 mg, 97%) as a yellow solid: ESI MS m/z 187 [$C_{11}H_{22}N_2O$ + H]$^+$.

Example 1105

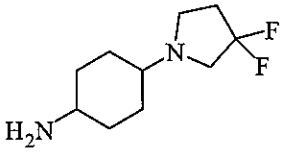
(R)-4-(3-fluoropyrrolidin-1-yl)cyclohexanamine



Following General procedure I, (R)-3-fluoropyrrolidine hydrochloride (407 mg, 3.26 mmol) was reacted with tert-butyl 4-oxocyclohexylcarbamate (500 mg, 2.34 mmol) to afford the desired product (200 mg, 51%) as a colorless oil: ESI MS m/z 187 [$C_{10}H_{19}FN_2$ + H]$^+$.

Example 1106

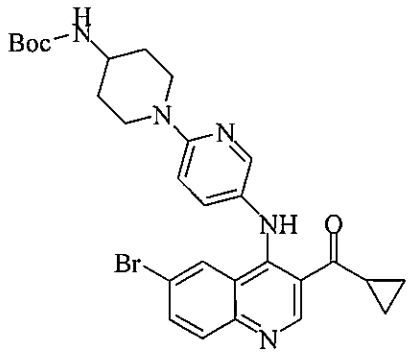
4-(3,3-difluoropyrrolidin-1-yl)cyclohexanamine



Following General procedure I, 3,3-difluoropyrrolidine hydrochloride (468 mg, 3.26 mmol) was reacted with tert-butyl 4-oxocyclohexylcarbamate (500 mg, 2.34 mmol) to afford the desired product (507 mg, quant.) as a colorless oil: ESI MS m/z 205 [$C_{10}H_{18}F_2N_2$ + H]$^+$.

Example 1107

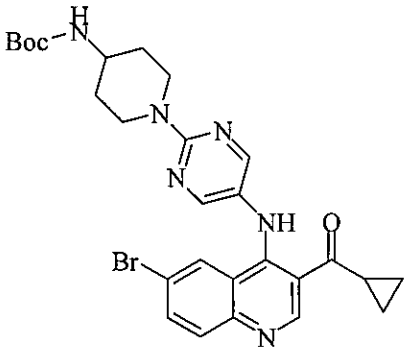
tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinoline-4-ylamino)pyridin-2-yl) piperidin-4-ylcarbamate



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1 mmol) was reacted with tert-butyl 1-(5-aminopyridin-2-yl)piperidin-4-ylcarbamate (439 mg, 1.5 mmol) to afford the desired product (423 mg, 75%) as a yellow solid: ESI MS m/z 566 $[C_{28}H_{32}BrN_5O_3 + H]^+$.

Example 1108

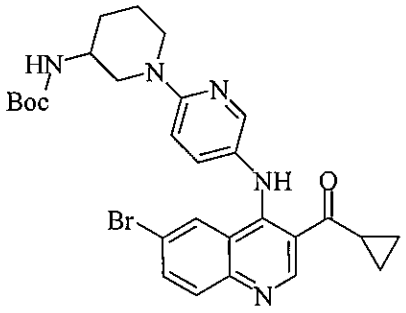
tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino) pyrimidin-2-yl)piperidin-4-ylcarbamate



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1 mmol) was reacted with tert-butyl 1-(5-aminopyrimidin-2-yl)piperidin-4-ylcarbamate (440 mg, 1.5 mmol) to afford the desired product (374 mg, 66%) as a yellow solid: ESI MS m/z 567 $[C_{27}H_{31}BrN_6O_3 + H]^+$.

Example 1109

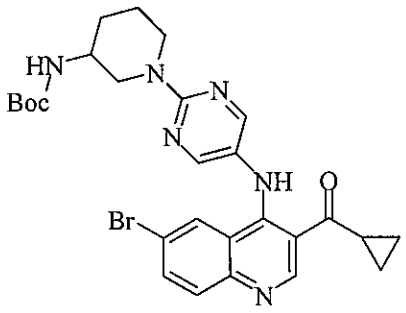
tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino) pyridin-2-ylpiperidin-3-ylcarbamate



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1 mmol) was reacted with tert-butyl 1-(5-aminopyridin-2-yl)piperidin-3-ylcarbamate (439 mg, 1.5 mmol) to afford the desired product (523 mg, 92%) as a yellow solid: ESI MS m/z 566 $[C_{28}H_{32}BrN_5O_3 + H]^+$.

Example 1110

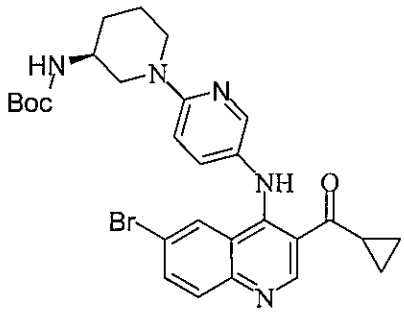
tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyrimidin-2-yl) piperidin-3-ylcarbamate



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1 mmol) was reacted with tert-butyl 1-(5-aminopyrimidin-2-yl)piperidin-3-ylcarbamate (440 mg, 1.5 mmol) to afford the desired product (462 mg, 80%) as a yellow solid: ESI MS m/z 567 $[C_{27}H_{31}BrN_6O_3 + H]^+$.

Example 1111

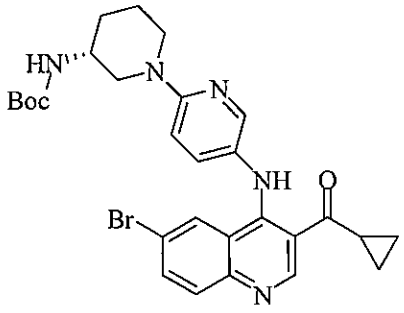
(S)-tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyridin-2-yl) piperidin-3-ylcarbamate



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1 mmol) was reacted with (S)-tert-butyl 1-(5-aminopyridin-2-yl)piperidin-3-ylcarbamate (439 mg, 1.5 mmol) to afford the desired product (527 mg, 93%) as a yellow solid: ESI MS m/z 566 $[C_{28}H_{32}BrN_5O_3 + H]^+$.

Example1112

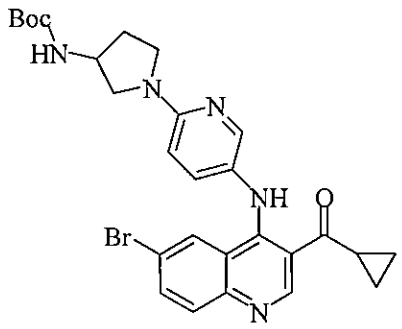
(R)-tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyridin-2-yl) piperidin-3-ylcarbamate



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1 mmol) was reacted with (R)-tert-butyl 1-(5-aminopyridin-2-yl)piperidin-3-ylcarbamate (439 mg, 1.5 mmol) to afford the desired product (516 mg, 91%) as a yellow solid: : ESI MS m/z 566 $[C_{28}H_{32}BrN_5O_3 + H]^+$.

Example1113

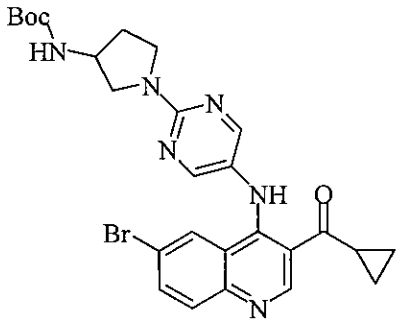
tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyridin-2-yl) pyrrolidin-3-ylcarbamate



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1 mmol) was reacted with tert-butyl 1-(5-aminopyridin-2-yl)pyrrolidin-3-ylcarbamate (417 mg, 1.5 mmol) to afford the desired product (488 mg, 88%) as a yellow solid: ESI MS m/z 552 $[C_{27}H_{30}BrN_5O_3 + H]^+$.

Example1114

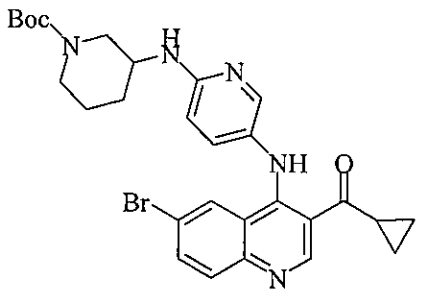
tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyrimidin-2-yl) pyrrolidin-3-ylcarbamate



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1 mmol) was reacted with tert-butyl 1-(5-aminopyrimidin-2-yl)pyrrolidin-3-ylcarbamate (418 mg, 1.5 mmol) to afford the desired product (336 mg, 61%) as a yellow solid: ESI MS m/z 553 $[C_{26}H_{29}BrN_6O_3 + H]^+$.

Example1115

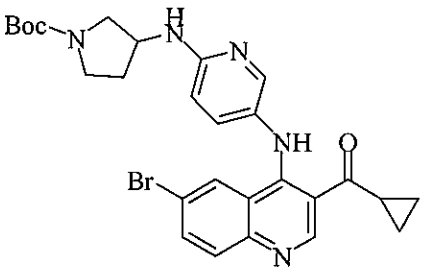
tert-butyl 3-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyridin-2-ylamino) piperidine-1-carboxylate



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (239 mg, 0.8 mmol) was reacted with tert-butyl 3-(5-aminopyridin-2-ylamino)piperidine-1-carboxylate (337 mg, 1.1 mmol) to afford the desired product (300 mg, 69%) as a yellow solid: ESI MS m/z 566 $[C_{28}H_{32}BrN_5O_3 + H]^+$.

Example1116

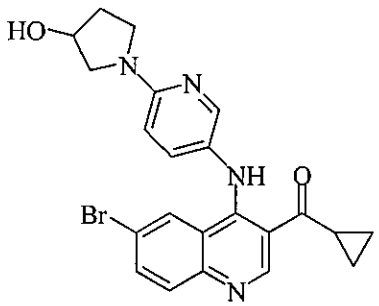
tert-butyl 3-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyridin-2-ylamino) pyrrolidine-1-carboxylate



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1 mmol) was reacted with tert-butyl 3-(5-aminopyridin-2-ylamino)pyrrolidine-1-carboxylate (417 mg, 1.5 mmol) to afford the desired product (450 mg, 98%) as a yellow solid: ESI MS m/z 552 $[C_{27}H_{30}BrN_5O_3 + H]^+$.

Example1117

(6-bromo-4-(6-(3-hydroxypyrrolidin-1-yl)pyridin-3-ylamino)quinolin-3-yl) (cyclopropyl)methanone

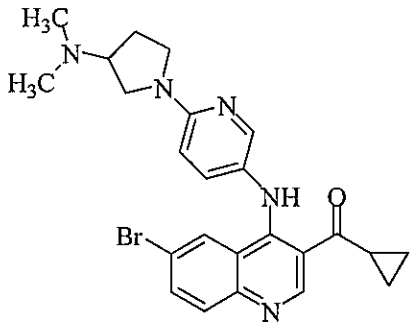


Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311

mg, 1 mmol) was reacted with 1-(5-aminopyridin-2-yl)pyrrolidin-3-ol (269 mg, 1.5 mmol) to afford the desired product (234 mg, 51%) as a yellow solid: ESI MS m/z 453 [$C_{22}H_{21}BrN_4O_2$ + H]$^+$.

Example1118

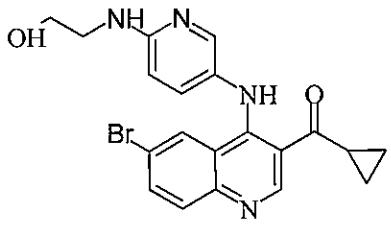
(6-bromo-4-(6-(3-(dimethylamino)pyrrolidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1 mmol) was reacted with 6-(3-(dimethylamino)pyrrolidin-1-yl)pyridin-3-amine (309 mg, 1.5 mmol) to afford the desired product (342 mg, 71%) as a yellow solid: ESI MS m/z 480 [$C_{24}H_{26}BrN_5O$ + H]$^+$.

Example1119

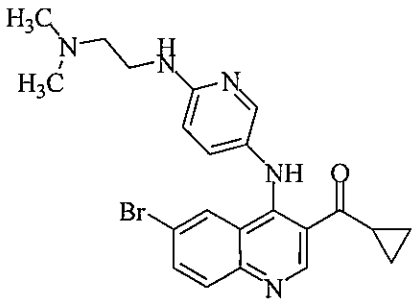
(6-bromo-4-(6-(2-hydroxyethylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1 mmol) was reacted with 2-(5-aminopyridin-2-ylamino)ethanol (230 mg, 1.5 mmol) to afford the desired product (287 mg, 67%) as a yellow solid: ESI MS m/z 427 [$C_{20}H_{19}BrN_4O_2$ + H]$^+$.

Example1120

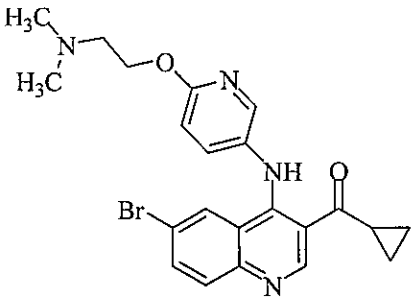
(6-bromo-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1 mmol) was reacted with $N^2$-(2-(dimethylamino)ethyl)pyridine-2,5-diamine (270 mg, 1.5 mmol) to afford the desired product (300 mg, 66%) as a yellow solid: ESI MS m/z 454 $[C_{22}H_{24}BrN_5O + H]^+$.

Example1121

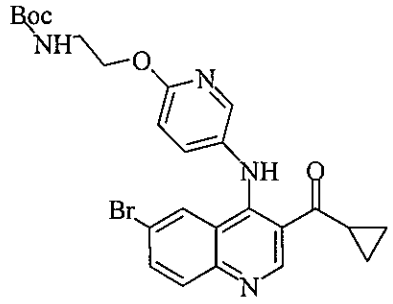
(6-bromo-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl) (cyclopropyl)methanone



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1 mmol) was reacted with 6-(2-(dimethylamino)ethoxy)pyridin-3-amine (340 mg, 1.8 mmol) to afford the desired product (340 mg, 75%) as a yellow solid: ESI MS m/z 455 $[C_{22}H_{23}BrN_4O_2 + H]^+$.

Example 1122

tert-butyl 2-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino) pyridin-2-yloxy)ethylcarbamate

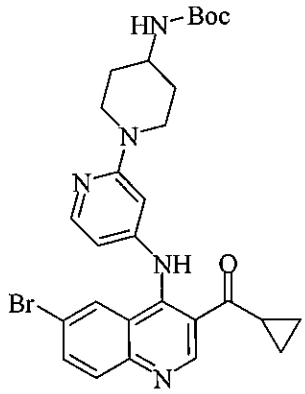


Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311

mg, 1 mmol) was reacted with tert-butyl 2-(5-aminopyridin-2-yloxy)ethylcarbamate (380 mg, 1.5 mmol) to afford the desired product (332 mg, 63%) as a yellow solid: ESI MS m/z 527 $[C_{25}H_{27}BrN_4O_4 + H]^+$.

Example1123

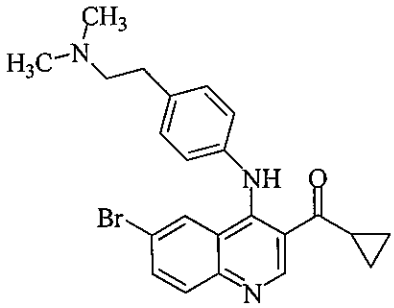
tert-butyl 1-(4-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyridin-2-yl) piperidin-4-ylcarbamate




Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (211 mg, 0.7 mmol) was reacted with tert-butyl 1-(4-aminopyridin-2-yl)piperidin-4-ylcarbamate (300 mg, 1 mmol) to afford the desired product (120 mg, 30%) as a yellow solid: ESI MS m/z 566 $[C_{28}H_{32}BrN_5O_3 + H]^+$.

Example1124

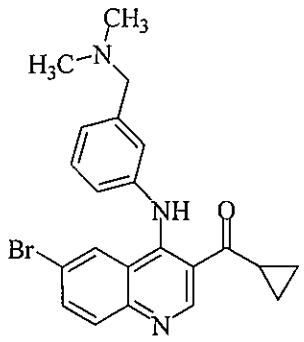
(6-bromo-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone




Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1 mmol) was reacted with 4-(2-(dimethylamino)ethyl)aniline (247 mg, 1.5 mmol) to afford the desired product (324 mg, 73%) as a yellow solid: ESI MS m/z 438 $[C_{23}H_{24}BrN_3O + H]^+$.

Example1125

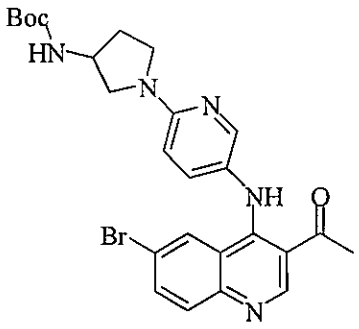
(6-bromo-4-(3-((dimethylamino)methyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1 mmol) was reacted with 3-((dimethylamino)methyl)aniline (226 mg, 1.5 mmol) to afford the desired product (343 mg, 810%) as a yellow solid: ESI MS m/z 424 $[C_{22}H_{22}BrN_3O + H]^+$.

Example 1126

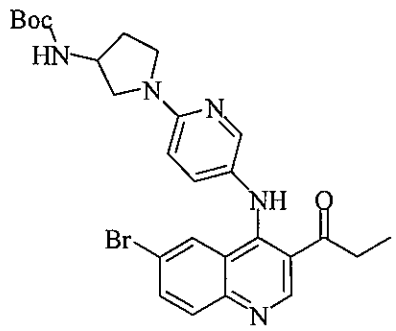
tert-butyl 1-(5-(3-acetyl-6-bromoquinolin-4-ylamino)pyridin-2-yl)pyrrolidin-3-ylcarbamate



Following General procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (284 mg, 1 mmol) was reacted with tert-butyl 1-(5-aminopyridin-2-yl)pyrrolidin-3-ylcarbamate (439 mg, 1.5 mmol) to afford the desired product (240 mg, 46%) as a yellow solid: ESI MS m/z 526 $[C_{25}H_{28}BrN_5O_3 + H]^+$.

Example 1127

tert-butyl 1-(5-(6-bromo-3-propionylquinolin-4-ylamino)pyridin-2-yl)pyrrolidin-3-ylcarbamate

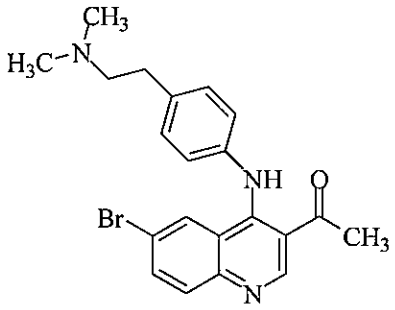


Following General procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)propan-1-one (298 mg, 1 mmol) was reacted with tert-butyl 1-(5-aminopyridin-2-yl)pyrrolidin-3-ylcarbamate (439 mg, 1.5

mmol) to afford the desired product (332 mg, 61%) as a yellow solid: ESI MS m/z 540 $[C_{26}H_{30}BrN_5O_3 + H]^+$.

Example 1128

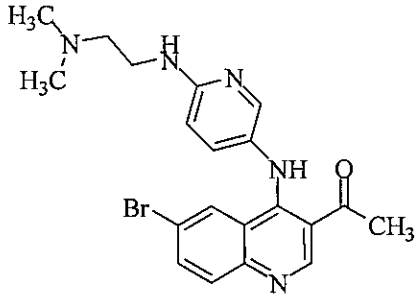
1-(6-bromo-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone



Following General procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (285 mg, 1 mmol) was reacted with 4-(2-(dimethylamino)ethyl)aniline (247 mg, 1.5 mmol) to afford the desired product (2284 mg, 55%) as a yellow solid: ESI MS m/z 412 $[C_{21}H_{22}BrN_3O + H]^+$.

Example 1129

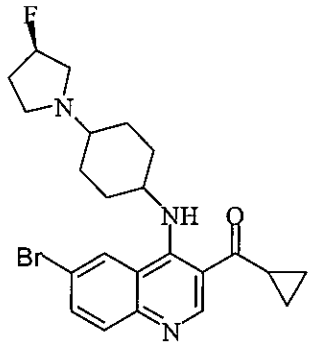
1-(6-bromo-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)ethanone



Following General procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (284 mg, 1 mmol) was reacted with $N^2$-(2-(dimethylamino)ethyl)pyridine-2,5-diamine (270 mg, 1.5 mmol) to afford the desired product (320 mg, 74%) as a yellow solid: ESI MS m/z 428 $[C_{20}H_{22}BrN_5O + H]^+$.

Example 1130

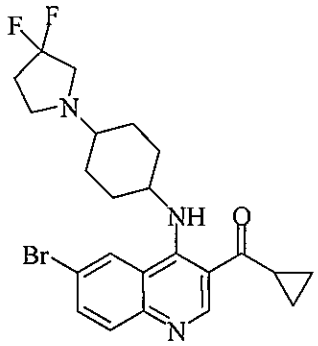
(R)-(6-bromo-4-(4-(3-fluoropyrrolidin-1-yl)cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (278 mg, 0.89 mmol) was reacted with (R)-4-(3-fluoropyrrolidin-1-yl)cyclohexanamine (200 mg, 1.1 mmol) to afford the desired product (307 mg, 75%) as a yellow solid: ESI MS m/z 460 $[C_{23}H_{27}BrFN_3O + H]^+$.

Example 1131

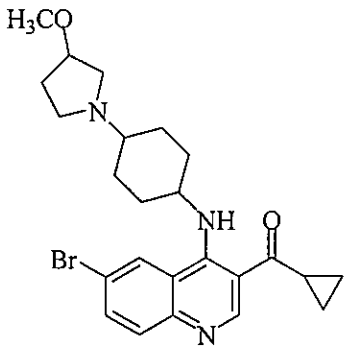
(6-bromo-4-(4-(3,3-difluoropyrrolidin-1-yl)cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1 mmol) was reacted with 4-(3,3-difluoropyrrolidin-1-yl)cyclohexanamine (306 mg, 1.5 mmol) to afford the desired product (218 mg, 46%) as a yellow solid: ESI MS m/z 478 $[C_{23}H_{26}BrF_2N_3O + H]^+$.

Example 1132

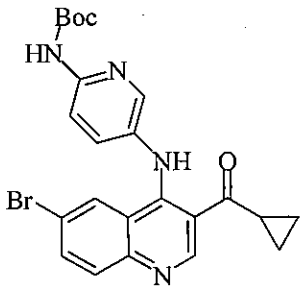
(6-bromo-4-(4-(3-methoxypyrrolidin-1-yl)cyclohexylamino)quinolin-3-yl) (cyclopropyl)methanone



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1 mmol) was reacted with 4-(3-methoxypyrrolidin-1-yl)cyclohexanamine (297 mg, 1.5 mmol) to afford the desired product (210 mg, 45%) as a yellow solid: ESI MS m/z 472 $[C_{24}H_{30}BrN_3O_2 + H]^+$.

Example 1133

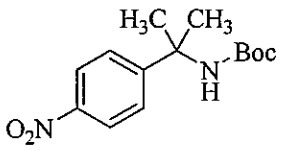
tert-butyl 5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyridin-2-ylcarbamate



Following General procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (311 mg, 1 mmol) was reacted with tert-butyl 5-aminopyridin-2-ylcarbamate (313 mg, 1.5 mmol) to afford the desired product (352 mg, 72%) as a yellow solid: ESI MS m/z 483 $[C_{23}H_{23}BrN_4O_3 + H]^+$.

Example 1134

*tert*-Butyl 2-(4-nitrophenyl)propan-2-ylcarbamate

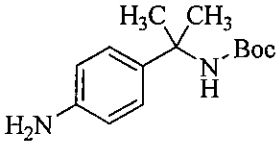


To a solution of 2-(4-nitrophenyl)propan-2-amine (1.0 g, 4.62 mmol) in dioxane (30 mL) at 0 °C was added a saturated solution of $Na_2CO_3$ (10 mL) and di-*tert*-butyl dicarbonate (1.95 g, 6.93 mmol) in dioxane (5 mL) and the resultant mixture was stirred at rt overnight. The dioxane was removed under vacuum and the resultant slurry was diluted with water, extracted with $CH_2Cl_2$,

dried with $Na_2SO_4$, and concentrated to give crude product (1.86 g) as an orange solid: $^1$H NMR (300 MHz, $CDCl_3$) δ 8.20–8.16 (m, 2H), 7.58–7.54 (m, 2H), 5.02 (s, 1H), 1.58 (s, 6H), 1.53 (s, 9H).

Example 1135

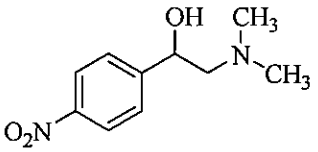
*tert*-Butyl 2-(4-aminophenyl)propan-2-ylcarbamate




A pressure flask was charged with a suspension of *tert*-butyl 2-(4-nitrophenyl)propan-2-yl-carbamate (4.62 mmol) in ethanol (20 mL) and palladium on carbon (100mg). The flask was placed on a Parr shaker, purged with $H_2$ (30 psi), and stirred overnight. The crude product was filtered through celite, concentrated, and chromatographed (hexane:ethyl acetate) to obtain the desired product (420 mg, 36% over two steps) as an orange-red oil: $^1$H NMR (300 MHz, $CDCl_3$) δ 7.26–7.17 (m, 2H), 6.67–6.62 (m, 2H), 4.82 (s, 1H), 1.60 (s, 3H), 1.57 (s, 3H), 1.37 (s, 9H).

Example 1136

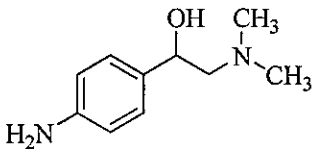
2-(Dimethylamino)-1-(4-nitrophenyl)ethanol




To a solution of 2-amino-1-(4-nitrophenyl)ethanone (500 mg, 2.30 mmol), paraformaldehyde (207 mg, 6.90 mmol), and sodium cyanoborohydride (433 mg, 6.90 mmol) in methanol (30 mL) was added acetic acid (catalytic) and the reaction stirred at room temperature for 18 h. The reaction mixture was quenched with water and the layers were separated. The combined organic layers were dried over anhydrous sodium sulfate, filtered, concentrated, and chromatographed ($CH_2Cl_2$/MeOH) to afford the desired product (164 mg, 34%) as an orange oil: ESI MS *m/z* 211 $[C_{10}H_{14}N_2O_3 + H]^+$.

Example 1137

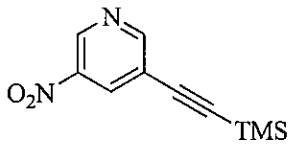
1-(4-Aminophenyl)-2-(dimethylamino)ethanol



A pressure flask was charged with a suspension 2-(dimethylamino)-1-(4-nitrophenyl)ethanol (160 mg, 0.770 mmol) in ethanol (10 mL) and Raney nickel (0.5 mL). The flask was placed on a Parr shaker, purged with $H_2$ (30 psi), and stirred for 4 h. The crude product was filtered through celite, and concentrated to obtain the crude product (210 mg) as an off-white solid: $^1$H NMR (300 MHz, $CDCl_3$) $\delta$ 7.11–7.09 (m, 2H), 6.71–6.69 (m, 2H), 4.61–4.70 (m, 1H), 2.61–2.58 (m, 1H), 2.40–2.32 (m, 1H), 2.31 (s, 3H).

Example 1138

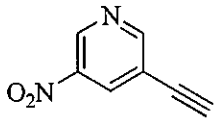
3-Nitro-5-((trimethylsilyl)ethynyl)pyridine



To a suspension of 3-bromo-5-nitropyridine (1.0 g, 4.90 mmol), $Pd(Ph_3P)_4$ (0.57 g, 0.49 mmol), and copper iodide (0.19 g, 0.98 mmol) in triethylamine (30 mL) was added ethynyltrimethylsilane (1.0 mL, 7.35 mmol) and the reaction was purged with $N_2$. The mixture was stirred at 80 °C for 2 h. The reaction mixture was filtered through celite and washed with ethyl acetate. The filtrate was washed with saturated solutions of $NaHCO_3$ and NaCl. The organic layer was concentrated to afford the crude product (1.72 g) as a light brown solid: ESI MS *m/z* 221 $[C_{10}H_{12}N_2O_2Si + H]^+$.

Example 1139

3-ethynyl-5-nitropyridine

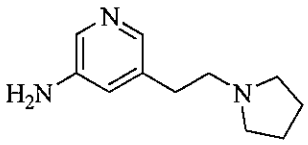


To a solution of 3-nitro-5-((trimethylsilyl)ethynyl)pyridine (4.90 mmol) in MeOH (15 mL) was added $K_2CO_3$ (67 mg, 0.49 mmol). The mixture was stirred at rt for 30 min. The reaction mixture was diluted with ethyl acetate, washed with water and brine, dried over sodium sulfate, and chromatographed (hexane/ethyl acetate) to afford the desired product (540 mg, 74% over

two steps) as a light brown solid: $^1$H NMR (300 MHz, $CDCl_3$) $\delta$ 9.39–9.38 (m, 1H), 8.99–8.98 (m, 1H), 8.56–8.54 (m, 1H), 3.40 (s, 1H).

Example 1140

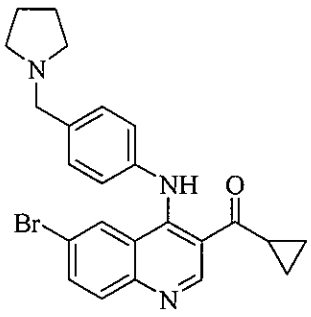
5-(2-(Pyrrolidin-1-yl)ethyl)pyridin-3-amine



To a solution of 3-ethynyl-5-nitropyridine (250 mg, 1.69 mmol) in ethanol (5 mL) was added pyrrolidine (0.56 mL, 6.76 mmol) and the reaction mixture was stirred at 80 °C for 16 h. The reaction mixture was cooled and palladium hydroxide on carbon (20 mg) was added. The flask was charged with $H_2$ (ballon) and stirred at rt for 16 h. The mixture was filtered over celite and the filtrate was concentrated to afford crude product (380 mg) as a dark red oil: ESI MS *m/z* 192 $[C_{11}H_{17}N_3 + H]^+$.

Example 1141

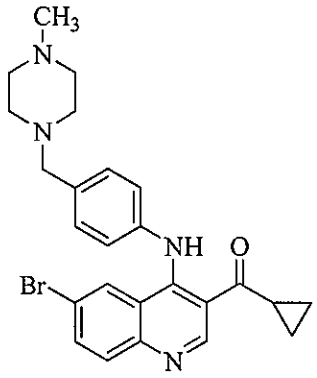
{6-Bromo-4-[4-(pyrrolidin-1-ylmethyl)phenylamino]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (320 mg, 1.03 mmol) was reacted 4-(pyrrolidin-1-ylmethyl)aniline (385 mg, 1.55 mmol) to afford the desired product (387 mg, 83%) as a yellow solid: ESI MS *m/z* 450 $[C_{24}H_{24}BrN_3O + H]^+$.

Example 1142

{6-Bromo-4-[4-((4-methylpiperazin-1-yl)methyl)phenylamino]quinolin-3-yl}(cyclopropyl)methanone

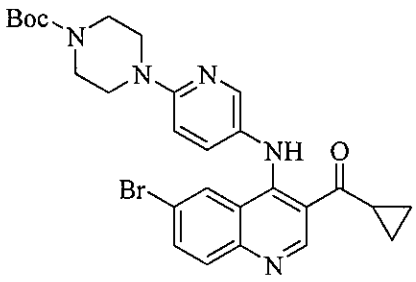


Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (200 mg, 0.644 mmol) was reacted with 4-[(4-methylpiperazin-1-yl)methyl]aniline (200 mg, 0.966 mmol) to afford the desired product (173 mg, 56%) as a yellow solid: ESI MS *m/z* 479 $[C_{25}H_{27}BrN_4O + H]^+$.

Example 1143

*tert*-Butyl

4-{5-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]pyridin-2-yl}piperazine-1-carboxylate

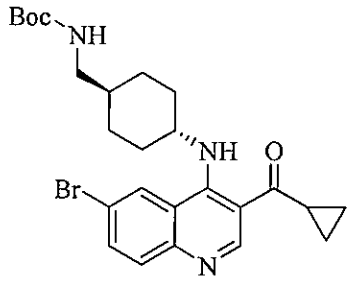


Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (225 mg, 0.724 mmol) was reacted with *tert*-butyl 4-(5-aminopyridin-2-yl)piperazine-1-carboxylate (300 mg, 1.09 mmol) to afford the desired product (320 mg, 80%) as an orange solid: ESI MS *m/z* 552 $[C_{27}H_{30}BrN_5O_3 + H]^+$.

Example 1144

*tert*-Butyl

{trans-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexyl}methylcarbamate

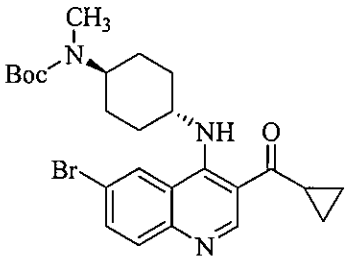


Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (260 mg, 0.840 mmol) was reacted with *tert*-trans-butyl (4-aminocyclohexyl)methylcarbamate (287 mg, 1.26 mmol) to afford the desired product (290 mg, 69%) as an off-white solid: ESI MS *m/z* 502 $[C_{25}H_{32}BrN_3O_3 + H]^+$.

Example 1145

*tert*-Butyl

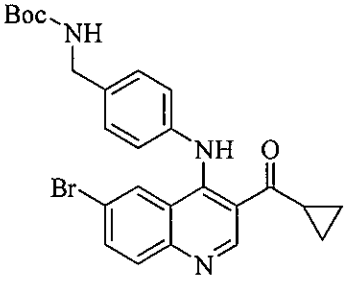
{trans-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexyl}(methyl)carbamate



Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (335 mg, 1.07 mmol) was reacted with *tert*-butyl-(trans)-4-aminocyclohexyl(methyl)carbamate (366 mg, 1.61 mmol) to afford the desired product (470 mg, 87%) as an orange foam: ESI MS *m/z* 502 $[C_{25}H_{32}BrN_3O_3 + H]^+$.

Example 1146

*tert*-Butyl 4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]benzylcarbamate

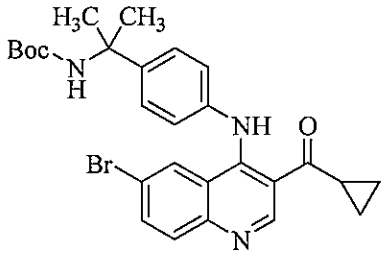


Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (290 mg, 0.934 mmol) was reacted with *tert*-butyl 4-aminobenzylcarbamate (312 mg, 1.40 mmol) to afford the desired product (362 mg, 78%) as a yellow solid: ESI MS *m/z* 496 $[C_{25}H_{26}BrN_3O_3 + H]^+$.

Example 1147

*tert*-Butyl

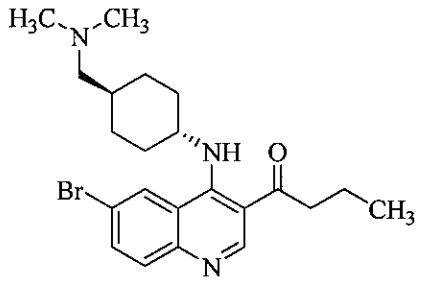
2-{4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]phenyl}propan-2-ylcarbamate



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (347 mg, 1.12 mmol) was reacted with *tert*-butyl 2-(4-aminophenyl)propan-2-ylcarbamate (420 mg, 1.68 mmol) to afford the desired product (422 mg, 63%) as a yellow solid: ESI MS *m/z* 524 $[C_{27}H_{30}BrN_3O_3 + H]^+$.

Example 1148

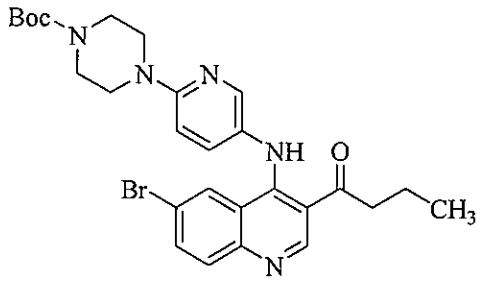
1-{6-Bromo-4-[trans-4-((dimethylamino)methyl)cyclohexylamino]quinolin-3-yl}butan-1-one



Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)butan-1-one (0.350 mg, 1.12 mmol) was reacted with trans-4-[(dimethylamino)methyl]cyclohexanamine•HCl (385 mg, 1.68 mmol) to afford the desired product (160 mg, 33%) as an off-white solid: ESI MS *m/z* 432 $[C_{22}H_{30}BrN_3O + H]^+$.

Example 1149

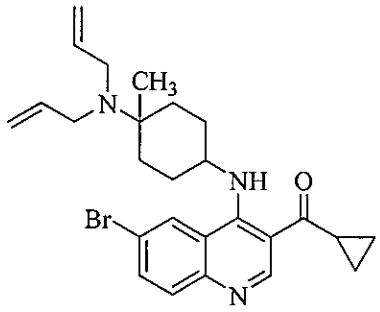
*tert*-Butyl 4-[5-(6-bromo-3-butyrylquinolin-4-ylamino)pyridin-2-yl]piperazine-1-carboxylate



Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)butan-1-one (360 mg, 1.15 mmol) was reacted with *tert*-butyl 4-(5-aminopyridin-2-yl)piperazine-1-carboxylate (480 mg, 1.73 mmol) to afford the desired product (440 mg, 69%) as an orange solid: ESI MS *m/z* 554 $[C_{27}H_{32}BrN_5O_3 + H]^+$.

Example 1150

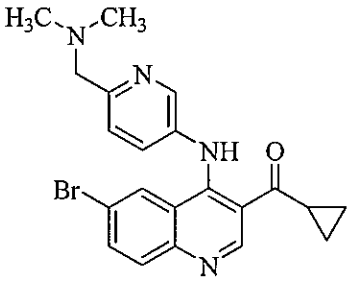
{6-Bromo-4-[4-(diallylamino)-4-methylcyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure B, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (300 mg, 0.966 mmol) was reacted with $N^1$,$N^1$-diallyl-1-methylcyclohexane-1,4-diamine (400 mg, 1.93 mmol) to afford the desired product (220 mg, 47%) as a yellow solid: ESI MS *m/z* 482 $[C_{26}H_{32}BrN_3O+ H]^+$.

Example 1151

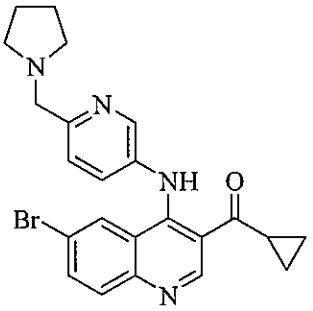
{6-Bromo-4-[6-((dimethylamino)methyl)pyridin-3-ylamino]quinolin-3-yl}(cyclopropyl)methano ne



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (330 mg, 1.06 mmol) was reacted with 6-[(dimethylamino)methyl]pyridin-3-amine (200 mg, 1.32 mmol) to afford the desired product (37 mg, 8%) as an orange oil: ESI MS *m/z* 425 $[C_{21}H_{21}BrN_4O+ H]^+$.

Example 1152

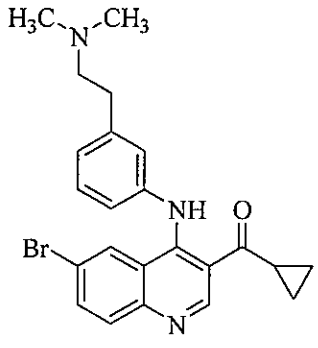
{6-Bromo-4-[6-(pyrrolidin-1-ylmethyl)pyridin-3-ylamino]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (310 mg, 1.00 mmol) was reacted with 6-(pyrrolidin-1-ylmethyl)pyridin-3-amine (280 mg, 1.50 mmol) to afford the desired product (352 mg, 78%) as a yellow foam: ESI MS *m/z* 451 $[C_{23}H_{23}BrN_4O + H]^+$.

Example 1153

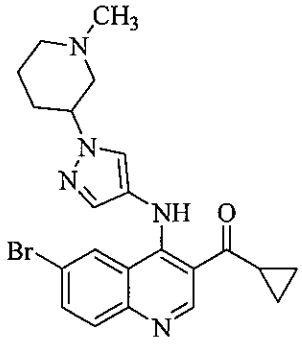
{6-Bromo-4-[3-(2-(dimethylamino)ethyl)phenylamino]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (280 mg, 0.91 mmol) was reacted with 3-[2-(dimethylamino)ethyl]aniline (150 mg, 0.91 mmol) to afford the desired product (270 mg, 68%) as a yellow solid: ESI MS *m/z* 438 $[C_{23}H_{24}BrN_3O + H]^+$.

Example 1154

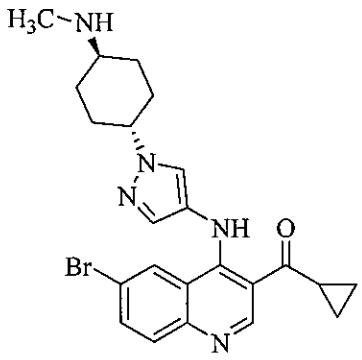
{6-Bromo-4-[1-(1-methylpiperidin-3-yl)-1*H*-pyrazol-4-ylamino]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (305 mg, 0.98 mmol) was reacted with 1-(1-methylpiperidin-3-yl)-1*H*-pyrazol-4-amine (265 mg, 1.47 mmol) to afford the desired product (100 mg, 22%) as a yellow solid: ESI MS *m/z* 454 $[C_{22}H_{24}BrN_5O + H]^+$.

Example 1155

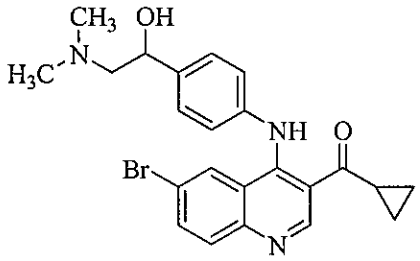
{6-Bromo-4-[1-(trans-4-(methylamino)cyclohexyl)-1*H*-pyrazol-4-ylamino]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (310 mg, 1.00 mmol) was reacted with 1-[trans-4-(methylamino)cyclohexyl]-1*H*-pyrazol-4-amine (388 mg, 2.00 mmol) to afford the desired product (65 mg, 14%) as an orange solid: ESI MS *m/z* 468 $[C_{23}H_{26}BrN_5O + H]^+$.

Example 1156

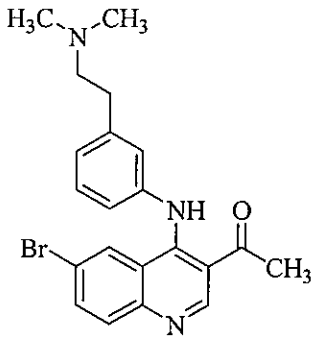
{6-Bromo-4-[4-(2-(dimethylamino)-1-hydroxyethyl)phenylamino]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (240 mg, 0.770 mmol) was reacted with 1-(4-aminophenyl)-2-(dimethylamino)ethanol (139 mg, 0.770 mmol) to afford the desired product (187 mg, 53%) as a yellow solid: ESI MS *m/z* 454 $[C_{23}H_{24}BrN_3O_2 + H]^+$.

Example 1157

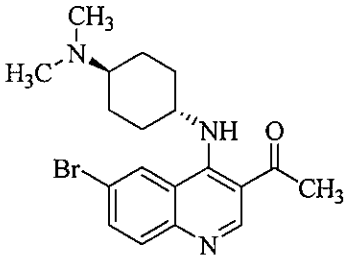
1-{6-Bromo-4-[3-(2-(dimethylamino)ethyl)phenylamino]quinolin-3-yl}ethanone



Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (340 mg, 1.20 mmol) was reacted with 3-(2-(dimethylamino)ethyl)aniline (215 mg, 1.31 mmol) to afford the desired product (360 mg, 50%) as a yellow solid: ESI MS *m/z* 412 $[C_{21}H_{22}BrN_3O + H]^+$.

Example 1158

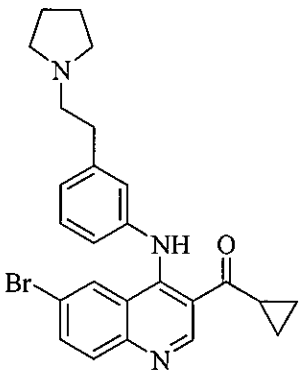
1-{6-Bromo-4-[trans-4-(dimethylamino)cyclohexylamino]quinolin-3-yl}ethanone



Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (250 mg, 0.880 mmol) was reacted with *trans*-$N^1$,$N^1$-dimethylcyclohexane-1,4-diamine hydrochloride (280 mg, 1.32 mmol) to afford the desired product (63 mg, 18%): ESI MS *m/z* 390 $[C_{19}H_{24}BrN_3O + H]^+$.

Example 1159

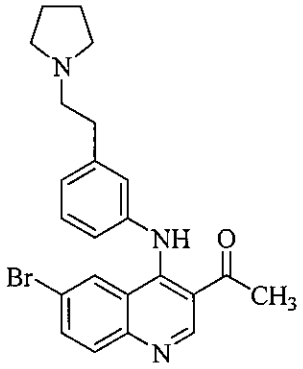
{6-bromo-4-[3-(2-(pyrrolidin-1-yl)ethyl)phenylamino]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (197 mg, 0.635 mmol) was reacted with 3-[2-(pyrrolidin-1-yl)ethyl]aniline (120 mg, 0.635 mmol) to afford the desired product (220 mg, 74%) as a yellow solid: ESI MS *m/z* 464 [$C_{25}H_{26}BrN_3O$ + H]$^+$.

Example 1160

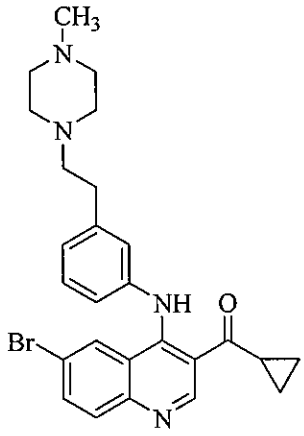
1-{6-bromo-4-[3-(2-(pyrrolidin-1-yl)ethyl)phenylamino]quinolin-3-yl}ethanone



Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (180 mg, 0.635 mmol) was reacted with 3-[2-(pyrrolidin-1-yl)ethyl]aniline (120 mg, 0.635 mmol) to afford the desired product (198 mg, 71%) as a yellow solid: ESI MS *m/z* 438 [$C_{23}H_{24}BrN_3O$ + H]$^+$.

Example 1161

{6-Bromo-4-[3-(2-(4-methylpiperazin-1-yl)ethyl)phenylamino]quinolin-3-yl}(cyclopropyl)methanone

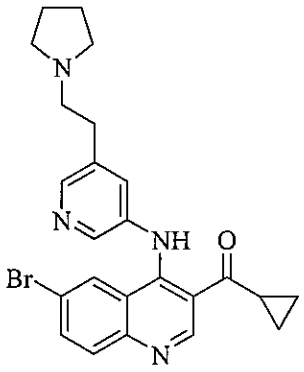


Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (240

mg, 0.77 mmol) was reacted with 3-(2-(4-methylpiperazin-1-yl)ethyl)aniline (170 mg, 0.77 mmol) to afford the desired product (212 mg, 55%) as a yellow solid: ESI MS *m/z* 493 $[C_{26}H_{29}BrN_4O + H]^+$.

Example 1162

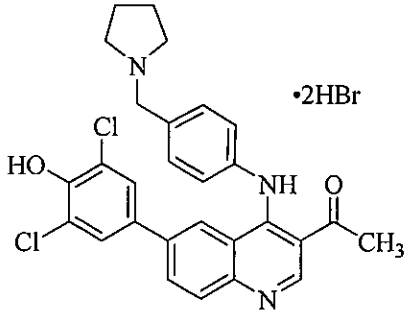
{6-Bromo-4-[5-(2-(pyrrolidin-1-yl)ethyl)pyridin-3-ylamino]quinolin-3-yl} (cyclopropyl)methanone



Following general procedure C, (6-bromo-4-chloroquinolin-3-yl)(cyclopropyl)methanone (262 mg, 0.845 mmol) was reacted with 5-[2-(pyrrolidin-1-yl)ethyl]pyridin-3-amine (161 mg, 0.845 mmol) to afford the desired product (178 mg, 45%) as a white solid: ESI MS *m/z* 465 $[C_{24}H_{25}BrN_4O + H]^+$.

Example 416

1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)phenylamino) quinolin-3-yl)ethanone hydrobromide

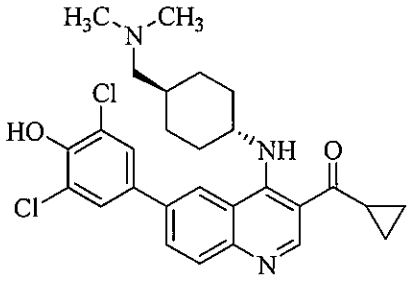


Following general procedure F, 1-(6-bromo-4-(4-(pyrrolidin-1-ylmethyl)phenylamino)quinoline -3-yl)ethanone (4.0 g, 9.42 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (4.0 g, 14.13 mmol) to obtain the free base. The purified product was suspended in dichloromethane / methanol (1:1, 40 mL) and HBr gas was bubbled through the suspension until a solution formed. The solution was concentrated to dryness and the resultant solid was triturated with diethyl ether. The mixture was filtered, washed with diethyl ether, and

dried to obtain desired product (3.37 g, 52% over two steps) as a yellow solid: $^1$H NMR (300 MHz, DMSO-$d_6$) δ 12.03 (br s, 1H), 10.59 (br s, 1H), 10.08 (br s, 1H), 9.27 (s, 1H), 8.43 – 8.27 (m, 2H), 8.112 (d, J = 8.8 Hz, 1H), 7.72 (d, J = 8.1 Hz, 2H), 7.59 – 7.47 (m, 4H), 4.47 (d, J = 5.3 Hz, 2H), 3.40 – 3.24 (m, 2H), 3.19 – 3.02 (m, 2H), 2.56 (s, 3H), 2.13 – 1.81 (m, 4H); APCI MS *m/z* 506 $[C_{28}H_{25}Cl_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 4.97 min.

Example 324

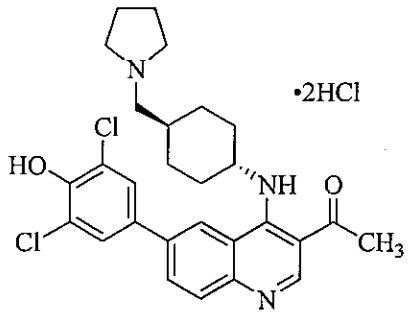
cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(trans-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)methanone



Following general procedure F except 2M $Na_2CO_3$ was used instead of 1M $Cs_2CO_3$, (6-bromo-4-(trans-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone (4.29 g, 9.96 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (4.32 g, 14.95 mmol) to afford the desired product (3.0 g, 59%) as a yellow solid: $^1$H NMR (300 MHz, DMSO-$d_6$) δ 9.77 (br s, 1H), 9.05 (s, 1H), 8.36 (d, J = 2.1 Hz, 1H), 8.03 (dd, J = 8.7, 1.8 Hz, 1H), 7.85 (d, J = 8.7 Hz, 1H), 7.73 (s, 2H), 3.96 – 3.86 (m, 1H), 2.97 – 2.82 (m, 1H), 2.19 (s, 6H), 2.17 – 2.06 (m, 4H), 1.86 (d, J = 12.7 Hz, 2H), 1.60 – 1.36 (m, 3H), 1.15 – 0.91 (m, 6H); APCI MS *m/z* 512 $[C_{28}H_{31}Cl_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 5.15 min.

Example 768

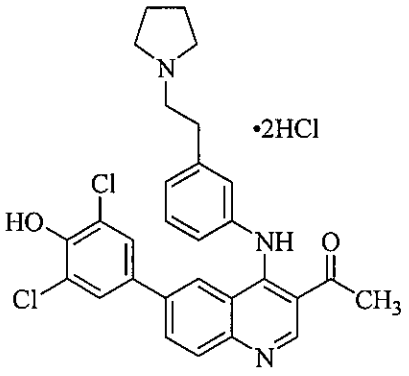
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(trans-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride



Following general procedure F, 1-(6-bromo-4-(trans-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone (6.0 g, 14.0 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (4.4 g, 15.0 mmol) to obtain the free base. The purified product was suspended in dichloromethane / methanol (1:1, 200 mL) after which HCl (35 mL, 1.25 M in methanol) was added to form a solution. The solution was concentrated to dryness and the resultant solid was triturated with dichloromethane. The mixture was filtered, washed with dichloromethane, and dried to obtain desired product (4.9 g, 60% over two steps) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.10 (s, 1H), 8.47 (d, J = 2.1 Hz, 1H), 8.26 (dd, J = 8.8, 1.8 Hz, 1H), 7.98 (d, J = 8.8 Hz, 1H), 7.73 (s, 2H), 4.55 – 4.45 (m, 1H), 3.70 (br s, 2H), 3.20 – 3.04 (m, 4H), 2.74 (s, 3H), 2.45 (d, J = 12.6 Hz, 2H), 2.17 – 1.94 (m, 7H), 1.89 – 1.70 (m, , 2H), 1.46 – 1.27 (m, 2H); APCI MS *m/z* 512 $[C_{28}H_{31}Cl_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 8.69 min.

Example 802

1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)ethanone hydrochloride

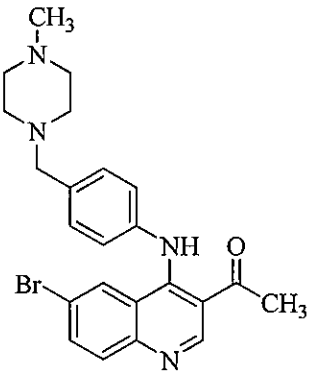


Following general procedure F, 1-(6-bromo-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino) quinolin-3-yl)ethanone (5.7 g, 13.0 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl -1,3,2-dioxaborolan-2-yl)phenol (4.1 g, 14.2 mmol) to obtain the free base. The purified product

was suspended in dichloromethane / methanol (1:1, 100 mL) after which HCl (40 mL, 1.25 M in methanol) was added to form a solution. The solution was concentrated to dryness and the resultant solid was triturated with acetonitrile. The mixture was filtered, washed with acetonitrile, and dried to obtain desired product (5.6 g, 73% over two steps) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.31 (s, 1H), 8.19 (dd, J = 8.8, 2.0 Hz, 1H), 7.99 (d, J = 8.8 Hz, 1H), 7.75 – 7.55 (m, 3H), 7.53 (s, 1H), 7.43 – 7.34 (m, 1H), 7.10 (s, 2H), 3.66 (br s, 2H), 3.48 – 3.36 (m, 2H), 3.24 – 3.06 (m, 4H), 2.82 (s, 3H), 2.07 (br s, 4H); APCI MS *m/z* 520 $[C_{29}H_{27}Cl_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 9.17 min.

Example 1163

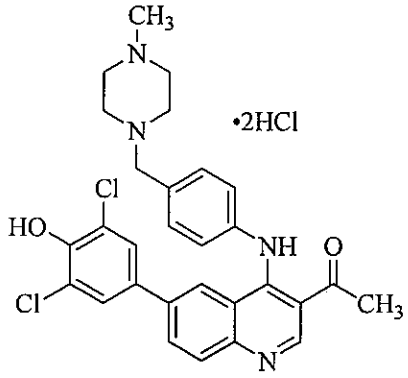
1-(6-bromo-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)ethanone




Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (5.0 g, 18.0 mmol) was reacted with 4-((4-methylpiperazin-1-yl)methyl)aniline (4.0 g, 19.0 mmol) to afford the desired product (6.7 g, 82%) as a yellow foam: $^1$H NMR (300 MHz, $CDCl_3$) $\delta$ 11.96 (s, 1H), 9.11 (s, 1H), 7.85 – 7.72 (m, 1H), 7.71 – 7.57 (m, 2H), 7.40 – 7.29 (m, 2H), 7.14 – 7.02 (m, 2H), 3.53 (s, 2H), 2.77 (s, 3H), 2.58 – 2.44 (br s, 8H), 2.30 (s, 3H).

Example 655

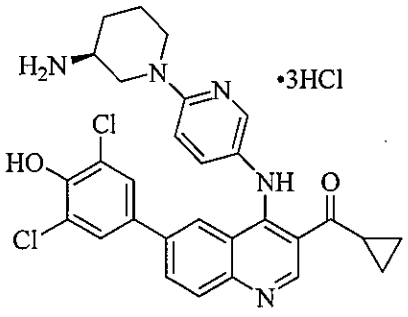
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)ethanone hydrochloride



Following general procedure F, 1-(6-bromo-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino) quinolin-3-yl)ethanone (6.0 g, 13.0 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5 -tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (4.2 g, 15.0 mmol) to obtain the free base. The purified product was suspended in dichloromethane / methanol (1:1, 200 mL) after which HCl (36 mL, 1.25 M in methanol) was added to form a solution. The solution was concentrated to dryness and the resultant solid was triturated with dichloromethane. The mixture was filtered, washed with dichloromethane, and dried to obtain desired product (5.2 g, 66% over two steps) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.30 (s, 1H), 8.15 (dd, J = 8.8, 1.9 Hz, 1H), 7.99 (d, J = 8.8 Hz, 1H), 7.73 (d, J = 2.0 Hz, 1H), 7.62 (d, J = 8.0 Hz, 2H), 7.46 (d, J = 8.0 Hz, 2H), 7.10 (s, 2H), 3.81 (s, 2H), 3.55 – 3.31 (m, 2H), 3.29 – 2.89 (m, 4H), 2.89 (s, 3H), 2.82 (s, 3H), 2.80 – 2.35 (m, 2H); APCI MS *m/z* 535 $[C_{29}H_{28}Cl_2N_4O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 7.89 min.

Example 647

(S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride

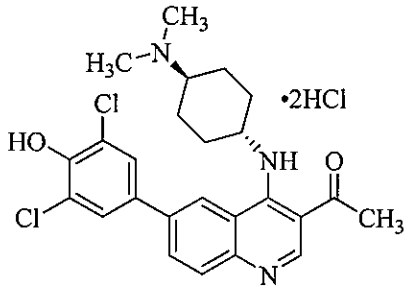


(*S*)-*tert*-Butyl 1-(5-(3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (5.7 g, 8.8 mmol) was reacted HCl (100 mL, 1.25M in methanol). The mixture was heated to 40 °C for 16 h. The reaction was diluted with ethyl acetate (100 mL). The resultant solid was filtered and washed with ethyl acetate. The solids

were dissolved in a mixture of water, methanol, and acetonitrile. The solution was concentrated by lyophilization to obtain desired product (4.7g, 81%) as an orange solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.36 (s, 1H), 8.32 – 8.22 (m, 3H), 8.08 (d, J = 9.2 Hz, 1H), 7.90 (dd, J = 9.5, 2.6 Hz, 1H), 7.48 (s, 2H), 7.36 (d, J = 9.5 Hz, 1H), 4.51 – 4.45 (m, 1H), 4.11 – 4.03 (m, 1H), 3.53 – 3.36 (m, 3H), 2.87 – 2.78 (m, 1H), 2.27 – 2.20 (m, 1H), 2.06 – 1.97 (m, 1H), 1.85 – 1.72 (m, 2H), 1.25 – 1.10 (m, 4H); ESI MS *m/z* 548 $[C_{29}H_{27}Cl_2N_5O_2 + H]^+$; HPLC 98.8% (AUC), $t_R$ = 9.51 min.

Example 766

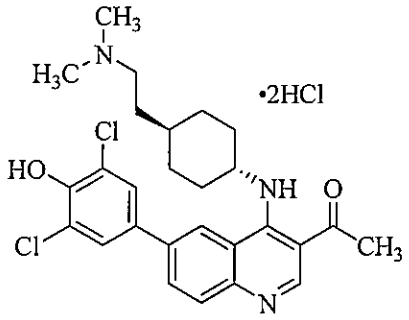
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(trans-4-(dimethylamino)cyclohexylamino)quinolin-3-yl) ethanone hydrochloride




Following general procedure F, 1-(6-bromo-4-(trans-4-(dimethylamino)cyclohexylamino) quinolin-3-yl)ethanone (4.48 g, 11.0 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (3.65 g, 13.0 mmol) to obtain the free base. The purified product was suspended in dichloromethane / methanol (2:1, 325 mL) after which HCl (115 mL, 1.25 M in methanol) was added to from a solution. The solution was concentrated to ~100 mL and the resultant solid was filtered, washed with dichloromethane, and dried to obtain desired product (4.2 g, 70% over two steps) as a yellow solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.13 (s, 1H), 8.48 (br s, 1H), 8.30 (dd, *J* = 8.8, 1.8 Hz, 1H), 8.01 (d, *J* = 8.7 Hz, 1H), 7.77 (s, 2H), 4.62 (br s, 1H), 3.50 – 3.46 (m, 1H), 2.91 (s, 6H), 2.75 (s, 3H), 2.58 – 2.54 (m, 2H), 2.35 – 2.29 (m, 2H), 1.92 – 1.82 (m, 4H); ESI MS *m/z* 472 $[C_{25}H_{27}Cl_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 6.41 min.

Example 740

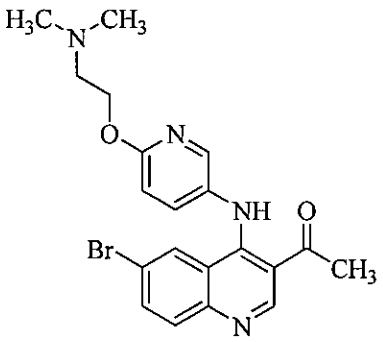
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(trans-4-(2-(dimethylamino)ethyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride



Following general procedure F, 1-(6-bromo-4-(trans-4-(2-(dimethylamino)ethyl)cyclohexyl amino)quinolin-3-yl)ethanone (4.8 g, 11.5 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (3.8 g, 13.1 mmol) to obtain the free base. The purified product was suspended in methanol (100 mL) after which HCl (125 mL, 1.25 M in methanol) was added to form a solution. The solution was concentrated to ~50 mL and the resultant solid was filtered, washed with methanol, and dried to obtain desired product (3.8 g, 58% over two steps) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.10 (s, 1H), 8.50 (s, 1H), 8.27 (dd, J = 8.8, 1.8 Hz, 1H), 7.97 (d, J = 8.8 Hz, 1H), 7.73 (s, 2H), 4.55 – 4.48 (m, 1H), 3.27 – 3.15 (m, 2H), 2.90 (s, 6H), 2.74 (s, 3H), 2.42 (br d, J = 12.3 Hz, 2H), 2.04 (br d, J = 12.9 Hz, 2H), 1.84 – 1.65 (m, 4H), 1.63 – 1.56 (m, 1H), 1.34 (q, J = 12.3 Hz, 2H); ESI MS *m/z* 500 [$C_{27}H_{31}Cl_2N_3O_2$ + H]$^+$; HPLC >99% (AUC), $t_R$ = 6.87 min.

Example 1164

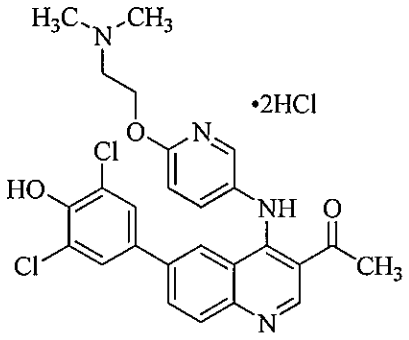
1-(6-bromo-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)ethanone



Following general procedure C, 1-(6-bromo-4-chloroquinolin-3-yl)ethanone (5.0 g, 18.0 mmol) was reacted with 6-(2-(dimethylamino)ethoxy)pyridin-3-amine (3.5 g, 19.0 mmol) to afford the desired product (5.7 g, 82%) as a yellow solid: $^1$H NMR (300 MHz, $CDCl_3$) $\delta$ 11.90 (s, 1H), 9.12 (s, 1H), 8.08 – 7.98 (m, 1H), 7.87 – 7.76 (m, 1H), 7.74 – 7.63 (m, 2H), 7.33 (dd, J = 8.8, 2.8 Hz, 1H), 6.83 (d, J = 8.8 Hz, 1H), 4.44 (t, J = 5.5 Hz, 2H), 2.78 (s, 3H), 2.74 (t, J = 8.8 Hz, 2H), 2.36 (s, 6H).

Example 852

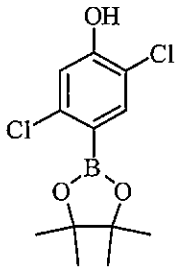
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinoli n-3-yl)ethanone hydrochloride



Following general procedure F, 1-(6-bromo-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino) quinolin-3-yl)ethanone (5.0 g, 12.0 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5 -tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (3.7 g, 13.0 mmol) to obtain the free base. The purified product was suspended in dichloromethane / methanol (1:1, 300 mL) after which HCl (30 mL, 1.25 M in methanol) was added to form a solution. The solution was concentrated to dryness to obtain desired product (5.2 g, 74% over two steps) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.27 (s, 1H), 8.29 (d, J = 2.9 Hz, 1H), 8.20 – 8.10 (m, 1H), 8.06 – 7.96 (m, 1H), 7.87 – 7.77 (m, 2H), 7.20 (s, 2H), 7.17 – 7.08 (m, 1H), 4.81 – 4.71 (m, 2H), 3.64 (t, J = 5.1 Hz, 2H), 3.01 (s, 6H), 2.80 (s, 3H); ESI MS *m/z* 511 $[C_{26}H_{24}Cl_2N_4O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 6.86 min.

Example 443

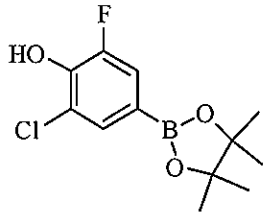
2,5-Dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol



Following general procedure E, 4-bromo-2,5-dichlorophenol (290 mg, 1.2 mmol) was reacted with bis(pinacolato)diboron (305 mg, 1.2 mmol) to afford the desired product (83 mg, 25%) as a waxy solid: ESI MS *m/z* 289 $[C_{12}H_{15}BCl_2O_3 + H]^+$.

Example 444

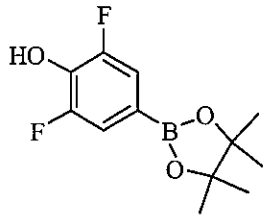
2-Chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol



Following general procedure E, 4-bromo-2-chloro-6-fluorophenol (271 mg, 1.2 mmol) was reacted with bis(pinacolato)diboron (305 mg, 1.2 mmol) to afford the desired product (340 mg, >99%) as a colorless oil: $^1$H NMR (500 MHz, $CDCl_3$) $\delta$ 7.57 (t, $J$ = 1.3 Hz, 1H), 7.42 (dd, $J$ = 10.2, 1.3 Hz, 1H), 1.33 (s, 12H).

Example 445

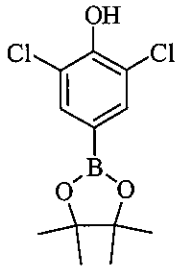
2,6-Difluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol



Following general procedure E, 4-bromo-2,6-difluorophenol (251 mg, 1.20 mmol) was reacted with bis(pinacolato)diboron (338 mg, 1.32 mmol) to afford the desired product (340 mg, >99%) as a white solid: ESI MS $m/z$ 257 $[C_{12}H_{15}BF_2O_3 + H]^+$.

Example 446

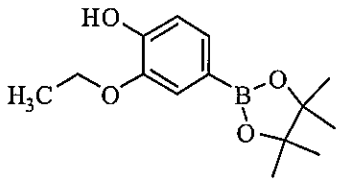
2,6-Dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol



Following general procedure E, 4-bromo-2,6-dichlorophenol (290 mg, 1.20 mmol) was reacted with bis(pinacolato)diboron (305 mg, 1.20 mmol) to afford the desired product (298 mg, 86%): ESI MS $m/z$ 289 $[C_{12}H_{15}BCl_2O_3 + H]^+$.

Example 447

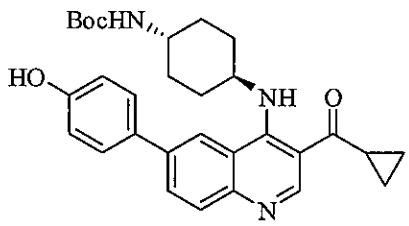
2-Ethoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol



Following general procedure E, 4-bromo-2-ethoxyphenol (1.26 g, 5.80 mmol) was reacted with bis(pinacolato)diboron (1.77 g, 6.96 mmol) to afford the desired product (580 mg, 38%) as a white solid: $^1$H NMR (500 MHz, $CDCl_3$) $\delta$ 7.36 (dd, $J$ = 7.8, 1.2 Hz, 1H), 6.92 (d, $J$ = 7.9 Hz, 1H), 5.91 (s, 1H), 4.16 (q, $J$ = 7.0 Hz, 2H), 1.44 (t, $J$ = 7.0 Hz, 3H), 1.33 (s, 12H).

Example 448

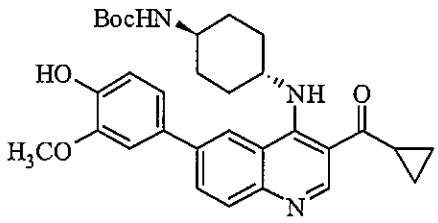
*tert*-Butyl *trans*-4-[3-(cyclopropanecarbonyl)-6-(4-hydroxyphenyl)quinolin-4-ylamino]cyclohexyl carbamate



Following general procedure D, *tert*-butyl *trans*-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexylcarbamate (90 mg, 0.183 mmol) was reacted with 4-hydroxyphenyl boronic acid (38 mg, 0.275 mmol) to afford the desired product (48 mg, 52%) as an off-white solid: ESI MS *m/z* 502 $[C_{30}H_{35}N_3O_4 + H]^+$.

Example 449

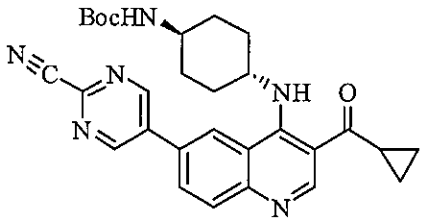
*tert*-Butyl *trans*-4-[3-(cyclopropanecarbonyl)-6-(4-hydroxy-3-methoxyphenyl) quinolin-4-ylamino]cyclohexylcarbamate



Following general procedure D, *tert*-butyl *trans*-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexylcarbamate (49 mg, 0.100 mmol) was reacted with 2-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (50 mg, 0.200 mmol) to afford the desired product (45 mg, 85%) as an off-white solid: ESI MS *m/z* 532 $[C_{31}H_{37}N_3O_5 + H]^+$.

Example 450

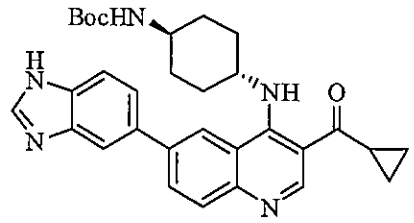
*tert*-Butyl *trans*-4-[6-(2-cyanopyrimidin-5-yl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino] cyclohexylcarbamate



Following general procedure D, *tert*-butyl *trans*-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin -4-ylamino]cyclohexylcarbamate (49 mg, 0.100 mmol) was reacted with 5-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)pyrimidine-2-carbonitrile (46 mg, 0.200 mmol) to afford the crude product (52 mg): ESI MS *m/z* 513 $[C_{29}H_{32}N_6O_3 + H]^+$.

Example 451

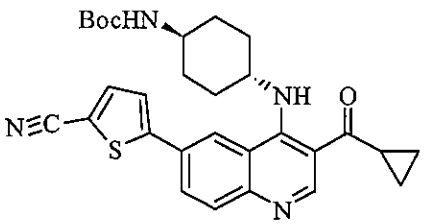
*tert*-Butyl *trans*-4-[6-(1*H*-benzo[*d*]imidazol-5-yl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino] cyclohexylcarbamate



Following general procedure D, *tert*-butyl [*trans*-4-(6-bromo-3-(cyclopropanecarbonyl)quinolin -4-ylamino]cyclohexylcarbamate (49 mg, 0.100 mmol) was reacted with 6-(4,4,5,5-tetramethyl -1,3,2-dioxaborolan-2-yl)-1*H*-benzo[*d*]imidazole (49 mg, 0.200 mmol) to afford the desired product (45.3 mg, 86%) as an off-white solid: ESI MS *m/z* 526 $[C_{31}H_{35}N_5O_3 + H]^+$.

Example 452

*tert*-Butyl *trans*-4-[6-(5-cyanothiophen-2-yl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino] cyclohexylcarbamate



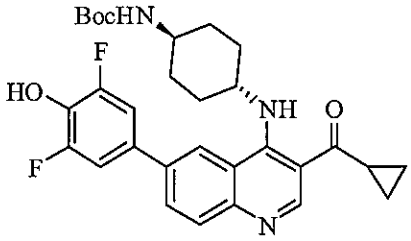
Following general procedure D, *tert*-butyl *trans*-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexylcarbamate (49 mg, 0.100 mmol) was reacted with 5-cyanothiophen-2-ylboronic acid (31 mg, 0.200 mmol) to afford the desired product (24 mg,

47%) as a brown solid: ESI MS *m/z* 517 $[C_{29}H_{32}N_4O_3S + H]^+$.

Example 453

*tert*-Butyl

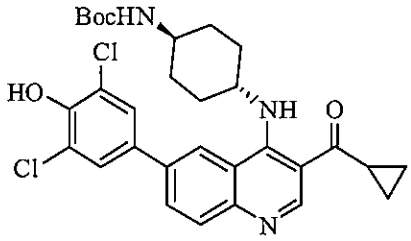
*trans*-4-[3-(Cyclopropanecarbonyl)-6-(3,5-difluoro-4-hydroxyphenyl)quinolin-4-ylamino] cyclohexylcarbamate




Following general procedure D, *tert*-butyl *trans*-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin -4-ylamino]cyclohexylcarbamate (49 mg, 0.100 mmol) was reacted with 2,6-difluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (50 mg, 0.196 mmol) to afford the desired product (26.2 mg, 49%) as an off-white solid: ESI MS *m/z* 538 $[C_{30}H_{33}F_2N_3O_4 + H]^+$.

Example 454

*tert*-Butyl *trans*-4-[3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-4-ylamino]cyclohexylcarbamate

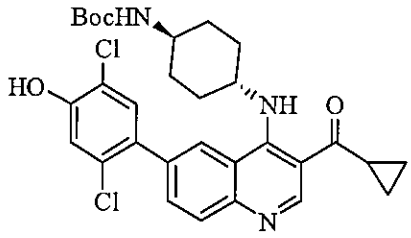



Following general procedure D, *tert*-butyl *trans*-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4 -ylamino]cyclohexylcarbamate (43 mg, 0.088 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (38 mg, 0.132 mmol) to afford the desired product (25 mg, 51%) as an off-white solid: ESI MS *m/z* 570 $[C_{30}H_{33}Cl_2N_3O_4 + H]^+$.

Example 455

*tert*-Butyl

*trans*-4-[3-(cyclopropanecarbonyl)-6-(2,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino] cyclohexylcarbamate

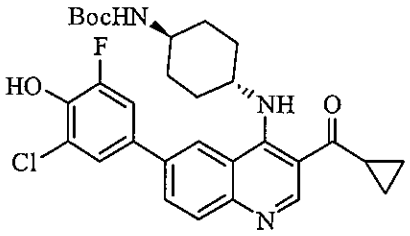



Following general procedure D, *tert*-butyl *trans*-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexylcarbamate (49 mg, 0.100 mmol) was reacted with 2,5-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (85 mg, 0.300 mmol) to afford the crude product (57 mg) as a white solid: ESI MS *m/z* 570 $[C_{30}H_{33}Cl_2N_3O_4 + H]^+$.

Example 456

*tert*-Butyl

*trans*-4-[6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino] cyclohexylcarbamate

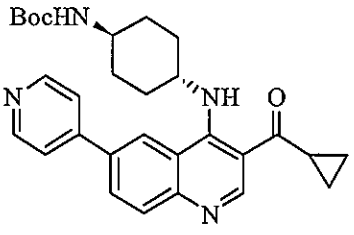



Following general procedure D, *tert*-butyl *trans*-4-[6-bromo-3-(cyclopropanecarbonyl)quinoline -4-ylamino]cyclohexylcarbamate (49 mg, 0.100 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (130 mg, 0.478 mmol) to afford the desired product (20 mg, 36%) as an off white solid: ESI MS *m/z* 554 $[C_{30}H_{33}ClFN_3O_4 + H]^+$.

Example 457

*tert*-Butyl

*trans*-4-[3-(cyclopropanecarbonyl)-6-(pyridin-4-yl)quinolin-4-ylamino]cyclohexylcarbamate

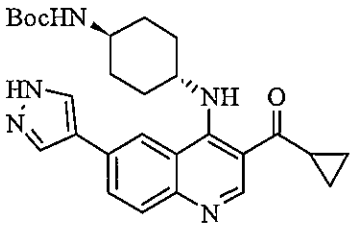



Following general procedure D, *tert*-butyl *trans*-4-(6-bromo-3-isobutyrylquinolin-4-ylamino) cyclohexylcarbamate (49 mg, 0.100 mmol) was reacted with pyridin-4-ylboronic acid (25 mg, 0.200 mmol) to afford the crude product (50 mg) as an off-white solid: ESI MS *m/z* 487 $[C_{29}H_{34}N_4O_3 + H]^+$.

Example 458

*tert*-Butyl

*trans*-4-[3-(cyclopropanecarbonyl)-6-(1*H*-pyrazol-4-yl)quinolin-4-ylamino]cyclohexylcarbamate

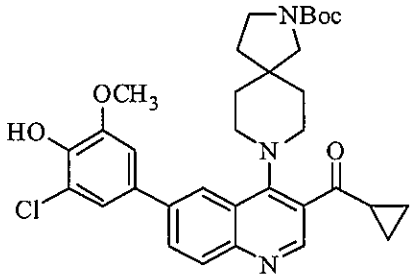



Following general procedure D, *tert*-butyl *trans*-4-(6-bromo-3-isobutyrylquinolin-4-ylamino) cyclohexylcarbamate (49 mg, 0.100 mmol) was reacted with 4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-1*H*-pyrazole (39 mg, 0.200 mmol) to afford the desired product (17 mg, 36%) as an off-white solid: ESI MS *m/z* 476 $[C_{27}H_{33}N_5O_3 + H]^+$.

Example 459

*tert*-Butyl

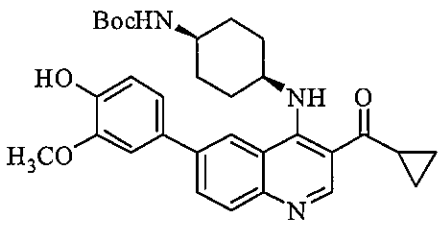
8-[6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-yl]-2,8-diazaspiro[4,5]decane-2-carboxylate




Following general procedure F, *tert*-butyl 8-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl]-2,8-diazaspiro[4,5]decane-2-carboxylate (50 mg, 0.097 mmol) was reacted with 3-chloro-4-hydroxy-5-methoxyphenylboronic acid (41 mg, 0.161 mmol) to afford the crude product (110 mg) as a brown oil: ESI MS *m/z* 593 $[C_{33}H_{38}ClN_3O_5 + H]^+$.

Example 460

*tert*-Butyl *cis*-4-[3-(cyclopropanecarbonyl)-6-(4-hydroxy-3-methoxyphenyl)quinolin-4-ylamino] cyclohexylcarbamate

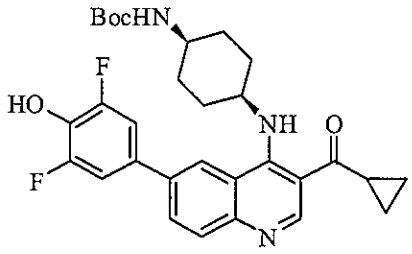



Following general procedure F, *tert*-butyl *cis*-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4

-ylamino]cyclohexylcarbamate (40 mg, 0.082 mmol) was reacted with 2-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (31 mg, 0.124 mmol) to afford the crude product (43 mg) as a yellow solid: ESI MS *m/z* 532 $[C_{31}H_{37}N_3O_5 + H]^+$.

Example 461

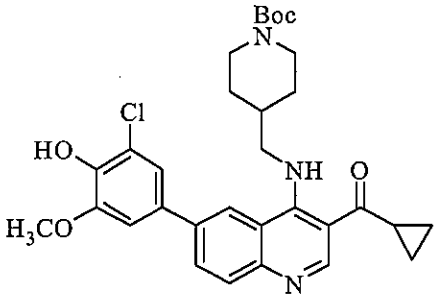
*tert*-Butyl *cis*-4-[3-(cyclopropanecarbonyl)-6-(3,5-difluoro-4-hydroxyphenyl) quinolin-4-ylamino]cyclohexylcarbamate




Following general procedure F, *tert*-butyl *cis*-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexylcarbamate (54 mg, 0.110 mmol) was reacted with 2,6-difluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (34 mg, 0.132 mmol) to afford the desired product (51 mg, 86%) as a light yellow solid: ESI MS *m/z* 538 $[C_{30}H_{33}F_2N_3O_4 + H]^+$.

Example 462

*tert*-Butyl 4-{[6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino] methyl}piperidine-1-carboxylate

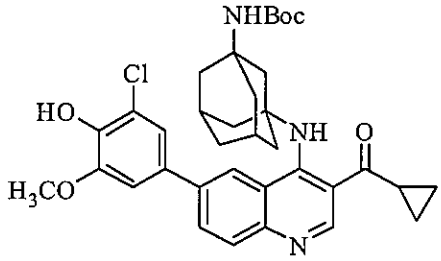



Following general procedure F, *tert*-butyl 4-{[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]methyl}piperidine-1-carboxylate (55 mg, 0.110 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (46 mg, 0.165 mmol) to afford the desired product (27 mg, 43%) as a yellow solid: ESI MS *m/z* 567 $[C_{31}H_{36}ClN_3O_5 + H]^+$.

Example 463

*tert*-Butyl 4-[3-(cyclopropanecarbonyl)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)

quinolin-4-ylamino]adamantylcarbamate

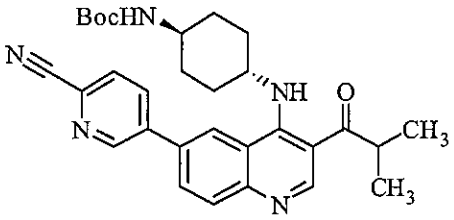



Following general procedure F, tert-butyl 4-[6-bromo-3-(cyclopropanecarbonyl)quinolin -4-ylamino]adamantylcarbamate (57 mg, 0.100 mmol) was reacted with 2-chloro-6-methoxy- 4-(4,4,5,5 -tetramethyl-1,3,2-dioxaborolan- 2-yl)phenol (43 mg, 0.150 mmol) to afford the crude product (84 mg) as a brown oil: ESI MS *m/z* 619 $[C_{35}H_{40}ClN_3O_5 + H]^+$.

Example 464

*tert*-Butyl

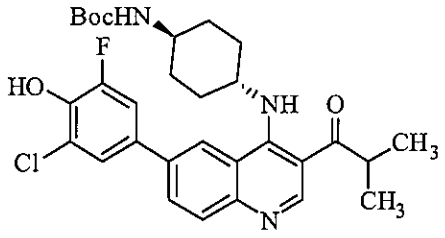
*trans*-4-[6-(6-cyanopyridin-3-yl)-3-isobutyrylquinolin-4-ylamino]cyclohexylcarbamate




Following general procedure D, *tert*-butyl *trans*-4-(6-bromo-3-isobutyrylquinolin-4-ylamino) cyclohexylcarbamate (47 mg, 0.093 mmol) was reacted with 5-(4,4,5,5-tetramethyl -1,3,2-dioxaborolan-2-yl)picolinonitrile (26 mg, 0.200 mmol) to afford the crude product (47 mg) as a yellow solid: ESI MS *m/z* 514 $[C_{30}H_{35}N_5O_3 + H]^+$.

Example 465

*tert*-Butyl *trans*-4-[6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-isobutyrylquinolin-4-ylamino] cyclohexylcarbamate

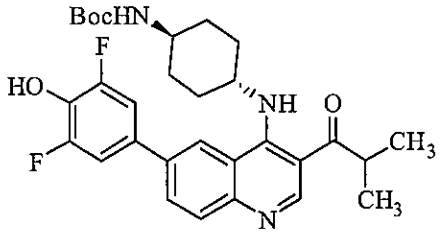



Following general procedure D, *tert*-butyl *trans*-4-(6-bromo-3-isobutyrylquinolin-4-ylamino) cyclohexylcarbamate (49 mg, 0.100 mmol) was reacted with 2-chloro-6-fluoro- 4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (102 mg, 0.375 mmol) to afford the crude product (56 mg) as an off-white solid: ESI MS *m/z* 556 $[C_{30}H_{35}ClFN_3O_4 + H]^+$.

Example 466

*tert*-Butyl

*trans*-4-[6-(3,5-difluoro-4-hydroxyphenyl)-3-isobutyrylquinolin-4-ylamino]cyclohexylcarbamate

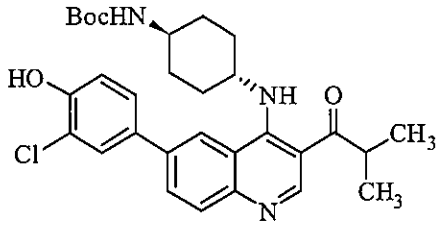



Following general procedure D, *tert*-butyl *trans*-4-(6-bromo-3-isobutyrylquinolin-4-ylamino) cyclohexylcarbamate (49 mg, 0.100 mmol) was reacted with 2,6-difluoro-4-(4,4,5,5 -tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (58 mg, 0.227 mmol) to afford the crude product (64 mg) as an off-white solid: ESI MS *m/z* 540 $[C_{30}H_{35}F_2N_3O_4 + H]^+$.

Example 467

*tert*-Butyl

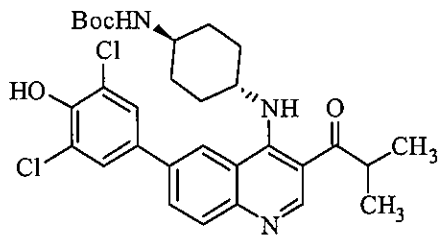
*trans*-4-[6-(3-chloro-4-hydroxyphenyl)-3-isobutyrylquinolin-4-ylamino]cyclohexylcarbamate




Following general procedure D, *tert*-butyl *trans*-4-(6-bromo-3-isobutyrylquinolin-4-ylamino) cyclohexylcarbamate (49 mg, 0.100 mmol) was reacted with 3-chloro-4-hydroxyphenylboronic acid (34 mg, 0.200 mmol) to afford the desired product (39 mg, 72%) as an off-white solid: ESI MS *m/z* 538 $[C_{30}H_{36}ClN_3O_4 + H]^+$.

Example 468

*tert*-Butyl *trans*-4-[6-(3,5-dichloro-4-hydroxyphenyl)-3-isobutyrylquinolin-4-ylamino] cyclohexylcarbamate

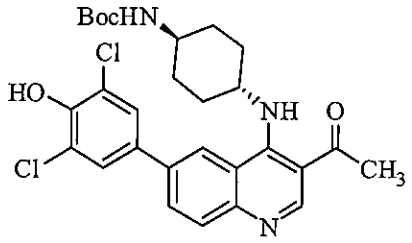



Following general procedure D, *tert*-butyl *trans*-4-(6-bromo-3-isobutyrylquinolin-4-ylamino)cyclohexylcarbamate (49 mg, 0.100 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-

tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (73 mg, 0.253 mmol) to afford the crude product (60 mg) as an off-white solid: ESI MS *m/z* 572 $[C_{30}H_{35}Cl_2N_3O_4 + H]^+$.

Example 469

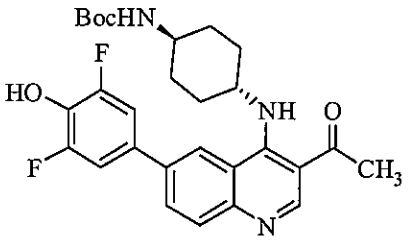
*tert*-Butyl *trans*-4-[3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino] cyclohexylcarbamate




Following general procedure D, *tert*-butyl *trans*-4-(3-acetyl-6-bromoquinolin -4-ylamino)cyclohexylcarbamate (40 mg, 0.087 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (50 mg, 0.195 mmol) to afford the crude product (46 mg) as a yellow solid: ESI MS *m/z* 544 $[C_{28}H_{31}Cl_2N_3O_4 + H]^+$.

Example 470

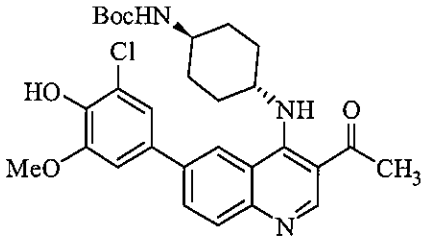
*tert*-Butyl *trans*-4-[3-acetyl-6-(3,5-difluoro-4-hydroxyphenyl)quinolin-4-ylamino]cyclohexylcarbamate




Following general procedure D, *tert*-butyl *trans*-4-(3-acetyl-6-bromoquinolin-4-ylamino) cyclohexylcarbamate (47 mg, 0.100 mmol) was reacted with 2,6-difluoro-4-(3,3,4,4 -tetramethylborolan-1-yl)phenol (97 mg, 0.382 mmol) to afford the desired product (30 mg, 59%) as a yellow solid: ESI MS *m/z* 512 $[C_{28}H_{31}F_2N_3O_4 + H]^+$.

Example 471

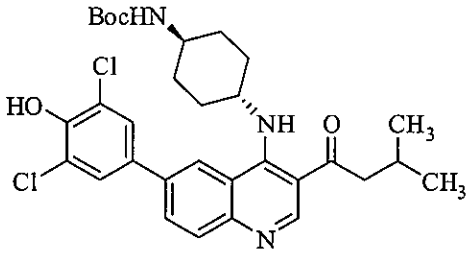
*tert*-Butyl *trans*-4-[3-acetyl-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-4-ylamino]cyclohexylcarba mate




Following general procedure D, *tert*-butyl *trans*-4-(3-acetyl-6-bromoquinolin-4-ylamino) cyclohexylcarbamate (56 mg, 0.200 mmol) was reacted with 2-chloro-6-methoxy-4-(3,3,4,4-tetramethylborolan-1-yl)phenol (47 mg, 0.100 mmol) to afford the desired product (35 mg, 65%) as a yellow solid: ESI MS *m/z* 541 $[C_{29}H_{34}ClN_3O_5 + H]^+$.

Example 472

*tert*-Butyl *trans*-4-[6-(3,5-dichloro-4-hydroxyphenyl)-3-(3-methylbutanoyl)quinolin-4-ylamino] cyclohexylcarbamate

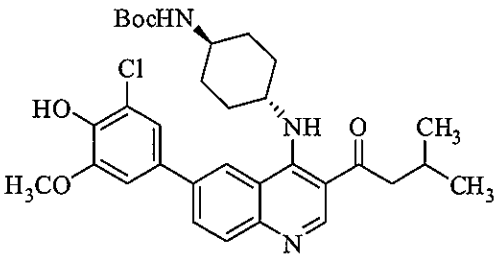



Following general procedure D, 1-{4-[*trans*-4-aminocyclohexylamino]-6-bromoquinolin -3-yl}-3-methylbutan-1-one (50 mg, 0.100 mmol) was reacted with 2,6-dichloro-4-(3,3,4,4 -tetramethylborolan-1-yl)phenol (42 mg, 0.145 mmol) to afford the desired product (36 mg, 61%) as a yellow solid: ESI MS *m/z* 587 $[C_{31}H_{37}Cl_2N_3O_4 + H]^+$.

Example 473

*tert*-Butyl

*trans*-4-[6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-(3-methylbutanoyl)quinolin-4-ylamino] cyclohexylcarbamate

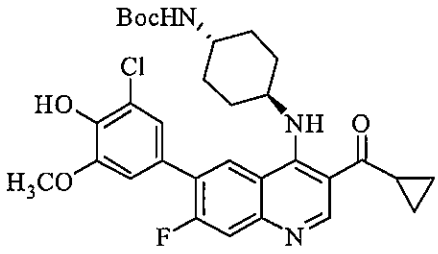



Following general procedure D, 1-{4-[*trans*-4-aminocyclohexylamino]-6-bromoquinolin-3-yl}-3-methylbutan-1-one (50 mg, 0.10 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-

dioxaborolan-2-yl)phenol (56 mg, 0.20 mmol) to afford the desired product (42 mg, 72%) as a yellow solid: $^1$H NMR (500 MHz, $CDCl_3$) 10.81 (d, $J$ = 7.9 Hz, 1 H), 8.99 (s, 1H), 8.22 (s, 1H), 7.97 (d, $J$ = 8.3 Hz, 1H), 7.86 (d, $J$ = 8.3 Hz, 1H), 7.22 (d, $J$ = 1.9 Hz, 1H), 7.03 (d, $J$ = 1.9 Hz, 1H), 5.96–5.91 (m, 1H), 4.00 (s, 3H), 3.52–3.46 (m, 1H), 2.89 (d, $J$ = 6.9 Hz, 2H), 2.34–2.26 (m, 3H), 2.21–2.14 (m, 2H), 1.36–1.20 (m, 4H), 1.02 (d, $J$ = 6.6 Hz, 2H), 1.45 (s, 9H).

Example 474

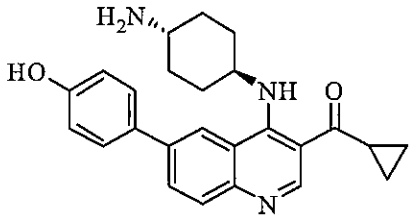
*tert*-Butyl *trans*-4-[6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-(cyclopropanecarbonyl)-7-fluoroquinolin-4-ylamino]




Following general procedure F, {4-[*trans*-4-aminocyclohexylamino]-6-bromo-7-fluoroquinolin-3-yl}(cyclopropyl)methanone (65 mg, 0.128 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (54 mg, 0.192 mmol) to afford the desired product (53 mg, 71%) as a yellow solid: ESI MS *m/z* 585 [$C_{31}H_{35}ClFN_3O_5$ + H]$^+$.

Example 55

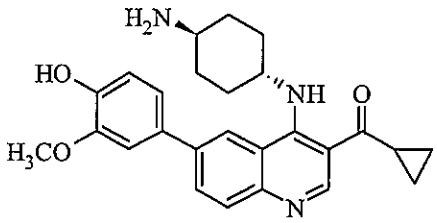
{4-[*trans*-4-Aminocyclohexylamino]-6-(4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl) methanone




Following general procedure A-2, *tert*-butyl *trans*-4-[3-(cyclopropanecarbonyl)-6-(4-hydroxy phenyl)quinolin-4-ylamino]cyclohexylcarbamate (48 mg, 0.096 mmol) was reacted with TFA (0.40 mL) to afford the desired product (17.8 mg, 46%) as an off-white solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.16 (s, 1H), 8.37 (d, $J$ = 1.7 Hz, 1H), 8.07 (dd, $J$ = 8.7, 1.8 Hz, 1H), 7.92 (d, $J$ = 8.7 Hz, 1H), 7.60–7.56 (m, 2H), 6.96–6.92 (m, 2H), 4.29–4.19 (m, 1H), 3.29–3.20 (m, 1H), 2.89–2.80 (m, 1H), 2.37 (d, $J$ = 12.8 Hz, 2H), 2.18 (d, $J$ = 11.7 Hz, 2H), 1.75–1.64 (m, 2H), 1.64–1.53 (m, 2H), 1.23–1.18 (m, 2H), 1.15–1.09 (m, 2H); ESI MS *m/z* 402 [$C_{25}H_{27}N_3O_2$ + H]$^+$; HPLC 98.5% (AUC), $t_R$ = 11.38 min.

Example 81

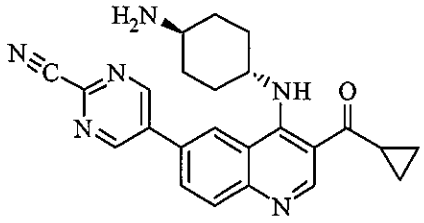
{4-[*trans*-4-Aminocyclohexylamino]-6-(4-hydroxy-3-methoxyphenyl)quinolin-3-yl}(cyclopropyl)methanone



Following general procedure A-2, *tert*-butyl *trans*-4-[3-(cyclopropanecarbonyl)-6-(4-hydroxy-3-methoxyphenyl)quinolin-4-ylamino]cyclohexylcarbamate (45 mg, 0.085 mmol) was reacted with TFA (2 mL) to afford the desired product (11.3 mg, 31%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.12 (s, 1H), 8.36 (s, 1H), 8.04–7.98 (m, 1H), 7.89 (d, $J$ = 8.7 Hz, 1H), 7.26 (d, $J$ = 1.9 Hz, 1H), 7.17 (dd, $J$ = 8.2, 2.0 Hz, 1H), 6.93 (d, $J$ = 8.2 Hz, 1H), 4.14 (s, 1H), 3.97 (s, 3H), 3.20–3.07 (m, 2H), 2.87–2.75 (m, 2H), 2.28 (d, $J$ = 12.2 Hz, 2H), 2.01 (d, $J$ = 11.6 Hz, 2H), 1.64–1.53 (m, 2H), 1.40–1.26 (m, 3H), 1.21–1.14 (m, 2H), 1.12–1.03 (m, 2H); ESI MS *m/z* 432 $[C_{26}H_{29}N_3O_3 + H]^+$; HPLC 98.8% (AUC), $t_R$ = 7.95 min.

Example 96

5-{4-[*trans*-4-Aminocyclohexylamino]-3-(cyclopropanecarbonyl)quinolin-6-yl}pyrimidine-2-carbonitrile

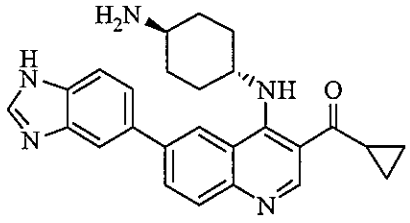


Following general procedure A-2, *tert*-butyl *trans*-4-[6-(2-cyanopyrimidin-5-yl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexylcarbamate (52 mg, 0.100 mmol) was reacted with TFA (1 mL) to afford the desired product (13.7 mg, 33%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.33 (s, 2H), 9.19 (s, 1H), 8.60 (d, $J$ = 1.9 Hz, 1H), 8.20 (dd, $J$ = 8.7, 2.0 Hz, 1H), 8.05 (d, $J$ = 8.7 Hz, 1H), 4.25–4.16 (m, 1H), 3.15–3.07 (m, 1H), 2.90–2.81 (m, 1H), 2.34 (d, $J$ = 13.1 Hz, 2H), 2.12 (d, $J$ = 11.8 Hz, 2H), 1.69–1.59 (m, 2H), 1.55–1.45 (m, 2H), 1.24–1.19 (m, 2H), 1.15–1.10 (m, 2H); ESI MS *m/z* 413 $[C_{24}H_{24}N_6O + H]^+$; HPLC 94.9% (AUC), $t_R$ = 9.67 min.

Example 116

{4-[*trans*-4-Aminocyclohexylamino]-6-(1*H*-benzo[*d*]imidazol-5-yl)quinolin-3-yl}(cyclopropyl)

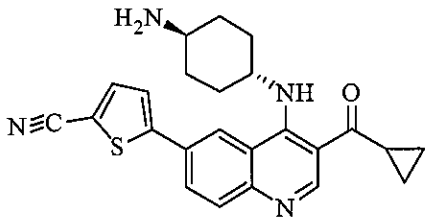
methanone



Following general procedure A-2, *tert*-butyl *trans*-4-[6-(1*H*-benzo[*d*]imidazol-5-yl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexylcarbamate (45.3 mg, 0.086 mmol) was reacted with TFA (2 mL) to afford the desired product (21.3 mg, 58%) as an off-white solid: $^1$H NMR (500 MHz, $CDCl_3$) $\delta$ 9.16 (s, 1H), 8.48 (s, 1H), 8.27 (s, 1H), 8.12 (d, $J$ = 8.7 Hz, 1H), 7.99–7.93 (m, 2H), 7.74 (d, $J$ = 8.4 Hz, 1H), 7.67 (d, $J$ = 8.4 Hz, 1H), 4.29 (s, 1H), 3.17 (s, 1H), 2.93–2.78 (m, 1H), 2.36 (d, $J$ = 11.1 Hz, 2H), 2.15 (d, $J$ = 11.2 Hz, 2H), 1.72–1.53 (m, 4H), 1.23–1.17 (m, 2H), 1.14–1.05 (m, 2H); ESI MS *m/z* 426 $[C_{26}H_{27}N_5O + H]^+$; HPLC 96.0% (AUC), $t_R$ = 8.89 min.

Example 119

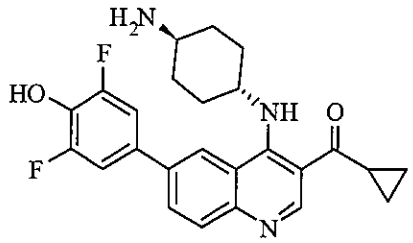
5-{4-[*trans*-4-Aminocyclohexylamino]-3-(cyclopropanecarbonyl)quinolin-6-yl} thiophene-2-carbonitrile



Following general procedure A-2, *tert*-butyl *trans*-4-[6-(5-cyanothiophen-2-yl)-3-(cyclopropane carbonyl)quinolin-4-ylamino]cyclohexylcarbamate (24 mg, 0.047 mmol) was reacted with TFA (2 mL) to afford the desired product (13.2 mg, 32%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.25 (s, 1H), 8.54 (s, 1H), 8.27 (d, $J$ = 8.6 Hz, 1H), 7.98 (d, $J$ = 8.8 Hz, 1H), 7.85 (d, $J$ = 4.0 Hz, 1H), 7.70 (d, $J$ = 4.0 Hz, 1H), 4.28 (s, 1H), 3.28–3.25 (m, 1H), 2.89–2.83 (m, 1H), 2.42 (d, $J$ = 12.8 Hz, 2H), 2.23 (d, $J$ = 12.2 Hz, 2H), 1.80–1.63 (m, 4H), 1.27–1.21 (m, 2H), 1.19–1.13 (m, 2H); ESI MS *m/z* 417 $[C_{24}H_{24}N_4OS + H]^+$; HPLC 95.1% (AUC), $t_R$ = 10.32 min.

Example 156

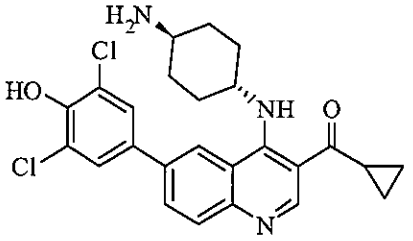
{4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-difluoro-4-hydroxyphenyl)quinolin-3-yl} (cyclopropyl)methanone



Following general procedure A-2, *tert*-butyl *trans*-4-[3-(cyclopropanecarbonyl)-6-(3,5-difluoro-4-hydroxyphenyl)quinolin-4-ylamino]cyclohexylcarbamate (26.2 mg, 0.049 mmol) was reacted with TFA (2 mL) to afford the desired product (17 mg, 79%) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.14 (s, 1H), 8.36 (s, 1H), 8.03 (d, $J$ = 9.5 Hz, 1H), 7.93 (d, $J$ = 8.7 Hz, 1H), 7.35 (d, $J$ = 9.6 Hz, 2H), 4.16 (s, 1H), 3.07 (s, 1H), 2.85 (s, 1H), 2.36 (d, $J$ = 10.7 Hz, 2H), 2.18 (d, $J$ = 14.1 Hz, 2H), 1.75–1.51 (m, 4H), 1.20 (s, 2H), 1.11 (s, 2H); ESI MS *m/z* 438 $[C_{25}H_{25}F_2N_3O_2 + H]^+$; HPLC 98.5% (AUC), $t_R$ = 8.70 min.

Example 157(a)

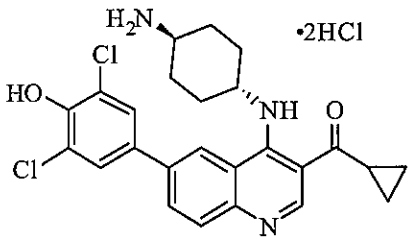
{4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl)methanone



Following general procedure A-2, *tert*-butyl *trans*-4-[3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino]cyclohexylcarbamate (25.7 mg, 0.045 mmol) was reacted with TFA (2 mL) to afford the desired product (8.8 mg, 42%) as a yellow-orange solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.14 (s, 1H), 8.35 (d, $J$ = 1.7 Hz, 1H), 8.04 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.94 (d, $J$ = 8.7 Hz, 1H), 7.69 (s, 2H), 4.14 (s, 1H), 3.29–3.20 (m, 1H), 2.88–2.79 (m, 1H), 2.37 (d, $J$ = 12.5 Hz, 2H), 2.19 (d, $J$ = 11.0 Hz, 2H), 1.76–1.64 (m, 2H), 1.64–1.52 (m, 2H), 1.23–1.18 (m, 2H), 1.15–1.10 (m, 2H); ESI MS *m/z* 470 $[C_{25}H_{25}Cl_2N_3O_2 + H]^+$; HPLC 94.9% (AUC), $t_R$ = 10.74 min.

Example 157(b)

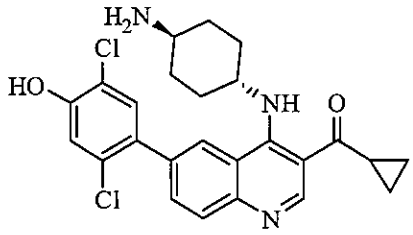
{4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl)methanone dihydrochloride



A solution of {4-[*trans*-4-aminocyclohexylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin -3-yl}(cyclopropyl)methanone (9.1 mg, 0.019 mmol) in methanol (10 mL) was treated with 1 N HCl (2 mL) and the mixture was concentrated and dried to obtain the desired salt (7.7 mg, 77%) as an off-white solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.38 (s, 1H), 8.46 (s, 1H), 8.28 (d, $J$ = 8.5 Hz, 1H), 7.99 (d, $J$ = 8.5 Hz, 1H), 7.75 (bs, 2H), 2.86 (bs, 1H), 2.54–2.48 (m, 2H), 2.25–2.19 (m, 2H),1.87–1.79 (m, 2H), 1.72–1.50 (m, 2H), 1.40–1.18 (m, 4H); ESI MS *m/z* 470 $[C_{25}H_{25}Cl_2N_3O_2 + H]^+$; HPLC 95.0% (AUC), $t_R$ = 10.79 min.

Example 160

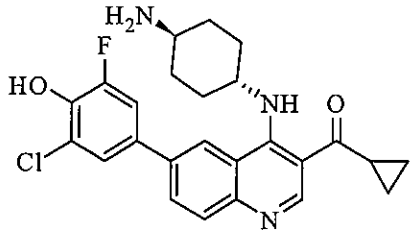
{4-[*trans*-4-Aminocyclohexylamino]-6-(2,5-dichloro-4-hydroxyphenyl)quinolin-3-yl} (cyclopropyl)methanone



Following general procedure A-2, *tert*-butyl *trans*-4-[3-(cyclopropanecarbonyl)-6-(2,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino]cycloh exylcarbamate (57 mg, 0.100 mmol) was reacted with TFA (2 mL) to afford the desired product (10.8 mg, 23%) as an off-white solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.23 (s, 1H), 8.27 (d, $J$ = 1.6 Hz, 1H), 7.94 (d, $J$ = 8.6 Hz, 1H), 7.87 (dd, $J$ = 8.7, 1.7 Hz, 1H), 7.48 (s, 1H), 7.12 (s, 1H), 4.27–4.14 (m, 1H), 3.27–3.18 (m, 1H), 2.95–2.82 (m, 1H), 2.34 (d, $J$ = 11.5 Hz, 2H), 2.14 (d, $J$ = 10.7 Hz, 2H), 1.72–1.59 (m, 2H), 1.59–1.48 (m, 2H), 1.26–1.16 (m, 2H), 1.16–1.07 (m, 2H); ESI MS *m/z* 470 $[C_{25}H_{25}Cl_2N_3O_2 + H]^+$; HPLC 96.4% (AUC), $t_R$ = 10.67 min.

Example 179

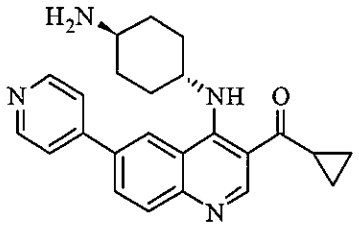
{4-[*trans*-4-Aminocyclohexylamino]-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl} (cyclopropyl)methanone



Following general procedure A-2, *tert*-butyl *trans*-4-[6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexylcarbamate (20 mg, 0.036 mmol) was reacted with TFA (2 mL) to afford the desired product (14.5 mg, 32%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.13 (s, 1H), 8.35 (d, $J$ = 1.8 Hz, 1H), 8.02 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.93 (d, $J$ = 8.7 Hz, 1H), 7.56–7.53 (m, 1H), 7.46 (dd, $J$ = 11.6, 2.2 Hz, 1H), 4.17–4.11 (m, 1H), 3.28–3.19 (m, 1H), 2.88–2.81 (m, 1H), 2.36 (d, $J$ = 12.8 Hz, 2H), 2.18 (d, $J$ = 12.2 Hz, 2H), 1.68 (q, $J$ = 10.6 Hz, 2H), 1.61–1.50 (m, 2H), 1.23–1.17 (m, 2H), 1.14–1.08 (m, 2H); ESI MS *m/z* 454 $[C_{25}H_{25}ClFN_3O_2 + H]^+$; HPLC 99.0% (AUC), $t_R$ = 10.52 min.

Example 212

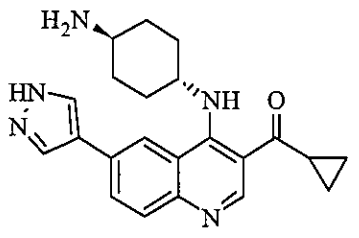
{4-[*trans*-4-Aminocyclohexylamino]-6-(pyridin-4-yl)quinolin-3-yl}(cyclopropyl)methanone



Following general procedure A-2, *tert*-butyl *trans*-4-[3-(cyclopropanecarbonyl)-6-(pyridin-4-yl) quinolin-4-ylamino]cyclohexylcarbamate (50 mg, 0.100 mmol) was reacted with TFA (2 mL) to afford the desired product (14.9 mg, 39%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.26 (s, 1H), 8.70 (dd, $J$ = 4.6, 1.6 Hz, 2H), 8.65 (s, 1H), 8.30 (dd, $J$ = 8.7, 1.7 Hz, 1H), 8.05 (d, $J$ = 8.7 Hz, 1H), 7.87 (dd, $J$ = 4.6, 1.7 Hz, 2H), 4.31 (br s, 1H), 3.28–3.22 (m, 1H), 2.91–2.82 (m, 1H), 2.41 (d, $J$ = 13.2 Hz, 2H), 2.20 (d, $J$ = 11.3 Hz, 2H), 1.82–1.69 (m, 2H), 1.67–1.55 (m, 2H), 1.28–1.23 (m, 2H), 1.20–1.16 (m, 2H); ESI MS *m/z* 387 $[C_{24}H_{26}N_4O + H]^+$; HPLC 95.0% (AUC), $t_R$ = 8.34 min.

Example 213

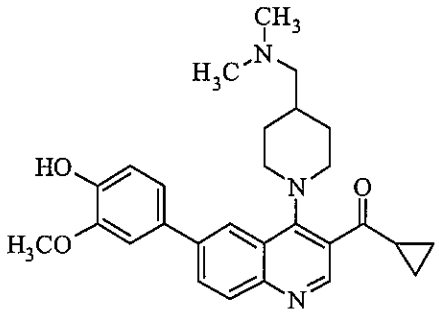
{4-[*trans*-4-Aminocyclohexylamino]-6-(1*H*-pyrazol-4-yl)quinolin-3-yl}(cyclopropyl)methanone



Following general procedure A-2, *tert*-butyl *trans*-4-[3-(cyclopropanecarbonyl)-6-(1*H*-pyrazol-4-yl)quinolin-4-ylamino]cyclohexylcarbamate (17 mg, 0.036 mmol) was reacted with TFA (2 mL) to afford the desired product (6.1 mg, 45%) as an off-white solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.30 (br s, 1H), 8.54 (br s, 1H), 8.29 (dd, $J$ = 8.7, 1.7 Hz, 1H), 8.19 (s, 2H), 7.94 (d, $J$ = 8.8 Hz, 1H), 2.84 (s, 1H), 2.44 (s, 2H), 2.24 (d, $J$ = 11.1 Hz, 2H), 1.89–1.76 (m, 2H), 1.67 (br s, 2H), 1.35–1.19 (m, 6H); ESI MS *m/z* 376 $[C_{22}H_{25}N_5O + H]^+$; HPLC 97.6 % (AUC), $t_R$ = 9.39 min.

Example 133

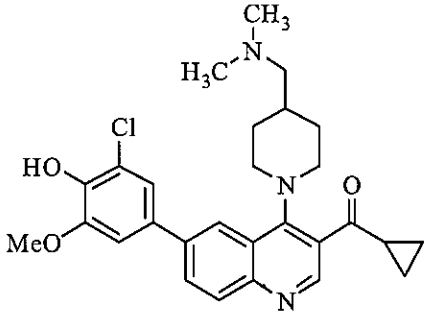
Cyclopropyl[4-{4-[(dimethylamino)methyl]piperidin-1-yl}-6-(4-hydroxy-3-methoxyphenyl) quinolin-3-yl]methanone



Following general procedure D, (6-bromo-4-{4-[(dimethylamino)methyl]piperidin-1-yl}quinolin -3-yl)(cyclopropyl)methanone (47 mg, 0.113 mmol) was reacted with 2-methoxy-4-(4,4,5,5 -tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (55 mg, 0.220 mmol) to afford the desired product (23.5 mg, 45%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.81 (s, 1H), 8.29 (d, $J$ = 1.6 Hz, 1H), 8.10–8.00 (m, 2H), 7.30 (d, $J$ = 2.0 Hz, 1H), 7.22 (dd, $J$ = 8.2, 2.1 Hz, 1H), 6.94 (d, $J$ = 8.2 Hz, 1H), 3.97 (s, 3H), 3.56 (d, $J$ = 12.6 Hz, 2H), 3.27–3.15 (m, 4H), 2.95 (s, 6H), 2.65–2.55 (m, 1H), 2.15-2.25 (m, 1H), 1.95 (d, $J$ = 12.6 Hz, 2H), 1.78–1.67 (m, 2H), 1.38–1.28 (m, 2H), 1.28–1.19 (m, 2H); ESI MS *m/z* 460 $[C_{28}H_{33}N_3O_3 + H]^+$; HPLC 95.9% (AUC), $t_R$ = 9.74 min.

Example 276

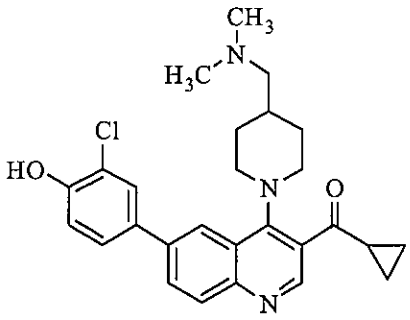
[6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-{4-[(dimethylamino)methyl]piperidin-1-yl} quinolin-3-yl](cyclopropyl)methanone



Following general procedure D, (6-bromo-4-{4-[(dimethylamino)methyl]piperidin-1-yl} quinolin-3-yl)(cyclopropyl)methanone (35 mg, 0.084 mmol) was reacted with 2-chloro-6-methoxy-4-(3,3,4,4-tetramethylborolan-1-yl)phenol (42 mg, 0.150 mmol) to afford the desired product (29.1 mg, 70%) as an off-white solid: $^1$H NMR (500 MHz, $CDCl_3$) $\delta$ 8.75 (s, 1H), 8.30 (s, 1H), 8.07–7.99 (m, 2H), 7.31 (d, $J$ = 2.0 Hz, 1H), 7.25 (d, $J$ = 1.9 Hz, 1H), 4.00 (s, 3H), 3.54 (d, $J$ = 12.4 Hz, 2H), 3.22 (t, $J$ = 12.2 Hz, 2H), 2.59–2.50 (m, 1H), 2.43 (d, $J$ = 6.2 Hz, 2H), 2.35 (s, 6H), 2.01–1.83 (m, 3H), 1.67–1.53 (m, 2H), 1.35–1.27 (m, 2H), 1.27–1.19 (m, 2H); ESI MS *m/z* 494 $[C_{28}H_{32}ClN_3O_3 + H]^+$; HPLC 98.9% (AUC), $t_R$ = 10.51 min.

Example 279

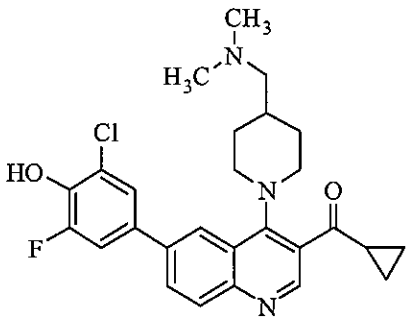
[6-(3-Chloro-4-hydroxyphenyl)-4-{4-[(dimethylamino)methyl]piperidin-1-yl}quinolin-3-yl](cyclopropyl)methanone




Following general procedure D, (6-bromo-4-{4-[(dimethylamino)methyl]piperidin-1-yl} quinolin-3-yl)(cyclopropyl)methanone (25 mg, 0.060 mmol) was reacted with 3-chloro-4-hydroxyphenylboronic acid (21 mg, 0.120 mmol) to afford the desired product (16.3 mg, 59%) as an off-white solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.74 (s, 1H), 8.28 (s, 1H), 8.05–7.98 (m, 2H), 7.70 (d, $J$ = 2.3 Hz, 1H), 7.53 (dd, $J$ = 8.4, 2.3 Hz, 1H), 7.06 (d, $J$ = 8.4 Hz, 1H), 3.53 (d, $J$ = 12.7 Hz, 2H), 3.21 (t, $J$ = 11.5 Hz, 2H), 2.60–2.51 (m, 1H), 2.43 (d, $J$ = 6.8 Hz, 2H), 2.35 (s, 6H), 2.00–1.84 (m, 3H), 1.65–1.53 (m, 2H), 1.34–1.28 (m, 2H), 1.28–1.17 (m, 2H); ESI MS *m/z* 464 $[C_{27}H_{30}ClN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.38 min.

Example 347

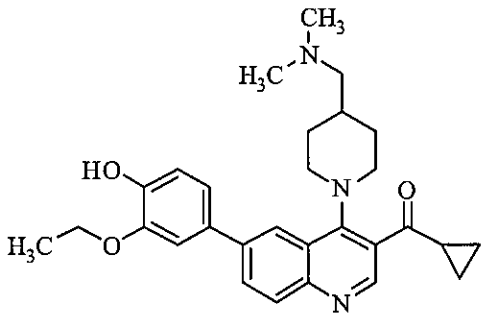
[6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-{4-[(dimethylamino)methyl]piperidin-1-yl} quinolin-3-yl](cyclopropyl)methanone



Following general procedure D, (6-bromo-4-{4-[(dimethylamino)methyl]piperidin-1-yl}quinolin-3-yl)(cyclopropyl)methanone (30 mg, 0.072 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (41 mg, 0.150 mmol) to afford the desired product (22.3 mg, 64%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.76 (s, 1H), 8.25 (d, $J$ = 1.6 Hz, 1H), 8.10–7.95 (m, 2H), 7.55–7.46 (m, 1H), 7.42 (dd, $J$ = 11.7, 2.3 Hz, 1H), 3.53 (d, $J$ = 12.7 Hz, 2H), 3.22 (t, $J$ = 11.6 Hz, 2H), 2.61 (d, $J$ = 6.6 Hz, 2H), 2.59–2.51 (m, 1H), 2.48 (s, 6H), 1.96 (d, $J$ = 10.0 Hz, 3H), 1.69–1.56 (m, 2H), 1.35–1.28 (m, 2H), 1.28–1.16 (m, 2H); ESI MS *m/z* 482 $[C_{27}H_{29}ClFN_3O_2 + H]^+$; HPLC 98.0% (AUC), $t_R$ = 10.47 min.

Example 353

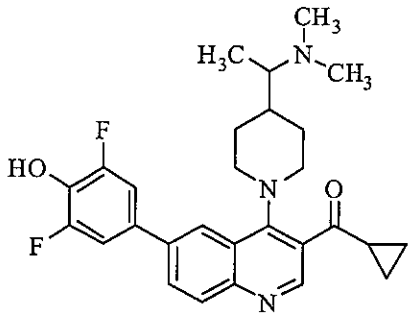
Cyclopropyl[4-{4-[(dimethylamino)methyl]piperidin-1-yl}-6-(3-ethoxy-4-hydroxyphenyl) quinolin-3-yl]methanone



Following general procedure D, (6-bromo-4-{4-[(dimethylamino)methyl]piperidin-1-yl}quinolin-3-yl)(cyclopropyl)methanone (30 mg, 0.072 mmol) was reacted with 2-ethoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (40 mg, 0.150 mmol) to afford the desired product (14.3 mg, 42%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.73 (s, 1H), 8.31 (d, $J$ = 1.7 Hz, 1H), 8.03 (m, 2H), 7.30 (d, $J$ = 2.1 Hz, 1H), 7.22 (dd, $J$ = 8.2, 2.1 Hz, 1H), 6.95 (d, $J$ = 8.2 Hz, 1H), 4.22 (q, $J$ = 7.0 Hz, 2H), 3.54 (d, $J$ = 12.6 Hz, 2H), 3.26–3.12 (m, 2H), 2.59–2.50 (m, 1H), 2.44 (s, 2H), 2.37 (s, 6H), 2.02–1.83 (m, 3H), 1.68–1.53 (m, 2H), 1.49 (t, $J$ = 7.0 Hz, 3H), 1.35–1.26 (m, 2H), 1.26–1.15 (m, 2H); ESI MS *m/z* 474 $[C_{29}H_{35}N_3O_3 + H]^+$; HPLC 96.9% (AUC), $t_R$ = 10.59 min.

Example 181

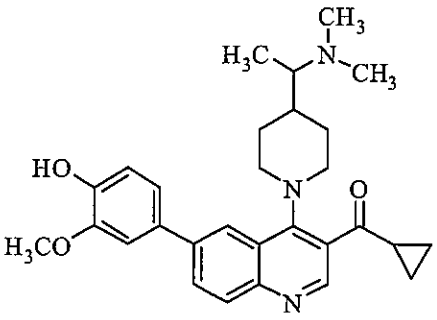
Cyclopropyl[6-(3,5-difluoro-4-hydroxyphenyl)-4-{4-[1-(dimethylamino)ethyl]piperidin-1-yl} quinolin-3-yl]methanone



Following general procedure F, (6-bromo-4-{4-[1-(dimethylamino)ethyl]piperidin-1-yl} quinolin-3-yl)(cyclopropyl)methanone (60 mg, 0.139 mmol) was reacted with 2,6-difluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (39 mg, 0.153 mmol) to afford the desired product (30 mg, 44%) as a light yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 8.82 (s, 1H), 8.26 (s, 1H), 8.03 (p, $J$ = 8.8 Hz, 2H), 7.35 (dd, $J$ = 8.0, 1.7 Hz, 2H), 3.56 (t, $J$ = 10.3 Hz, 2H), 3.26–3.17 (m, 3H), 2.80 (s, 6H), 2.66–2.53 (m, 1H), 1.96 (d, $J$ = 11.2 Hz, 3H), 1.87–1.68 (m, 2H), 1.37–1.22 (m, 8H); ESI MS *m/z* 480 $[C_{28}H_{31}F_2N_3O_2 + H]^+$; HPLC 98.6% (AUC), $t_R$ = 10.24 min.

Example 187

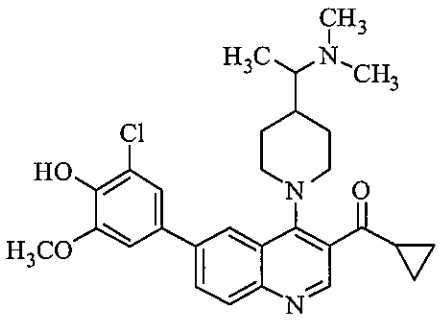
Cyclopropyl(4-{4-[1-(dimethylamino)ethyl]piperidin-1-yl}-6-(4-hydroxy-3-methoxyphenyl) quinolin-3-yl)methanone



Following general procedure F, (6-bromo-4-{4-[1-(dimethylamino)ethyl]piperidin-1-yl}quinolin- 3-yl)(cyclopropyl)methanone (42 mg, 0.097 mmol) was reacted with 2-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (36 mL, 0.146 mmol) to afford the desired product (26 mg, 56%) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 8.82 (s, 1H), 8.29 (d, $J$ = 1.6 Hz, 1H), 8.19– 7.97 (m, 2H), 7.31 (d, $J$ = 2.1 Hz, 1H), 7.23 (dd, $J$ = 8.2, 2.1 Hz, 1H), 6.95 (d, $J$ = 8.2 Hz, 1H), 3.98 (s, 3H), 3.61 (t, $J$ = 12.8 Hz, 2H), 3.48–3.36 (m, 1H), 3.27–3.17 (m, 2H), 2.98–2.84 (m, 5H), 2.67–2.56 (m, 1H), 2.11–1.73 (m, 5H), 1.40 (d, $J$ = 6.8 Hz, 3H), 1.34–1.23 (m, 6H); ESI MS *m/z* 474 $[C_{29}H_{35}N_3O_3 + H]^+$; HPLC 98.6% (AUC), $t_R$ = 9.95 min.

Example 250

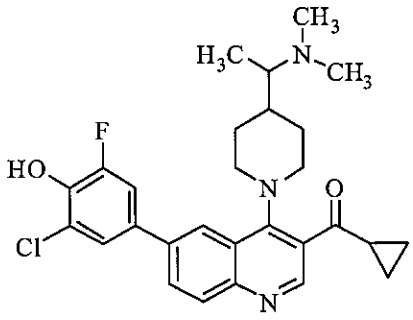
[6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-{4-[1-(dimethylamino)ethyl]piperidin-1-yl}quinolin-3-yl](cyclopropyl)methanone



Following general procedure F, (6-bromo-4-{4-[1-(dimethylamino)ethyl]piperidin-1-yl}quinolin-3-yl)(cyclopropyl)methanone (50 mg, 0.116 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (49 mg, 0.173 mmol) to afford the desired product (33 mg, 56%) as a yellow-green solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.74 (s, 1H), 8.30 (d, $J$ = 1.6 Hz, 1H), 8.07–7.97 (m, 2H), 7.32 (d, $J$ = 2.1 Hz, 1H), 7.25 (d, $J$ = 2.1 Hz, 1H), 4.00 (s, 3H), 3.55 (d, $J$ = 12.2 Hz, 2H), 3.19 (dd, $J$ = 19.9, 7.2 Hz, 2H), 2.64–2.58 (m, 1H), 2.58–2.50 (m, 1H), 2.40 (s, 6H), 2.03 (d, $J$ = 12.7 Hz, 1H), 1.95–1.78 (m, 3H), 1.73–1.61 (m, 2H), 1.33–1.28 (m, 2H), 1.26–1.20 (m, 2H), 1.11 (d, $J$ = 6.6 Hz, 3H); ESI MS *m/z* 508 $[C_{29}H_{34}ClN_3O_3 + H]^+$; HPLC 97.0% (AUC), $t_R$ = 10.04 min.

Example 269

[6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-{4-[1-(dimethylamino)ethyl]piperidin-1-yl}quinolin-3-yl](cyclopropyl)methanone

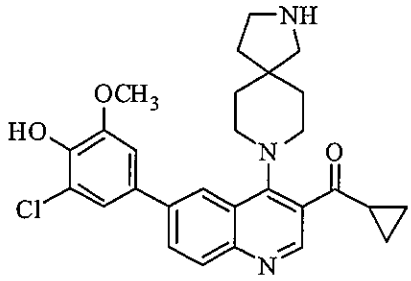


Following general procedure F, (6-bromo-4-{4-[1-(dimethylamino)ethyl]piperidin-1-yl}quinolin-3-yl)(cyclopropyl)methanone (39 mg, 0.090 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (30 mg, 0.108 mmol) to afford the desired product (27 mg, 60%) as a light brown solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.81 (s, 1H), 8.26 (d, $J$ = 1.6 Hz, 1H), 8.08–7.99 (m, 2H), 7.57–7.51 (m, 1H), 7.46 (dd, $J$ = 11.6, 2.2 Hz, 1H), 3.55 (d, $J$ = 11.5 Hz,

2H), 3.27–3.13 (m, 3H), 2.78 (s, 5H), 2.63–2.51 (m, 1H), 2.02 (s, 1H), 1.95 (d, $J$ = 12.8 Hz, 2H), 1.82–1.67 (m, 2H), 1.41–1.19 (m, 8H), 0.90 (s, 1H); ESI MS *m/z* 496 $[C_{28}H_{31}ClFN_3O_2 + H]^+$; HPLC 98.4% (AUC), $t_R$ = 10.58 min.

Example 155

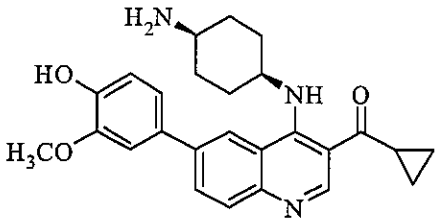
[6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-(2,8-diazaspiro[4,5]decan-8-yl)quinolin-3-yl] (cyclopropyl)methanone




Following general procedure A-2, *tert*-butyl 8-[6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-yl]-2,8-diazaspiro[4,5]decane-2-carboxylate (110 mg, 0.097 mmol) was reacted with TFA (2 mL) to afford the desired product (18 mg, 38%) as a green solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 8.79 (s, 1H), 8.29 (s, 1H), 8.02 (s, 2H), 7.30 (d, $J$ = 2.1 Hz, 1H), 7.23 (d, $J$ = 2.1 Hz, 1H), 3.98 (s, 4H), 3.08 (s, 2H), 2.65–2.52 (m, 1H), 2.03–1.81 (m, 7H), 1.37–1.16 (m, 8H); ESI MS *m/z* 492 $[C_{28}H_{30}ClN_3O_3 + H]^+$.

Example 165

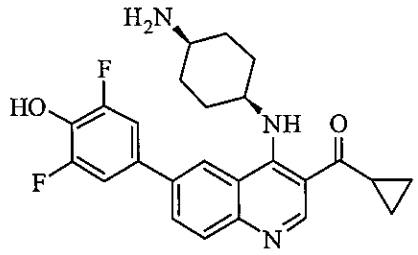
{4-(*cis*-4-Aminocyclohexylamino)-6-(4-hydroxy-3-methoxyphenyl)quinolin-3-yl} (cyclopropyl)methanone




Following general procedure A-2, *tert*-butyl *cis*-4-[3-(cyclopropanecarbonyl)-6-(4-hydroxy-3-methoxyphenyl)quinolin-4-ylamino]cyclohexylcarbamate (43 mg, 0.100 mmol) was reacted with TFA (2 mL) to afford the desired product (20 mg, 56%) as a light yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.26 (s, 1H), 8.39 (d, $J$ = 1.7 Hz, 1H), 8.10 (dd, $J$ = 8.8, 1.8 Hz, 1H), 7.93 (d, $J$ = 8.7 Hz, 1H), 7.27 (d, $J$ = 2.1 Hz, 1H), 7.18 (dd, $J$ = 8.2, 2.1 Hz, 1H), 6.93 (d, $J$ = 8.2 Hz, 1H), 4.74 (s, 1H), 3.96 (s, 3H), 3.12–3.02 (m, 1H), 2.98–2.84 (m, 1H), 2.17 (d, $J$ = 9.9 Hz, 2H), 2.10–1.93 (m, 4H), 1.93–1.73 (m, 2H), 1.31–1.20 (m, 2H), 1.16–1.08 (m, 2H); ESI MS *m/z* 432 $[C_{26}H_{29}N_3O_3 + H]^+$; HPLC 98.4% (AUC), $t_R$ = 9.93 min.

Example 180

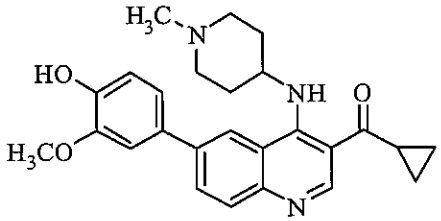
[4-(*cis*-4-Aminocyclohexylamino)-6-(3,5-difluoro-4-hydroxyphenyl)quinolin-3-yl] (cyclopropyl)methanone



Following general procedure A-2, *tert*-butyl *cis*-4-[3-(cyclopropanecarbonyl)-6-(3,5-difluoro-4-hydroxyphenyl)quinolin-4-ylamino]cyclohexylcarbamate (51 mg, 0.095 mmol) was reacted with TFA (2 mL) to afford the desired product (25 mg, 52%) as a light yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.27 (s, 1H), 8.37 (d, $J$ = 1.7 Hz, 1H), 8.06 (dd, $J$ = 8.8, 1.9 Hz, 1H), 7.94 (d, $J$ = 8.7 Hz, 1H), 7.33 (dd, $J$ = 8.1, 1.6 Hz, 2H), 4.73 (s, 1H), 2.97–2.86 (m, 1H), 2.16 (d, $J$ = 9.1 Hz, 2H), 2.09–1.97 (m, 5H), 1.91–1.76 (m, 2H), 1.27–1.20 (m, 2H), 1.20–1.10 (m, 2H); ESI MS *m/z* 438 $[C_{25}H_{25}F_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 5.12 min.

Example 177

Cyclopropyl[6-(4-hydroxy-3-methoxyphenyl)-4-(1-methylpiperidin-4-ylamino) quinolin-3-yl]methanone

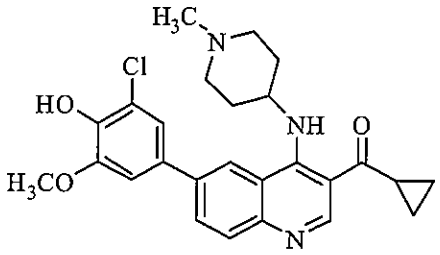


Following general procedure F, [6-bromo-4-(1-methylpiperidin-4-ylamino)quinolin-3-yl] (cyclopropyl)methanone (47 mg, 0.121 mmol) was reacted with 2-methoxy-4-(4,4,5,5 -tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (45 mg, 0.182 mmol) to afford the desired product (33 mg, 63%) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.17 (s, 1H), 8.33 (d, $J$ = 1.8 Hz, 1H), 8.05 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.92 (d, $J$ = 8.7 Hz, 1H), 7.27 (d, $J$ = 2.1 Hz, 1H), 7.19 (dd, $J$ = 8.2, 2.1 Hz, 1H), 6.94 (d, $J$ = 8.2 Hz, 1H), 4.36 (s, 1H), 3.97 (s, 3H), 3.34 (s, 1H), 3.08 (s, 2H), 2.94–2.82 (m, 1H), 2.65 (s, 2H), 2.53 (s, 3H), 2.28 (d, $J$ = 13.9 Hz, 2H), 1.89 (d, $J$ = 10.3 Hz, 2H), 1.26–1.17 (m, 2H), 1.17–1.08 (m, 2H); ESI MS *m/z* 432 $[C_{26}H_{29}N_3O_3 + H]^+$; HPLC (AUC), $t_R$ = 9.78 min.

Example 249

6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-(1-methylpiperidin-4-ylamino)quinolin-3-yl]

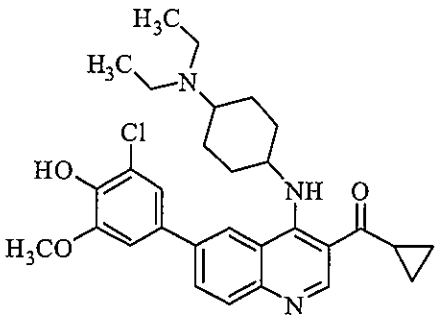
(cyclopropyl)methanone



Following general procedure F, [6-bromo-4-(1-methylpiperidin-4-ylamino)quinolin-3-yl] (cyclopropyl)methanone (63 mg, 0.160 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (68 mg, 0.240 mmol) to afford the desired product (30 mg, 40%) as a yellow-green solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.17 (s, 1H), 8.31 (d, $J$ = 1.5 Hz, 1H), 8.04 (dd, $J$ = 8.7, 1.8 Hz, 1H), 7.93 (d, $J$ = 8.7 Hz, 1H), 7.29 (d, $J$ = 2.1 Hz, 1H), 7.21 (d, $J$ = 2.0 Hz, 1H), 4.36 (s, 1H), 3.99 (s, 3H), 3.20 (d, $J$ = 9.4 Hz, 2H), 2.93–2.68 (m, 3H), 2.61 (s, 3H), 2.31 (d, $J$ = 13.0 Hz, 2H), 2.00–1.81 (m, 2H), 1.28–1.18 (m, 2H), 1.17–1.05 (m, 2H); ESI MS $m/z$ 466 $[C_{26}H_{28}ClN_3O_3 + H]^+$; HPLC 96.4% (AUC), $t_R$ = 9.24 min.

Example 185(a)

{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(diethylamino)cyclohexylamino]quinolin-3-yl} (cyclopropyl)methanone

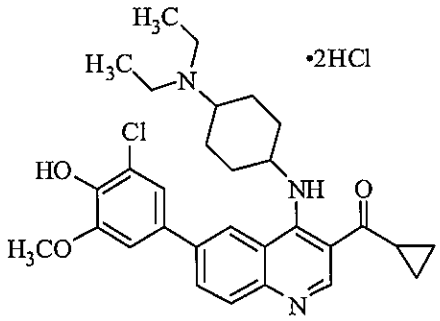


Following general procedure F, {6-bromo-4-[4-(diethylamino)cyclohexylamino]quinolin-3-yl} (cyclopropyl)methanone (45 mg, 0.101 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (34 mg, 0.121 mmol) to afford the desired product (28 mg, 53%) as a yellow glass: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.39 (s, 0.5H), 9.28 (s, 0.5H), 8.44 (d, $J$ = 2.2 Hz, 1H), 8.30–8.21 (m, 1H), 7.98 (d, $J$ = 8.8 Hz, 1H), 7.40–7.17 (m, 2H), 4.96 (s, 1H), 3.99 (d, $J$ = 2.5 Hz, 3H), 3.72–3.52 (m, 1H), 3.43–3.18 (m, 3H), 2.98–2.81 (m, 1H), 2.59–1.75 (m, 9H), 1.48–1.34 (m, 6H), 1.31–1.13 (m, 4H); ESI MS $m/z$ 522 $[C_{30}H_{36}ClN_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 7.67 min.

Example 185(b)

{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(diethylamino)cyclohexylamino]quinolin-3-yl}

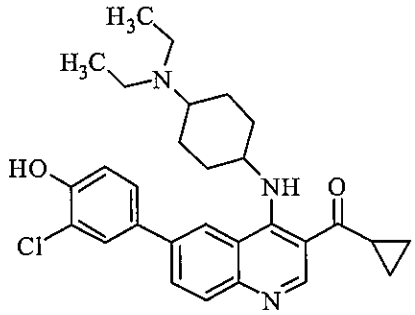
(cyclopropyl)methanone dihydrochloride



To {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(diethylamino)cyclohexylamino]quinolin-3-yl} (cyclopropyl)methanone (18 mg, 0.34 mmol) was added 1 M HCl (5 mL) and the mixture was concentrated to afford the desired product (15 mg, 75%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.43–9.36 (m, 1H), 8.49 (d, $J$ = 2.2 Hz, 1H), 8.34 – 8.27 (m, 1H), 7.98 – 7.22 (m, 3H), 3.69 – 3.59 (m, 1H), 3.45 – 3.22 (m, 4H), 2.98–2.81 (m, 1H), 2.59–1.75 (m, 9H), 1.45 – 1.22 (m, 10H); ESI MS *m/z* 522 $[C_{30}H_{36}ClN_3O_3 + H]^+$; HPLC 95.2% (AUC), $t_R$ = 10.26 min.

Example 192

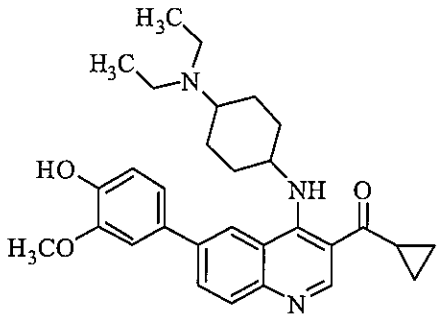
{6-(3-Chloro-4-hydroxyphenyl)-4-[4-(diethylamino)cyclohexylamino]quinolin-3-yl} (cyclopropyl)methanone



Following general procedure F, {6-bromo-4-[4-(diethylamino)cyclohexylamino]quinolin-3-yl} (cyclopropyl)methanone (65 mg, 0.146 mmol) was reacted with 3-chloro-4-hydroxyphenyl boronic acid (38 mg, 0.219 mmol) to afford the desired product (24 mg, 33%) as a light yellow-brown solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.29 (s, 0.5H), 9.20 (s, 0.5H), 8.38 (s, 1H), 8.12–8.04 (m, 1H), 7.98–7.91 (m, 1H), 7.74 (d, $J$ = 2.3 Hz, 0.5H), 7.68 (d, $J$ = 2.3 Hz, 0.5H), 7.58–7.48 (m, 1H), 7.06 (dd, $J$ = 9.5, 8.5 Hz, 1H), 3.59–3.49 (m, 1H), 3.45–3.15 (m, 4H), 2.98–2.83 (m, 1H), 2.45 (d, $J$ = 11.9 Hz, 1H), 2.30–2.19 (m, 2H), 2.11–1.88 (m, 4H), 1.86–1.70 (m, 2H), 1.38 (q, $J$ = 7.4 Hz, 6H), 1.27–1.20 (m, 2H), 1.19–1.10 (m, 2H); ESI MS *m/z* 492 $[C_{29}H_{34}ClN_3O_2 + H]^+$; HPLC 97.5% (AUC), $t_R$ = 4.53 min.

Example 193

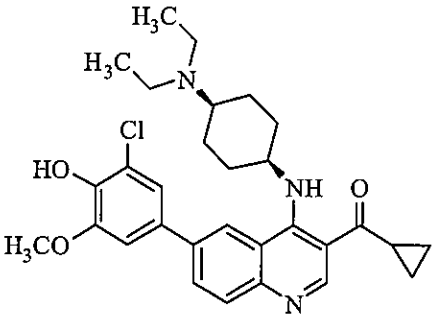
Cyclopropyl{4-[4-(diethylamino)cyclohexylamino]-6-(4-hydroxy-3-methoxyphenyl) quinolin-3-yl}methanone



Following general procedure F, {6-bromo-4-[4-(diethylamino)cyclohexylamino]quinolin-3-yl} (cyclopropyl)methanone (58 mg, 0.130 mmol) was reacted with 2-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (34 mg, 0.136 mmol) to afford the desired product (40 mg, 60%) as a yellow glass: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.26 (s, 0.5H), 9.17 (s, 0.5H), 8.33 (dd, $J$ = 8.2, 1.6 Hz, 1H), 8.09 (dt, $J$ = 8.8, 1.7 Hz, 1H), 7.90 (d, $J$ = 8.7 Hz, 1H), 7.25 (dd, $J$ = 12.8, 2.1 Hz, 1H), 7.21–7.08 (m, 1H), 6.99–6.87 (m, 1H), 4.81 (s, 1H), 3.96 (d, $J$ = 3.5 Hz, 3H), 3.64–3.44 (m, 1H), 3.40–3.12 (m, 3H), 2.96–2.76 (m, 1H), 2.41 (s, 1H), 2.24 (d, $J$ = 12.4 Hz, 2H), 2.14–1.83 (m, 4H), 1.73 (t, $J$ = 9.7 Hz, 2H), 1.46–1.30 (m, 6H), 1.26–1.07 (m, 4H); ESI MS *m/z* 488 $[C_{30}H_{37}N_3O_3 + H]^+$; HPLC 98.9% (AUC), $t_R$ = 6.24 min.

Example 311

{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[*cis*-4-(diethylamino)cyclohexylamino] quinolin-3-yl}(cyclopropyl)methanone

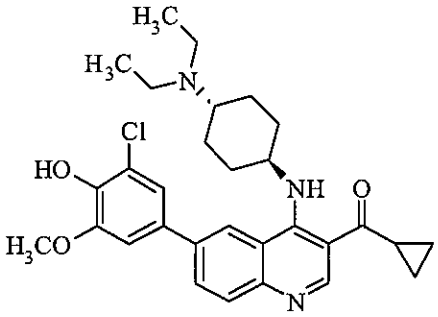


Following general procedure F, {6-bromo-4-[*cis*-4-(diethylamino)cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone (31 mg, 0.070 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.150 mmol) to afford the desired product (14.1 mg, 39%) as a yellow-brown solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.25 (s, 1H), 8.36 (d, $J$ = 1.8 Hz, 1H), 8.03 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.93 (d, $J$ = 8.7 Hz, 1H), 7.26 (d, $J$ = 2.1 Hz, 1H), 7.20 (d, $J$ = 2.1 Hz, 1H), 4.77 (s, $J$ = 12.7 Hz, 1H), 3.98 (s, 3H), 3.50–3.41 (m, 1H), 3.23 (q, $J$ = 7.2 Hz, 4H), 2.97–2.88 (m, 1H), 2.22 (d, $J$ = 12.9 Hz, 2H), 2.09–1.85 (m, 6H), 1.35 (t, $J$ = 7.3 Hz, 6H), 1.24–1.17 (m, 2H), 1.18–1.09 (m, 2H); ESI MS *m/z* 522 $[C_{30}H_{36}ClN_3O_3 +$

H]$^+$; HPLC 98.3% (AUC), $t_R$ = 11.07 min.

Example 314

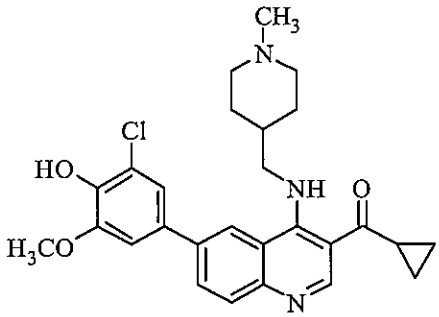
{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[*trans*-4-(diethylamino)cyclohexylamino] quinolin-3-yl}(cyclopropyl)methanone



Following general procedure D, {6-bromo-4-[*trans*-4-(diethylamino)cyclohexylamino] quinolin-3-yl}(cyclopropyl)methanone (31 mg, 0.070 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl- 1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.015 mmol) to afford the desired product (19.7 mg, 54%) as an orange-brown solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.15 (s, 1H), 8.34 (d, $J$ = 1.8 Hz, 1H), 8.04 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.92 (d, $J$ = 8.7 Hz, 1H), 7.31 (d, $J$ = 2.1 Hz, 1H), 7.23 (d, $J$ = 2.0 Hz, 1H), 4.20 (s, 1H), 3.99 (s, 3H), 3.12 (q, $J$ = 7.2 Hz, 4H), 2.89–2.80 (m, 1H), 2.41 (d, $J$ = 10.4 Hz, 2H), 2.15 (d, $J$ = 9.8 Hz, 2H), 1.82–1.62 (m, 4H), 1.30 (t, $J$ = 7.3 Hz, 6H), 1.23–1.16 (m, 2H), 1.15–1.04 (m, 2H); ESI MS *m/z* 522 [$C_{30}H_{36}ClN_3O_3$ + H]$^+$; HPLC 98.5% (AUC), $t_R$ = 11.05 min.

Example 201

{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[(1-methylpiperidin-4-yl)methylamino] quinolin-3-yl}(cyclopropyl)methanone

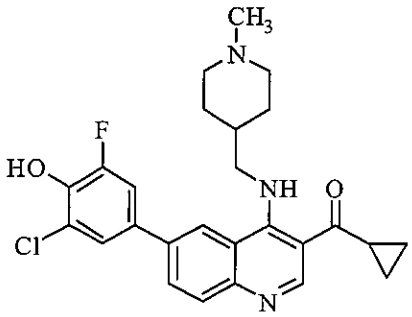


Following general procedure F, {6-bromo-4-[(1-methylpiperidin-4-yl)methylamino]quinolin-3 -yl}(cyclopropyl)methanone (63 mg, 0.156 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (53 mg, 0.187 mmol) to afford the desired product (33 mg, 44%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.12 (s, 1H), 8.41 (d, $J$ = 1.8 Hz, 1H), 7.99 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.88 (d, $J$ = 8.7 Hz, 1H), 7.26 (d, $J$ = 2.1 Hz, 1H),

7.19 (d, $J$ = 2.1 Hz, 1H), 3.98 (s, 3H), 3.84 (d, $J$ = 6.7 Hz, 2H), 3.20–3.13 (m, 2H), 2.87–2.80 (m, 1H), 2.51 (s, $J$ = 10.3 Hz, 3H), 2.46 (t, $J$ = 11.6 Hz, 2H), 1.97 (d, $J$ = 13.2 Hz, 2H), 1.90 (s, 1H), 1.53–1.40 (m, 2H), 1.24–1.17 (m, 2H), 1.14–1.07 (m, 2H); ESI MS $m/z$ $[C_{27}H_{30}ClN_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 8.32 min.

Example 270

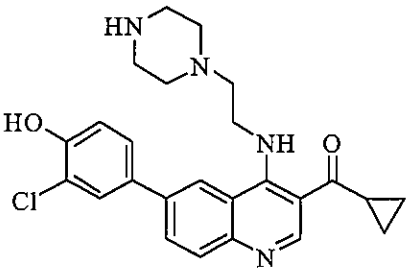
{6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[(1-methylpiperidin-4-yl)methylamino] quinolin-3-yl}(cyclopropyl)methanone



Following general procedure F, {6-bromo-4-[(1-methylpiperidin-4-yl)methylamino]quinolin-3-yl}(cyclopropyl)methanone (50 mg, 0.120 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (49 mg, 0.180 mmol) to afford the desired product (29 mg, 51%) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.13 (s, 1H), 8.39 (d, $J$ = 1.5 Hz, 1H), 8.02–7.83 (m, 2H), 7.56–7.37 (m, 2H), 3.84 (d, $J$ = 5.9 Hz, 2H), 2.89–2.74 (m, 3H), 2.71 (s, 3H), 2.05 (d, $J$ = 13.4 Hz, 3H), 1.65–1.47 (m, 2H), 1.28 (s, 3H), 1.24–1.16 (m, 2H), 1.16–1.02 (m, 2H), 0.88 (d, $J$ = 6.9 Hz, 1H); ESI MS $m/z$ $[C_{26}H_{27}ClFN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 9.14 min.

Example 215

{6-(3-Chloro-4-hydroxyphenyl)-4-[2-(piperazin-1-yl)ethylamino]quinolin-3-yl} (cyclopropyl)methanone

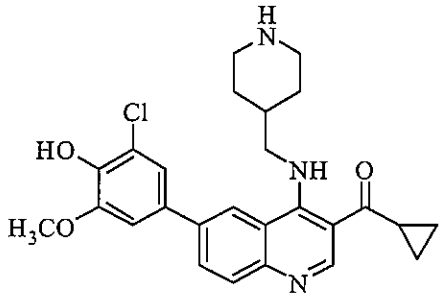


Following general procedure A-2, *tert*-butyl 4-{2-[6-(3-Chloro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino]ethyl}piperazine-1-carboxylate (40 mg, 0.073 mmol) was reacted with TFA (2 mL) to afford the desired product (23 mg, 35%) as a yellow solid: $^1$H NMR (500 MHz, DMSO-$d_6$) $\delta$ 10.00 (s, 1H), 9.09

(s, 1H), 8.46 (d, $J$ = 1.8 Hz, 1H), 7.98 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.85 (d, $J$ = 8.7 Hz, 1H), 7.78 (d, $J$ = 2.3 Hz, 1H), 7.61 (dd, $J$ = 8.5, 2.3 Hz, 1H), 7.09 (d, $J$ = 8.4 Hz, 1H), 3.82 (d, $J$ = 5.2 Hz, 2H), 2.95–2.82 (m, 1H), 2.68 (t, $J$ = 4.7 Hz, 4H), 2.55 (t, $J$ = 6.0 Hz, 2H), 2.35 (s, 4H), 1.11–0.97 (m, 4H); ESI MS *m/z* 451 $[C_{25}H_{27}ClN_4O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 9.32 min.

Example 243

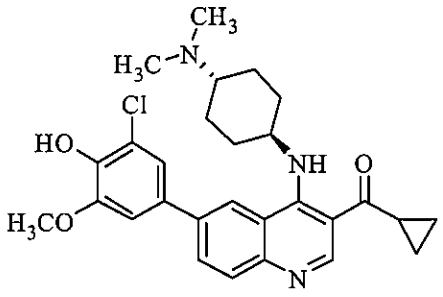
6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-(piperidin-4-ylmethylamino)quinolin-3-yl] (cyclopropyl)methanone



Following general procedure A-2, *tert*-butyl 4-{[6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino]methyl}piperidine-1-carboxylate (27 mg, 0.047 mmol) was reacted with TFA (1 mL) to afford the desired product (11 mg, 21%) as a yellow-orange solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.24 (s, 1H), 8.54 (d, $J$ = 1.6 Hz, 1H), 8.16 (dd, $J$ = 8.7, 1.7 Hz, 1H), 7.95 (d, $J$ = 8.7 Hz, 1H), 7.33 (d, $J$ = 2.1 Hz, 1H), 7.25 (d, $J$ = 2.1 Hz, 1H), 3.99 (s, $J$ = 23.2 Hz, 5H), 3.51–3.42 (m, 2H), 3.18–3.14 (m, 1H), 3.07 (td, $J$ = 13.0, 2.9 Hz, 2H), 2.90–2.81 (m, 1H), 2.22 (s, 1H), 2.13 (d, $J$ = 14.0 Hz, 2H), 1.67–1.53 (m, 2H), 1.29–1.21 (m, 2H), 1.21–1.13 (m, 2H); ESI MS *m/z* 466 $[C_{26}H_{28}ClN_3O_3 + H]^+$; HPLC 97.7% (AUC), $t_R$ = 8.47 min.

Example 255

{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[*trans*-4-(dimethylamino)cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone

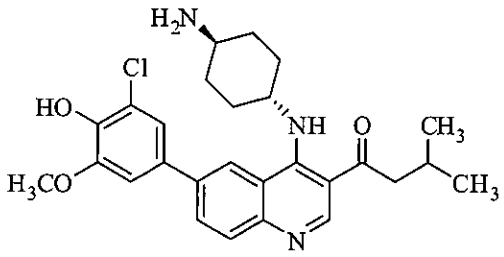


Following general procedure F, {6-bromo-4-[*trans*-4-(dimethylamino)cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone (50 mg, 0.120 mmol) was reacted with

2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (51 mg, 0.180 mmol) to afford the desired product (22 mg, 37%) as a yellow-green solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.18 (s, 1H), 8.36 (s, 1H), 8.09 (d, $J$ = 10.4 Hz, 1H), 7.94 (d, $J$ = 8.7 Hz, 1H), 7.33 (d, $J$ = 2.0 Hz, 1H), 7.25 (d, $J$ = 2.0 Hz, 1H), 4.24 (s, 1H), 3.99 (s, 3H), 3.35 (s, 1H), 2.86 (s, 7H), 2.46 (s, 2H), 2.21 (s, 2H), 1.73 (d, $J$ = 10.4 Hz, 4H), 1.28–1.06 (m, 4H); ESI MS *m/z* $[C_{28}H_{32}ClN_3O_3 + H]^+$; HPLC 97.5% (AUC), $t_R$ = 10.92 min.

Example 262

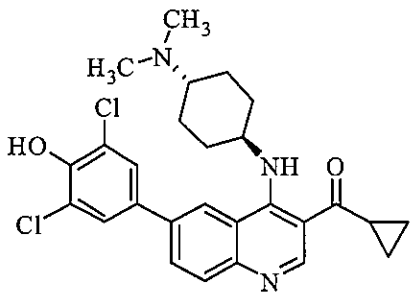
1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3-chloro-4-hydroxy-6-mothoxyphenyl)quinolin-3-yl}-3-methylbutan-1-one dihydrochloride




Following general procedure D, *tert*-butyl *trans*-4-[6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-(3-methylbutanoyl)quinolin-4-ylamino]cyclohexylcarbamate (42 mg, 0.072 mmol) was reacted with TFA (2 mL) to afford the desired product (15.4 mg, 44%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.96 (s, 1H), 8.32 (s, 1H), 8.04 (dd, $J$ = 8.7, 1.8 Hz, 1H), 7.91 (d, $J$ = 8.7 Hz, 1H), 7.28 (d, $J$ = 2.1 Hz, 1H), 7.22 (d, $J$ = 2.1 Hz, 1H), 4.26-4.17 (m, 1H), 3.99 (s, 3H), 3.26–3.18 (m, 1H), 2.95 (d, $J$ = 7.0 Hz, 2H), 2.41 (d, $J$ = 12.9 Hz, 2H), 2.31–2.22 (m, 1H), 2.17 (d, $J$ = 12.1 Hz, 2H), 1.78-1.66 (m, 2H), 1.62-1.50 (m, 2H) 1.03 (d, $J$ = 6.6 Hz, 2H); ESI MS *m/z* 482 $[C_{27}H_{32}ClN_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.22 min.

Example 263

Cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[*trans*-4-(dimethylamino)cyclohexylamino]quinolin-3-yl}methanone

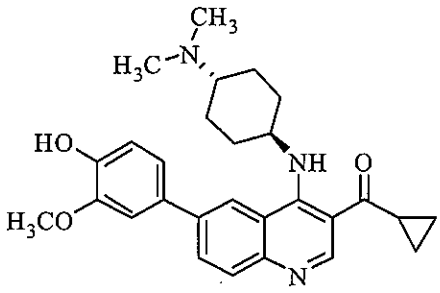



Following general procedure F,

{6-bromo-4-[*trans*-4-(dimethylamino)cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone (45 mg, 0.110 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (38 mg, 0.135 mmol) to afford the desired product (32 mg, 58%) as a light yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.30 (s, 1H), 8.50 (s, 1H), 8.28 (d, $J$ = 8.8 Hz, 1H), 8.00 (d, $J$ = 8.8 Hz, 1H), 7.78 (s, 2H), 4.47 (s, 1H), 3.45 (s, 1H), 2.91 (s, 6H), 2.85 (s, 1H), 2.51 (s, 2H), 2.31 (s, 2H), 1.91–1.74 (m, 4H), 1.31–1.18 (m, 4H); ESI MS *m/z* 498 $[C_{27}H_{29}Cl_2N_3O_2 + H]^+$; HPLC 96.9% (AUC), $t_R$ = 11.50 min.

Example 266

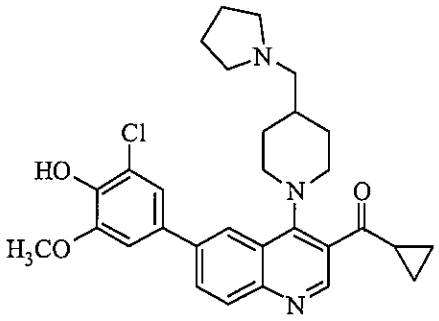
Cyclopropyl(4-((trans)-4-(dimethylamino)cyclohexylamino)-6-(4-hydroxy-3-methoxyphenyl)quinolin-3-yl)methanone




Following general procedure F, {6-bromo-4-[*trans*-4-(dimethylamino)cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone (52 mg, 0.120 mmol) was reacted with 2-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (45 mg, 0.180 mmol) to afford the desired product (17 mg, 31%) as a yellow-green solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.19 (s, 1H), 8.36 (s, 1H), 8.10 (dd, $J$ = 8.8, 1.9 Hz, 1H), 7.93 (d, $J$ = 8.8 Hz, 1H), 7.30 (d, $J$ = 2.1 Hz, 1H), 7.21 (dd, $J$ = 8.2, 2.1 Hz, 1H), 6.95 (d, $J$ = 8.2 Hz, 1H), 4.22 (s, 1H), 3.97 (s, 3H), 2.84 (s, 7H), 2.43 (s, 2H), 2.21 (s, 2H), 1.68 (s, 3H), 1.27–1.18 (m, 2H), 1.18–1.07 (m, 2H); ESI MS *m/z* 460 $[C_{28}H_{33}N_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.86 min.

Example 280

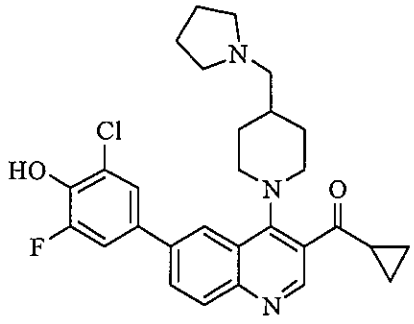
{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure D, {6-bromo-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone (30 mg, 0.068 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (30 mg, 0.106 mmol) to afford the desired product (21.5 mg, 61%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.76 (s, 1H), 8.29 (s, 1H), 8.07–7.99 (m, 2H), 7.31 (d, $J$ = 2.0 Hz, 1H), 7.24 (d, $J$ = 2.0 Hz, 1H), 3.99 (s, 3H), 3.54 (d, $J$ = 12.4 Hz, 2H), 3.22 (t, $J$ = 11.7 Hz, 2H), 2.82 (s, 4H), 2.71 (d, $J$ = 6.5 Hz, 2H), 2.60–2.51 (m, 1H), 2.06–1.81 (m, 7H), 1.71–1.59 (m, 2H), 1.36–1.27 (m, 2H), 1.27–1.19 (m, 2H); ESI MS *m/z* 520 $[C_{30}H_{34}ClN_3O_3 + H]^+$; HPLC 98.6% (AUC), $t_R$ = 10.70 min.

Example 283

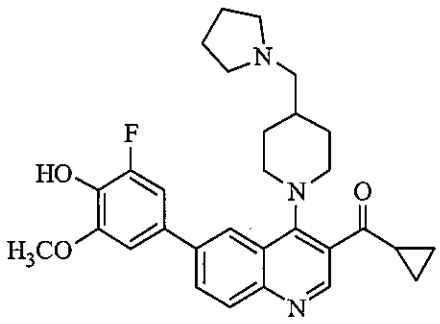
{6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure D, {6-bromo-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone (30 mg, 0.068 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (27 mg, 0.099 mmol) to afford the desired product (24.3 mg, 71%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.79 (s, 1H), 8.24 (d, $J$ = 1.7 Hz, 1H), 8.06–7.96 (m, 2H), 7.53–7.49 (m, 1H), 7.42 (dd, $J$ = 11.7, 2.2 Hz, 1H), 3.53 (d, $J$ = 12.8 Hz, 2H), 3.28–3.15 (m, 6H), 3.09 (d, $J$ = 7.0 Hz, 2H), 2.62–2.54 (m, 1H), 2.14–2.02 (m, 5H), 1.99 (d, $J$ = 12.5 Hz, 2H), 1.77–1.63 (m, 2H), 1.36–1.28 (m, 2H), 1.28–1.17 (m, 2H); ESI MS *m/z* 508 $[C_{29}H_{31}ClFN_3O_2 + H]^+$; HPLC 98.1% (AUC), $t_R$ = 10.69 min.

Example 307

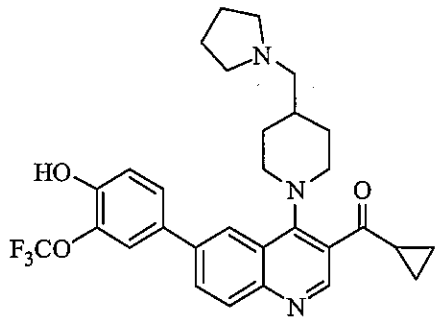
Cyclopropyl{6-(3-fluoro-4-hydroxy-5-methoxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}methanone



Following general procedure D, {6-bromo-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone (26 mg, 0.059 mmol) was reacted with 2-fluoro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (32 mg, 0.118 mmol) to afford the desired product (15.4 mg, 52%) as a gray solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.78 (s, 1H), 8.27 (s, 1H), 8.03 (s, 2H), 7.23–7.04 (m, 2H), 3.99 (s, 3H), 3.54 (d, $J$ = 12.8 Hz, 2H), 3.28–3.11 (m, 6H), 3.05 (d, $J$ = 6.6 Hz, 2H), 2.63–2.51 (m, 1H), 2.20–1.89 (m, 7H), 1.80–1.58 (m, 2H), 1.41–1.16 (m, 4H).

Example 313

Cyclopropyl{6-[4-hydroxy-3-(trifluoromethoxy)phenyl]-4-[4-(pyrrolidin-1-ylmethyl]piperidin-1-yl}quinolin-3-yl)methanone

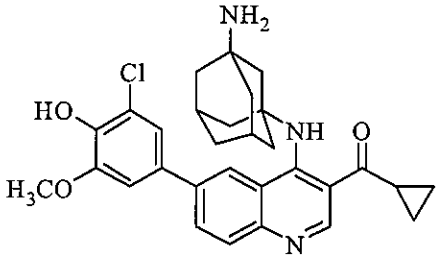


Following general procedure D, {6-bromo-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone (30 mg, 0.068 mmol) was reacted with 4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-2-(trifluoromethoxy)phenol (36 mg, 0.140 mmol) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.80 (s, 1H), 8.28 (d, $J$ = 1.6 Hz, 1H), 8.08–7.98 (m, 2H), 7.64–7.57 (m, 2H), 7.12 (d, $J$ = 9.0 Hz, 1H), 3.54 (d, $J$ = 12.8 Hz, 2H), 3.22 (t, $J$ = 11.5 Hz, 2H), 3.13 (s, 4H), 2.99 (s, 2H), 2.64–2.50 (m, 1H), 2.10–1.92 (m, 7H), 1.74–1.59

(m, 2H), 1.36–1.28 (m, 2H), 1.28–1.19 (m, 2H); ESI MS *m/z* 540 $[C_{30}H_{32}F_3N_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.16 min.

Example 309

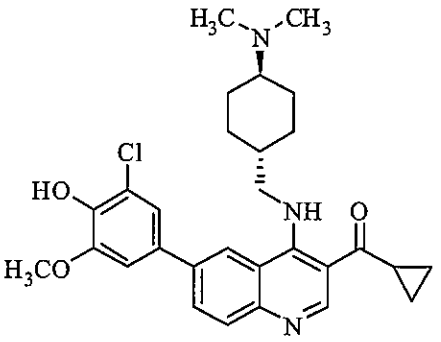
{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[(3-amino)adamantylamino]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure F, *tert*-butyl 4-[3-(cyclopropanecarbonyl)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-4-ylamino]adamantylcarbamate (62 mg, 0.100 mmol) was reacted with TFA (2 mL) to afford the desired product (26 mg, 50%) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$ + Acetic Acid-$d_4$) $\delta$ 9.20 (s, 1H), 8.50 (d, $J$ = 1.9 Hz, 1H), 8.11 (dd, $J$ = 8.8, 2.0 Hz, 1H), 8.02 (d, $J$ = 8.8 Hz, 1H), 7.36 (d, $J$ = 2.0 Hz, 1H), 7.26 (d, $J$ = 2.1 Hz, 1H), 3.99 (s, 3H), 3.03–2.91 (m, 1H), 2.33 (s, 2H), 2.05 (d, $J$ = 12.5 Hz, 2H), 1.92–1.55 (m, 12H), 1.32–1.23 (m, 2H), 1.23–1.13 (m, 2H); ESI MS *m/z* 518 $[C_{30}H_{32}ClN_3O_3 + H]^+$; HPLC 96.0 % (AUC), $t_R$ = 9.59 min.

Example 315

6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-{[*trans*-4-(dimethylamino)cyclohexyl]methylamino}quinolin-3-yl](cyclopropyl)methanone

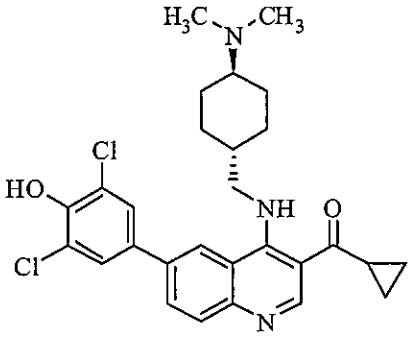


Following general procedure F, (6-bromo-4-{[*trans*-4-(dimethylamino)cyclohexyl]methylamino}quinolin-3-yl)(cyclopropyl)methanone (58 mg, 0.135 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (57 mg, 0.202 mmol) to afford the desired product (30 mg, 44%) as a yellow-green solid: $^1$H NMR (300 MHz, $CD_3OD$ + Acetic Acid-$d_4$) $\delta$ 9.25 (s, 1H), 8.52 (s, 1H), 8.15 (d, $J$ = 8.7 Hz, 1H), 7.95 (d, $J$ = 8.8 Hz,

1H), 7.30 (d, $J$ = 2.0 Hz, 1H), 7.22 (d, $J$ = 1.9 Hz, 1H), 3.98 (s, 3H), 3.95 (d, $J$ = 6.5 Hz, 2H), 2.83 (s, $J$ = 13.2 Hz, 6H), 2.15 (s, 4H), 2.05–1.93 (m, 1H), 1.88 (s, 1H), 1.73–1.48 (m, 2H), 1.43–1.08 (m, 7H); ESI MS *m/z* 508 $[C_{29}H_{34}ClN_3O_3 + H]^+$; HPLC 98.5% (AUC), $t_R$ = 10.37 min.

Example 325

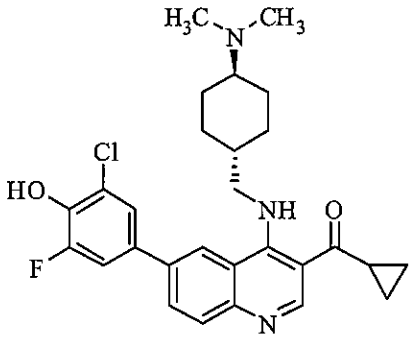
Cyclopropyl[6-(3,5-dichloro-4-hydroxyphenyl)-4-{[*trans*-4-(dimethylamino)cyclohexyl]methylamino}quinolin-3-yl]methanone



Following general procedure F, (6-bromo-4-{[*trans*-4-(dimethylamino)cyclohexyl]methylamino}quinolin-3-yl)(cyclopropyl)methanone (66 mg, 0.153 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (65 mg, 0.230 mmol) to afford the desired product (38 mg, 50%) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$ + Acetic Acid-$d_4$) $\delta$ 9.24 (s, 1H), 8.49 (d, $J$ = 1.7 Hz, 1H), 8.10 (dd, $J$ = 8.8, 1.8 Hz, 1H), 7.95 (d, $J$ = 8.8 Hz, 1H), 7.68 (s, 2H), 3.90 (d, $J$ = 6.5 Hz, 2H), 2.85 (d, $J$ = 11.2 Hz, 6H), 2.15 (t, $J$ = 11.3 Hz, 4H), 2.01–1.74 (m, 2H), 1.61 (dd, $J$ = 21.6, 12.1 Hz, 2H), 1.46–1.07 (m, 7H); ESI MS *m/z* 512 $[C_{28}H_{31}Cl_2N_3O_2 + H]^+$; HPLC 99.0% (AUC), $t_R$ = 10.65 min.

Example 327

6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-{[*trans*-4-(dimethylamino)cyclohexyl]methylamino}quinolin-3-yl](cyclopropyl)methanone

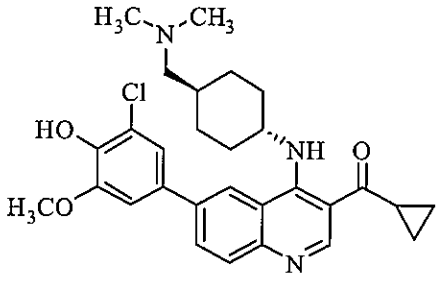


Following general procedure F, (6-bromo-4-{[*trans*-4-(dimethylamino)cyclohexyl]methylamino}quinolin-3-yl)(cyclopropyl)methanone (58 mg, 0.134 mmol) was reacted with

2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (55 mg, 0.201 mmol) to afford the desired product (19 mg, 29%) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$ + Acetic Acid-$d_4$) $\delta$ 9.24 (s, 1H), 8.52 (s, 1H), 8.11 (d, $J$ = 8.8 Hz, 1H), 7.95 (d, $J$ = 8.8 Hz, 1H), 7.56 (s, 1H), 7.49 (dd, $J$ = 11.5, 2.2 Hz, 1H), 3.92 (d, $J$ = 6.4 Hz, 2H), 2.84 (s, 6H), 2.15 (s, 4H), 2.02–1.93 (m, 1H), 1.88 (s, 1H), 1.72–1.51 (m, 2H), 1.43–1.10 (m, 7H); ESI MS $m/z$ 496 $[C_{28}H_{31}ClN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.39 min

Example 316

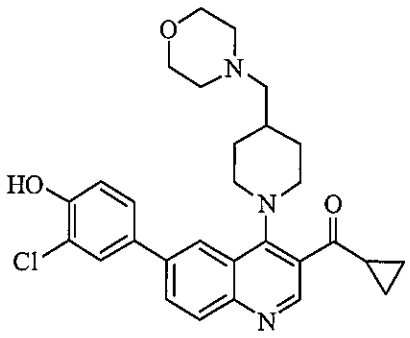
6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-{*trans*-4-[(dimethylamino)methyl]cyclohexylamino}quinolin-3-yl](cyclopropyl)methanone



Following general procedure F, {6-bromo-4-[*trans*-4-{(dimethylamino)methyl}cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone (58 mg, 0.135 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (57 mg, 0.203 mmol) to afford the desired product (21 mg, 30%) as a yellow-green solid: $^1$H NMR (300 MHz, $CD_3OD$ + Acetic Acid-$d_4$) $\delta$ 9.23 (s, 1H), 8.42 (s, 1H), 8.17 (dd, $J$ = 8.7, 1.7 Hz, 1H), 7.96 (d, $J$ = 8.8 Hz, 1H), 7.31 (d, $J$ = 2.1 Hz, 1H), 7.24 (d, $J$ = 2.0 Hz, 1H), 4.28 (s, 1H), 3.99 (s, 3H), 3.03 (d, $J$ = 6.7 Hz, 2H), 2.89 (s, 6H), 2.83 (d, $J$ = 4.7 Hz, 1H), 2.38 (d, $J$ = 12.1 Hz, 2H), 2.09–1.89 (m, 4H), 1.79–1.58 (m, $J$ = 24.6, 11.7 Hz, 2H), 1.38–1.09 (m, 7H); ESI MS $m/z$ 508 $[C_{29}H_{34}ClN_3O_3 + H]^+$; HPLC 98.8% (AUC), $t_R$ = 10.38 min.

Example 332

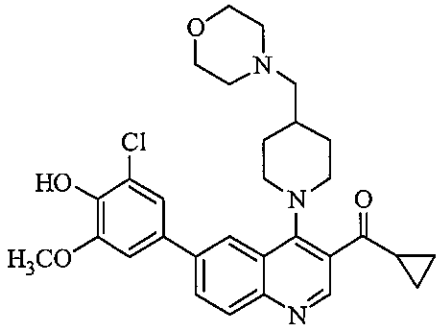
{6-(3-Chloro-4-hydroxyphenyl)-4-[4-(morpholinomethyl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure D, {6-bromo-4-[4-(morpholinomethyl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone (30 mg, 0.065 mmol) was reacted with 3-chloro-4-hydroxyphenylboronic acid (34 mg, 0.200 mmol) to afford the desired product (20.3 mg, 62%) as an off-white solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.73 (s, 1H), 8.29 (s, 1H), 8.04–7.98 (m, 2H), 7.71 (d, $J$ = 2.3 Hz, 1H), 7.54 (dd, $J$ = 8.4, 2.3 Hz, 1H), 7.07 (d, $J$ = 8.4 Hz, 1H), 3.74–3.71 (m, 3H), 3.53 (d, $J$ = 12.7 Hz, 2H), 3.34 (s, 3H), 3.26–3.15 (m, 2H), 2.59–2.46 (m, 4H), 2.38 (d, $J$ = 6.7 Hz, 2H), 1.98 (d, $J$ = 12.9 Hz, 3H), 1.66–1.52 (m, 2H), 1.36–1.27 (m, 2H), 1.27–1.20 (m, 2H); ESI MS *m/z* 506 [$C_{29}H_{32}ClN_3O_3$ + H]$^+$; HPLC 98.0% (AUC), $t_R$ = 10.44 min.

Example 334

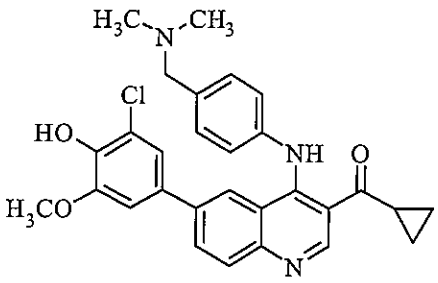
{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(morpholinomethyl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone




Following general procedure D, {6-bromo-4-[4-(morpholinomethyl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone (30 mg, 0.065 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (42 mg, 0.150 mmol) to afford the desired product (20 mg, 57%) as an off-white solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.73 (s, 1H), 8.33 (d, $J$ = 1.7 Hz, 1H), 8.07–7.97 (m, 2H), 7.33 (d, $J$ = 2.1 Hz, 1H), 7.26 (d, $J$ = 2.1 Hz, 1H), 4.00 (s, 3H), 3.75–3.68 (m, 4H), 3.55 (d, $J$ = 12.7 Hz, 2H), 3.25–3.15 (m, 2H), 2.61–2.41 (m, 5H), 2.36 (d, $J$ = 6.9 Hz, 2H), 2.07–1.90 (m, 3H), 1.68–1.54 (m, 2H), 1.37–1.27 (m, 2H), 1.26–1.20 (m, 2H); ESI MS *m/z* 536 [$C_{30}H_{34}ClN_3O_4$ + H]$^+$; HPLC >99% (AUC), $t_R$ = 10.57 min.

Example 339

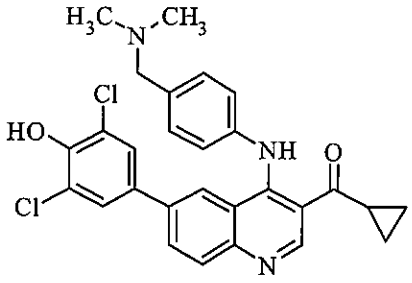
-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-{4-[(dimethylamino)methyl]phenylamino}quinolin-3-yl]cyclopropyl)methanone



Following general procedure F, (6-bromo-4-{4-[(dimethylamino)methyl]phenylamino}quinolin-3-yl)(cyclopropyl)methanone (38 mg, 0.090 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (38 mg, 0.133 mmol) to afford the desired product (39 mg, 86%) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.26 (s, 1H), 8.10–7.97 (m, 2H), 7.95 (s, 1H), 7.49 (d, $J$ = 8.4 Hz, 2H), 7.25 (d, $J$ = 8.3 Hz, 2H), 6.98 (d, $J$ = 1.9 Hz, 1H), 6.81 (d, $J$ = 2.0 Hz, 1H), 4.27 (s, 2H), 3.87 (s, 3H), 2.98–2.85 (m, 1H), 2.78 (s, 6H), 1.23–1.00 (m, 4H); ESI MS $m/z$ 502 $[C_{29}H_{28}ClN_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.69 min.

Example 345

Cyclopropyl[6-(3,5-dichloro-4-hydroxyphenyl)-4-{4-[(dimethylamino)methyl]phenylamino}quinolin-3-yl]methanone

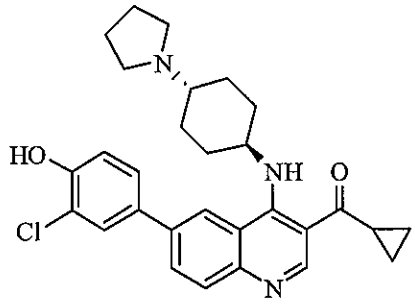


Following general procedure F, (6-bromo-4-{4-[(dimethylamino)methyl]phenylamino}quinolin-3-yl)(cyclopropyl)methanone (44 mg, 0.104 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (45 mg, 0.156 mmol) to afford the desired product (38 mg, 73%) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$ + Acetic Acid-$d_4$) $\delta$ 9.26 (s, 1H), 7.99 (d, $J$ = 10.0 Hz, 2H), 7.94 (s, 1H), 7.51 (d, $J$ = 8.4 Hz, 2H), 7.29 (s, $J$ = 9.9 Hz, 3H), 7.25 (s, 1H), 4.32 (s, 2H), 2.94–2.85 (m, 1H), 2.82 (s, 6H), 1.17–1.01 (m, 4H); ESI MS $m/z$ 506 $[C_{28}H_{25}Cl_2N_3O_2 + H]^+$; HPLC 94.4% (AUC), $t_R$ = 11.19 min.

Example 342

{6-(3-Chloro-4-hydroxyphenyl)-4-[*trans*-4-(pyrrolidin-1-yl)cyclohexylamino]quinolin-3-yl}(cyc

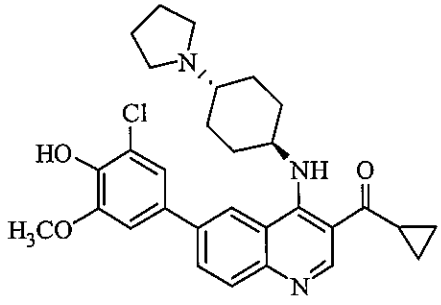
lopropyl)methanone



Following general procedure D, {6-bromo-4-[*trans*-4-(pyrrolidin-1-yl)cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone (24 mg, 0.054 mmol) was reacted with 3-chloro-4-hydroxyphenylboronic acid (26 mg, 0.150 mmol) to afford the desired product (22 mg, 83%) as a brown solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.14 (s, 1H), 8.34 (s, 1H), 8.01 (dd, $J$ = 8.8, 1.8 Hz, 1H), 7.92 (d, $J$ = 8.7 Hz, 1H), 7.70 (d, $J$ = 2.2 Hz, 1H), 7.52 (dd, $J$ = 8.5, 2.3 Hz, 1H), 7.06 (d, $J$ = 8.5 Hz, 1H), 4.18 (s, 1H), 3.24 (s, 4H), 3.07 (s, 1H), 2.90–2.78 (m, 1H), 2.34 (d, $J$ = 14.5 Hz, 4H), 2.02 (s, 4H), 1.73–1.51 (m, 4H), 1.26–1.15 (m, 2H), 1.15–1.02 (m, 2H); ESI MS *m/z* 490 $[C_{29}H_{32}ClN_3O_2 + H]^+$; HPLC 98.9% (AUC), $t_R$ = 10.90 min.

Example 343

{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[*trans*-4-(pyrrolidin-1-yl)cyclohexylamino]quinoli n-3-yl}(cyclopropyl)methanone

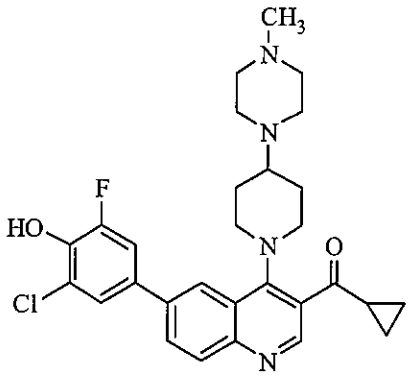


Following general procedure D, {6-bromo-4-[*trans*-4-(pyrrolidin-1-yl)cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone (25 mg, 0.150 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.150 mmol) to afford the desired product (20 mg, 67%), as a yellow-brown solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.14 (s, 1H), 8.34 (d, $J$ = 1.9 Hz, 1H), 8.03 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.92 (d, $J$ = 8.7 Hz, 1H), 7.29 (d, $J$ = 2.1 Hz, 1H), 7.22 (d, $J$ = 2.0 Hz, 1H), 4.15 (t, $J$ = 10.6 Hz, 1H), 3.99 (s, 3H), 3.16 (s, 4H), 2.94 (s, 1H), 2.89–2.79 (m, 1H), 2.38 (d, $J$ = 12.5 Hz, 2H), 2.28 (d, $J$ = 11.9 Hz, 2H), 1.99 (s, 4H), 1.70–1.50 (m, 4H), 1.23–1.17 (m, 2H), 1.13–1.06 (m, 2H); ESI MS *m/z* 520

$[C_{30}H_{34}ClN_3O_3 + H]^+$; HPLC 98.7% (AUC), $t_R$ = 10.99 min.

Example 349

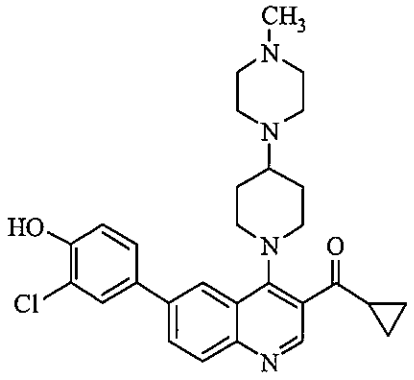
{6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure D, {6-bromo-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone (30 mg, 0.066 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (41 mg, 0.150 mmol) to afford the desired product (23 mg, 67%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.77 (s, 1H), 8.28 (d, $J$ = 1.3 Hz, 1H), 8.05–7.99 (m, 2H), 7.58–7.53 (m, 1H), 7.46 (dd, $J$ = 11.6, 2.2 Hz, 1H), 3.55 (d, $J$ = 13.1 Hz, 2H), 3.25– 3.15 (m, 2H), 2.93–2.47 (m, 10H), 2.39 (s, 3H), 2.12 (d, $J$ = 10.8 Hz, 2H), 1.96–1.82 (m, 2H), 1.34–1.28 (m, 2H), 1.27–1.20 (m, 2H); ESI MS *m/z* 523 $[C_{29}H_{32}ClFN_4O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.14 min.

Example 350

{6-(3-Chloro-4-hydroxyphenyl)-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone

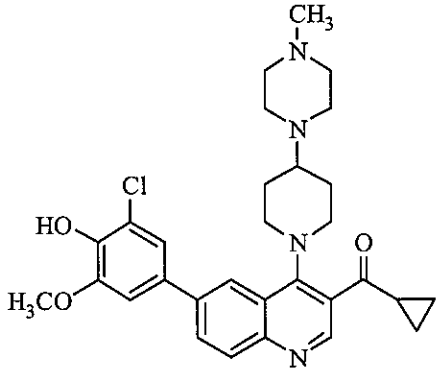


Following general procedure D, {6-bromo-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone (30 mg, 0.065 mmol) was reacted with 3-chloro-4-hydroxyphenylboronic acid (26 mg, 0.150

mmol) to afford the desired product (19 mg, 57%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.76 (s, 1H), 8.28 (s, 1H), 8.06–7.98 (m, 2H), 7.71 (d, $J$ = 2.3 Hz, 1H), 7.54 (dd, $J$ = 8.4, 2.3 Hz, 1H), 7.09–7.03 (m, 1H), 3.55 (d, $J$ = 12.8 Hz, 2H), 3.34 (s, 3H), 3.23–3.15 (m, 2H), 2.81–2.50 (m, 8H), 2.35 (s, 3H), 2.12 (d, $J$ = 10.6 Hz, 2H), 1.92–1.81 (m, 2H), 1.34–1.28 (m, 2H), 1.27–1.20 (m, 2H); ESI MS *m/z* 505 $[C_{29}H_{33}ClN_4O_4 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.01 min.

Example 351

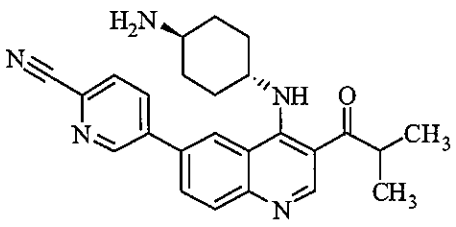
{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure D, {6-bromo-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone (102 mg, 0.225 mmol was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (42 mg, 0.150 mmol) to afford the desired product (16.8 mg, 48%) as an orange-brown solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.76 (2, 1H), 8.30 (d, $J$ = 1.4 Hz, 1H), 8.08–8.00 (m, 2H), 7.33 (d, $J$ = 2.1 Hz, 1H), 7.26 (d, $J$ = 2.0 Hz, 1H), 4.00 (s, 3H), 3.57 (d, $J$ = 12.9 Hz, 2H), 3.34 (s, 3H), 3.24–3.16 (m, 2H), 2.79–2.52 (m, 7H), 2.36 (s, 3H), 2.11 (d, $J$ = 11.3 Hz, 2H), 1.96–1.83 (m, 2H), 1.34–1.28 (m, 2H), 1.26–1.19 (m, 2H); ESI MS *m/z* 535 $[C_{30}H_{35}ClN_4O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.13 min.

Example 108

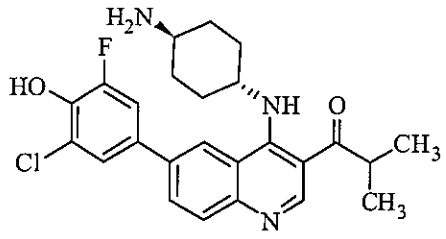
5-{4-[*trans*-4-Aminocyclohexylamino]-3-isobutyrylquinolin-6-yl}picolinonitrile



Following general procedure A-1, *tert*-butyl *trans*-4-[6-(6-cyanopyridin-3-yl)-3-isobutyrylquinolin-4-ylamino]cyclohexylcarbamate (47.7 mg, 0.093 mmol) was reacted with 6 N hydrochloric acid (3 mL) to afford the desired product (20.8 mg, 54%) as a light yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.13–9.11 (m, 1H), 9.06 (s, 1H), 8.55 (d, $J$ = 1.8 Hz, 1H), 8.39 (dd, $J$ = 8.1, 2.3 Hz, 1H), 8.19 (dd, $J$ = 8.7, 1.9 Hz, 1H), 8.04 (d, $J$ = 3.8 Hz, 1H), 8.02 (d, $J$ = 4.4 Hz, 1H), 4.35–4.27 (m, 1H), 3.82–3.73 (m, 1H), 3.29–3.22 (m, 1H), 2.40 (d, $J$ = 12.7 Hz, 2H), 2.19 (d, $J$ = 12.1 Hz, 2H), 1.78–1.68 (m, 2H), 1.67–1.56 (m, 2H), 1.25 (d, $J$ = 6.8 Hz, 6H); ESI MS *m/z* 414 $[C_{25}H_{27}N_5O + H]^+$; HPLC 98.3 % (AUC), $t_R$ = 7.96 min.

Example 205

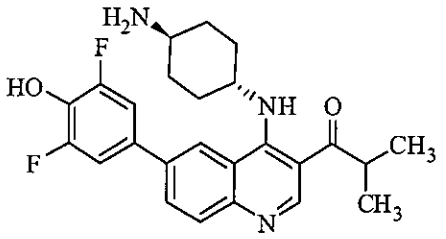
1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl}-2-methylpropan-1-one




Following general procedure A-2, *tert*-butyl *trans*-4-[6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-isobutyrylquinolin-4-ylamino]cyclohexylcarbamate (56 mg, 0.100 mmol) was reacted with TFA (2 mL) to afford the desired product (28 mg, 61%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.96 (s, 1H), 8.31 (d, $J$ = 1.8 Hz, 1H), 7.99 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.90 (d, $J$ = 8.7 Hz, 1H), 7.51–7.47 (m, 1H), 7.39 (dd, $J$ = 11.8, 2.3 Hz, 1H), 4.23–4.15 (m, 1H), 3.82–3.69 (m, 1H), 3.28–3.18 (m, 1H), 2.39 (d, $J$ = 12.7 Hz, 2H), 2.19 (d, $J$ = 12.0 Hz, 2H), 1.71 (q, $J$ = 10.5 Hz, 2H), 1.62–1.53 (m, 2H), 1.24 (d, $J$ = 6.8 Hz, 6H), ESI MS *m/z* 456$[C_{25}H_{27}ClFN_3O_2 + H]^+$; HPLC 98.1% (AUC), $t_R$ = 10.69 min.

Example 214

1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-difluoro-4-hydroxyphenyl)quinolin-3-yl}-2-methylpropan-1-one

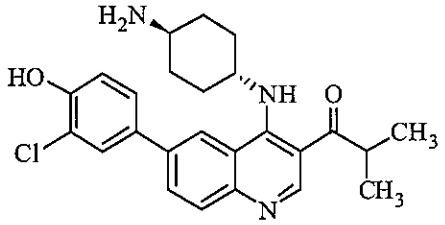



Following general procedure A-2, *tert*-butyl *trans*-4-[6-(3,5-difluoro-4-hydroxyphenyl)-3-isobutyrylquinolin-4-ylamino]cyclohexylcarbamate

(64 mg, 0.100 mmol) was reacted with TFA (2 mL) to afford the desired product (10.8 mg, 36%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.97 (s, 1H), 8.32 (d, $J$ = 1.8 Hz, 1H), 8.00 (dd, $J$ = 8.7, 2.0 Hz, 1H), 7.90 (d, $J$ = 8.7 Hz, 1H), 7.28 (dd, $J$ = 7.8, 1.9 Hz, 2H), 4.26–4.15 (m, 1H), 3.81–3.69 (m, 1H), 3.27–3.18 (m, 1H), 2.38 (d, $J$ = 12.6 Hz, 2H), 2.18 (d, $J$ = 11.7 Hz, 2H), 1.69 (q, $J$ = 10.4 Hz, 2H), 1.61–1.53 (m, 2H), 1.24 (d, $J$ = 6.8 Hz, 6H); ESI MS *m/s* 440 $[C_{25}H_{27}F_2N_3O_2 + H]^+$; HPLC 95.0 % (AUC), $t_R$ = 10.50 min.

Example 219

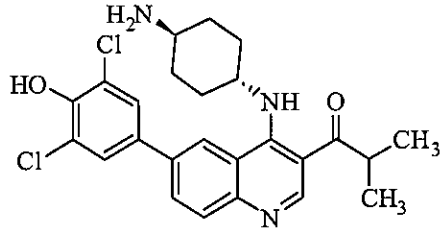
1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3-chloro-4-hydroxyphenyl)quinolin-3-yl}-2-methylpropan-1-one




Following general procedure A-2, *tert*-butyl *trans*-4-[6-(3-chloro-4-hydroxyphenyl)-3-isobutyrylquinolin-4-ylamino]cyclohexylcarbamate (39 mg, 0.072 mmol) was reacted with TFA (2 mL) to afford the desired product (15.4 mg, 41%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.05 (s, 1H), 8.40 (s, 1H), 8.13 (d, $J$ = 8.8 Hz, 1H), 7.95 (d, $J$ = 8.7 Hz, 1H), 7.72 (d, $J$ = 2.3 Hz, 1H), 7.54 (dd, $J$ = 8.4, 2.3 Hz, 1H), 7.08 (d, $J$ = 8.4 Hz, 1H), 4.31 (s, 1H), 3.80–3.72 (m, 1H), 3.29–3.26 (m, 1H), 2.44 (d, $J$ = 12.7 Hz, 2H), 2.22 (d, $J$ = 10.6 Hz, 2H), 1.84–1.74 (m, 2H), 1.67–1.56 (m, 2H), 1.25 (d, $J$ = 6.8 Hz, 6H); ESI MS *m/z* 438 $[C_{25}H_{28}ClN_3O_2 + H]^+$; HPLC 96.5% (AUC), $t_R$ = 9.19 min.

Example 225(a)

1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}-2-methylpropan-1-one

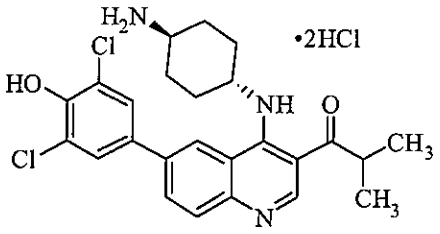



Following general procedure A-2, *tert*-butyl *trans*-4-[6-(3,5-dichloro-4-hydroxyphenyl)-3-isobutyrylquinolin-4-ylamino]cyclohexylcarbamate (60 mg, 0.100 mmol) was reacted with TFA (2 mL) to afford the desired product (20.3 mg, 43%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.98 (s, 1H), 8.33 (s, 1H), 8.02 (d, $J$ = 8.8 Hz, 1H), 7.93 (d, $J$ = 8.7 Hz, 1H), 7.67 (s, 2H), 4.18 (s, 1H), 3.80–3.70 (m, 1H), 2.96 (s, 1H),

2.40 (d, $J$ = 11.4 Hz, 2H), 2.20 (d, $J$ = 12.2 Hz, 2H), 1.73 (q, $J$ = 11.1 Hz, 2H), 1.65–1.53 (m, 2H), 1.24 (d, $J$ = 6.8 Hz, 6H); ESI MS $m/z$ 472 $[C_{25}H_{27}Cl_2N_3O_2 + H]^+$; HPLC 98.7% (AUC), $t_R$ = 10.95 min.

Example 225(b)

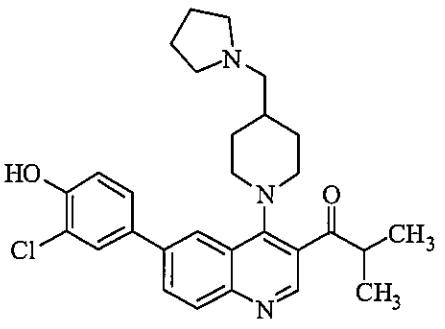
1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}-2-methylpropan-1-one dihydrochloride



To a suspension of 1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}-2-methylpropan-1-one (3.0 g, 6.4 mmol) in THF (50 mL) was added 3 M HCl (30 mL) and the reaction micture was heated at 60 °C for 2 h. The reaction mixture was cooled and the precipitate was filtered to afford the desired product (4.7 g, 92%) as an off-white solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.18 (bs, 1H), 8.49 (bs, 1H), 8.27 (d, $J$ = 8.8 Hz, 1H), 7.02 (d, $J$ = 8.8 Hz, 1H), 7.75 (bs, 2H), 4.54 (bs, 1H), 3.80–3.69 (m, 1H), 2.52 (bs, 2H), 2.29–2.22 (m, 2H), 1.94–1.81 (m, 2H),, 1.75–1.62 (m, 2H), 1.24 (d, $J$ = 6.8 Hz, 6H); ESI MS $m/z$ 472 $[C_{25}H_{27}Cl_2N_3O_2 + H]^+$.

Example 318

1-{6-(3-Chloro-4-hydroxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}-2-methylpropan-1-one

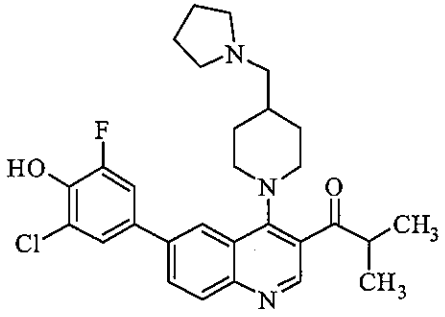


Following general procedure D, 1-{6-bromo-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}-2-methylpropan-1-one (30 mg, 0.068 mmol) was reacted with 3-chloro-4-hydroxyphenylboronic acid (17 mg, 0.100 mmol) to afford the desired product (18.9 mg, 56%) as an off-white solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.75 (s, 1H), 8.28 (d, $J$ = 1.2 Hz, 1H), 8.06–7.99 (m, 2H), 7.70 (d, $J$ = 2.3 Hz, 1H), 7.54 (dd, $J$ = 8.4, 2.3 Hz, 1H), 7.06 (d, $J$ = 8.4 Hz, 1H), 3.54–3.41 (m, 3H), 3.23–3.11 (m, 6H),

3.03 (d, $J$ = 6.8 Hz, 2H), 2.11–1.93 (m, 7H), 1.74–1.62 (m, 2H), 1.26 (d, $J$ = 6.9 Hz, 6H); ESI MS $m/z$ 492 $[C_{29}H_{34}ClN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.93 min.

Example 323

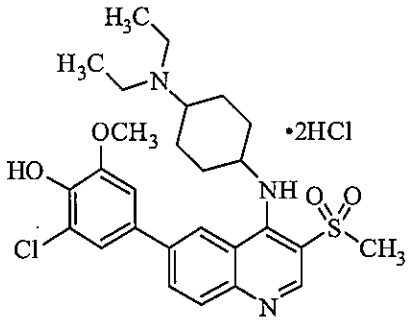
1-{6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}-2-methylpropan-1-one



Following general procedure D, 1-{6-bromo-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}-2-methylpropan-1-one (30 mg, 0.068 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (27 mg, 0.102 mmol) to afford the desired product (27.4 mg, 79%) as a yellow-brown solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.77 (s, 1H), 8.27 (d, $J$ = 1.8 Hz, 1H), 8.07–7.99 (m, 2H), 7.55–7.51 (m, 1H), 7.44 (dd, $J$ = 11.6, 2.2 Hz, 1H), 3.54–3.42 (m, 3H), 3.38–3.33 (m, 4H), 3.21–3.11 (m, 4H), 2.15–2.06 (m, 5H), 1.99 (d, $J$ = 11.0 Hz, 2H), 1.75–1.64 (m, 2H), 1.26 (d, $J$ = 6.9 Hz, 6H); ESI MS $m/z$ 510 $[C_{29}H_{33}ClFN_3O_2 + H]^+$; HPLC 97.7% (AUC), $t_R$ = 11.07 min.

Example 240

2-Chloro-4-{4-[4-(diethylamino)cyclohexylamino]-3-(methylsulfonyl)quinolin-6-yl}-6-methoxy phenol dihydrochloride

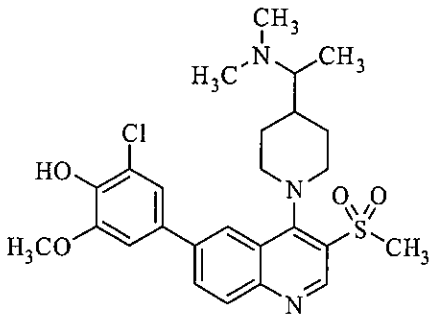


Following general procedure D, $N^1$-[6-bromo-3-(methylsulfonyl)quinolin-4-yl]-$N^4$,$N^4$-diethylcyclohexane-1,4-diamine (40 mg, 0.088 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (50 mg, 0.176 mmol)

to afford, after treatment with 1M HCl, the desired product (24.5 mg, 50%) as an orange-brown solid: $^1$H NMR (500 MHz, DMSO-$d_6$+$D_2O$) $\delta$ 8.91 (d, $J$ = 8.0 Hz, 1H), 8.44–8.32 (m, 2H), 8.08 (d, $J$ = 8.5 Hz, 1H), 7.48–7.27 (m, 2H), 3.98–3.95 (m, 3H), 3.46 (d, $J$ = 11.4 Hz, 5H), 3.28–3.03 (m, 5H), 2.38 (s, 2H), 2.27 (d, $J$ = 13.0 Hz, 1H), 2.15 (s, 1H), 2.10–1.96 (m, 2H), 1.90–1.69 (m, 3H), 1.33–1.23 (m, 6H); ESI MS $m/z$ 532 $[C_{27}H_{34}ClN_3O_4S + H]^+$; HPLC 98.9% (AUC), $t_R$ = 10.49 min.

Example 245

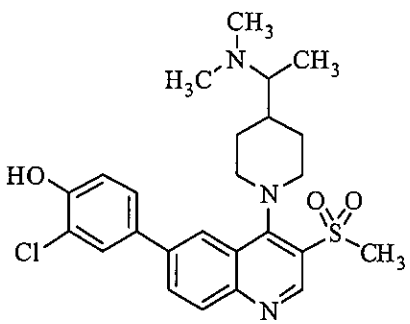
2-Chloro-4-[4-{4-[1-(dimethylamino)ethyl]piperidin-1-yl}-3-(methylsulfonyl)quinolin-6-yl]-6-methoxyphenol



Following general procedure D, 1-{1-[6-bromo-3-(methylsulfonyl)quinolin-4-yl]piperidin-4-yl}-*N*,*N*-dimethylethanamine (35 mg, 0.079 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.150 mmol) to afford the desired product (22.6 mg, 55%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.22 (s, 1H), 8.41 (s, 1H), 8.20–8.15 (m, 2H), 7.33 (d, $J$ = 2.1 Hz, 1H), 7.25 (d, $J$ = 2.1 Hz, 1H), 4.00 (s, 3H), 3.71 (t, $J$ = 11.8 Hz, 2H), 3.56 (d, $J$ = 11.9 Hz, 2H), 3.49–3.42 (m, 3H), 2.96 (s, 1H), 2.64 (s, 6H), 2.10–1.90 (m, 3H), 1.82–1.63 (m, 2H), 1.26 (d, $J$ = 6.7 Hz, 3H); ESI MS $m/z$ 518 $[C_{26}H_{32}ClN_3O_4S + H]^+$; HPLC 98.8 % (AUC), $t_R$ = 10.97 min.

Example 246

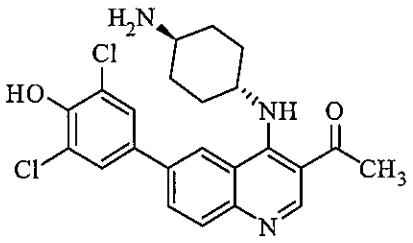
2-Chloro-4-[4-{4-[1-(dimethylamino)ethyl]piperidin-1-yl}-3-(methylsulfonyl)quinolin-6-yl]phenol



Following general procedure D, 1-{1-[6-bromo-3-(methylsulfonyl)quinolin-4-yl]piperidin-4-yl}-*N*,*N*-dimethylethanamine (35 mg, 0.079 mmol) was reacted with 3-chloro-4-hydroxyphenylboronic acid (26 mg, 0.150 mmol) to afford the desired product (9.4 mg, 24%) as an off-white solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.23 (s, 1H), 8.39 (d, $J$ = 1.5 Hz, 1H), 8.24–8.13 (m, 2H), 7.74 (d, $J$ = 2.2 Hz, 1H), 7.58 (dd, $J$ = 8.4, 2.3 Hz, 1H), 7.09 (d, $J$ = 8.4 Hz, 1H), 3.81–3.70 (m, 2H), 3.55 (s, 2H), 3.45 (s, 3H), 3.28–3.22 (m, 1H), 2.84 (s, 6H), 2.14 (d, $J$ = 7.9 Hz, 1H), 1.95 (d, $J$ = 11.0 Hz, 2H), 1.87–1.68 (m, 2H), 1.38 (d, $J$ = 6.7 Hz, 3H); ESI MS *m/z* 488 $[C_{25}H_{30}ClN_3O_3S + H]^+$; HPLC >99% (AUC), $t_R$ = 10.84 min.

Example 256

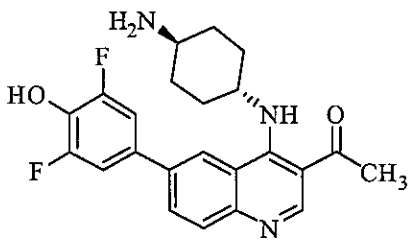
1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}ethanone



Following general procedure A-2, *tert*-butyl *trans*-4-[3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino]cyclohexylcarbamate (46 mg, 0.085 mmol) was reacted with TFA (2 mL) to afford the desired product (19.4 mg, 51%) as an orange solid: $^1$H NMR (500 MHz, DMSO-$d_6$+$D_2O$) $\delta$ 8.92 (s, 1H), 8.20 (s, 1H), 8.04 (d, $J$ = 8.9 Hz, 1H), 7.89 (d, $J$ = 8.7 Hz, 1H), 7.63 (s, 2H), 4.09 (s, 1H), 3.20–3.11 (m, 1H), 2.68 (s, 3H), 2.26 (d, $J$ = 12.7 Hz, 2H), 2.08 (d, $J$ = 10.1 Hz, 2H), 1.69–1.58 (m, 2H), 1.57–1.46 (m, 2H); ESI MS *m/z* 444 $[C_{23}H_{23}Cl_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 8.70 min.

Example 258

1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-difluoro-4-hydroxyphenyl)quinolin-3-yl}ethanone

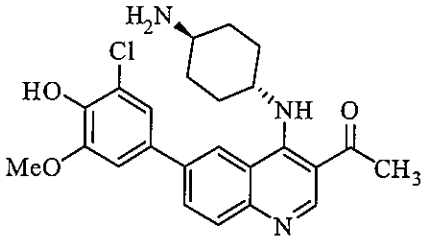


Following general procedure A-2, *tert*-butyl *trans*-4-[3-acetyl-6-(3,5-difluoro-4-hydroxyphenyl)quinolin-4-ylamino]cyclohexylcarbamate (30 mg, 0.059 mmol) was reacted with TFA (2 mL) to afford the desired product (14.2 mg, 59%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.98 (s, 1H), 8.35 (d, $J$ = 1.9 Hz, 1H),

8.07–8.00 (m, 1H), 7.93 (d, $J$ = 8.7 Hz, 1H), 7.33 (dd, $J$ = 8.0, 1.6 Hz, 2H), 4.29 (s, 1H), 3.23 (s, 1H), 2.71 (s, 3H), 2.41 (d, $J$ = 12.2 Hz, 2H), 2.19 (d, $J$ = 12.1 Hz, 2H), 1.76–1.67 (m, 2H), 1.63–1.54 (m, 2H); ESI MS $m/z$ 412 $[C_{23}H_{23}F_2N_3O_2 + H]^+$; HPLC 98.7% (AUC), $t_R$ = 8.13 min.

Example 259

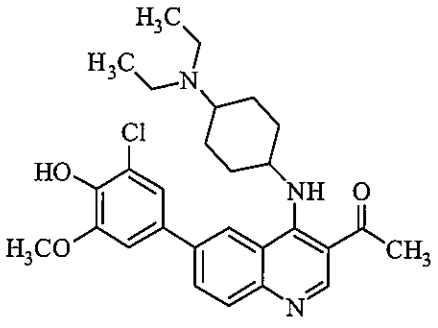
1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl} ethanone



Following general procedure A-2, *tert*-butyl *trans*-4-[3-acetyl-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-4-ylamino]cyclohexylcarbamate (35 mg, 0.065 mmol) was reacted with TFA (2 mL) to afford the desired product (13.6 mg, 48%) as an orange solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.95 (s, 1H), 8.32 (d, $J$ = 1.8 Hz, 1H), 8.04 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.92 (d, $J$ = 8.7 Hz, 1H), 7.27 (d, $J$ = 2.1 Hz, 1H), 7.22 (d, $J$ = 2.0 Hz, 1H), 4.23 (t, $J$ = 11.1 Hz, 1H), 3.99 (s, 3H), 3.24–3.16 (m, 1H), 2.70 (s, $J$ = 6.3 Hz, 3H), 2.41 (d, $J$ = 12.4 Hz, 2H), 2.18 (d, $J$ = 12.1 Hz, 2H), 1.80–1.66 (m, 2H), 1.61–1.50 (m, 2H); ESI MS $m/z$ 440 $[C_{24}H_{26}ClN_3O_3 + H]^+$; HPLC 97.6% (AUC), $t_R$ = 8.45 min.

Example 303

1-{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(diethylamino)cyclohexylamino]quinolin-3-yl}ethanone

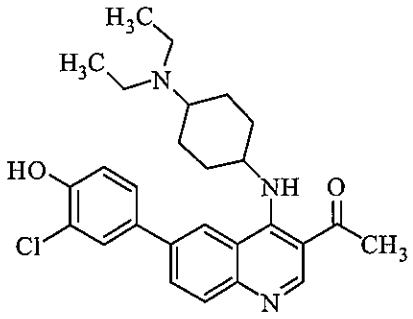


Following general procedure D, 1-{6-bromo-4-[4-(diethylamino)cyclohexylamino]quinolin-3-yl}ethanone (42 mg, 0.100 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (57 mg, 0.200 mmol) to afford the desired product (21.5 mg, 43%) as an orange solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.93 (s, 1H), 8.32 (d, $J$ = 1.8 Hz, 1H), 8.03 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.90 (d, $J$ = 8.7 Hz, 1H), 7.29 (d, $J$ = 2.1 Hz, 1H), 7.22 (d, $J$ = 2.1 Hz, 1H), 4.26 (s, 1H), 3.99 (s, 3H),

3.08 (q, $J$ = 7.2 Hz, 4H), 2.69 (s, 3H), 2.44 (s, 2H), 2.14 (s, 2H), 1.79–1.64 (m, 4H), 1.29 (t, $J$ = 7.2 Hz, 6H); ESI MS *m/z* 496 $[C_{28}H_{34}ClN_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.50 min.

Example 335

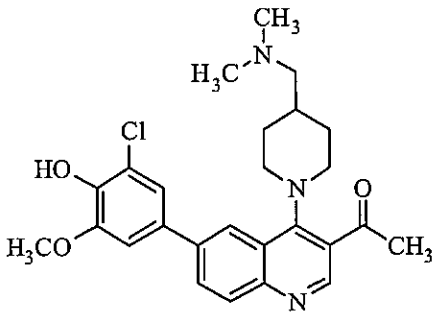
1-{6-(3-Chloro-4-hydroxyphenyl)-4-[4-(diethylamino)cyclohexylamino]quinolin-3-yl}ethanone



Following general procedure D, 1-{6-bromo-4-[4-(diethylamino)cyclohexylamino]quinolin-3-yl}ethanone (30 mg, 0.072 mmol) was reacted with 3-chloro-4-hydroxyphenylboronic acid (34 mg, 0.200 mmol) to afford the desired product (19.7 mg, 59%) as a yellow-brown solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.95 (s, 1H), 8.34 (d, $J$ = 1.8 Hz, 1H), 8.02 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.91 (d, $J$ = 8.7 Hz, 1H), 7.71 (d, $J$ = 2.3 Hz, 1H), 7.53 (dd, $J$ = 8.4, 2.3 Hz, 1H), 7.06 (d, $J$ = 8.4 Hz, 1H), 4.31 (s, 1H), 3.52–3.43 (m, 1H), 3.22 (q, $J$ = 7.2 Hz, 4H), 2.70 (s, 3H), 2.46 (d, $J$ = 12.3 Hz, 2H), 2.20 (d, $J$ = 11.9 Hz, 2H), 1.88–1.65 (m, 4H), 1.41–1.30 (m, 6H); ESI MS *m/z* 466 $[C_{27}H_{32}ClN_3O_2 + H]^+$; HPLC 97.7% (AUC), $t_R$ = 10.44 min.

Example 305

1-[6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-{4-[(dimethylamino)methyl]piperidin-1-yl}quinolin-3-yl]ethanone

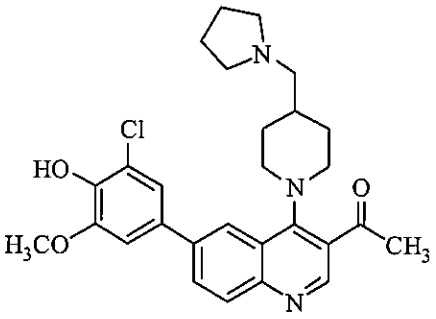


Following general procedure D, 1-(6-bromo-4-{4-[(dimethylamino)methyl]piperidin-1-yl}quinolin-3-yl)ethanone (17.7 mg, 0.045 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (28 mg, 0.100 mmol)

to afford the desired product (10.4 mg, 49%) as an off-white solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.76 (s, 1H), 8.32 (d, $J$ = 1.3 Hz, 1H), 8.07–7.97 (m, 2H), 7.31 (d, $J$ = 2.1 Hz, 1H), 7.25 (d, $J$ = 2.1 Hz, 1H), 4.00 (s, 3H), 3.48 (d, $J$ = 12.5 Hz, 2H), 3.16 (t, $J$ = 11.5 Hz, 2H), 2.68 (s, 3H), 2.43 (d, $J$ = 6.6 Hz, 2H), 2.36 (s, 6H), 2.01–1.85 (m, 3H), 1.67–1.54 (m, 2H); ESI MS *m/z* 468 $[C_{26}H_{30}ClN_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.12 min.

Example 321

1-{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}ethanone



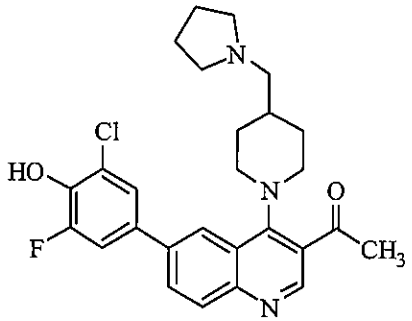
Following general procedure D,

1-{6-bromo-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}ethanone (30 mg, 0.072 mmol) was reacted with

2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.150 mmol) to afford the desired product (25.4 mg, 71%) as a yellow brown solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.80 (s, 1H), 8.29 (s, 1H), 8.03 (s, 2H), 7.30 (d, $J$ = 2.1 Hz, 1H), 7.24 (d, $J$ = 2.0 Hz, 1H), 3.99 (s, 3H), 3.49 (d, $J$ = 12.9 Hz, 2H), 3.24–3.12 (m, 6H), 3.02 (d, $J$ = 5.5 Hz, 2H), 2.70 (s, 3H), 2.13–1.96 (m, 7H), 1.77–1.62 (m, 2H); ESI MS *m/z* 494 $[C_{28}H_{32}ClN_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.45 min.

Example 336

1-{6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}ethanone

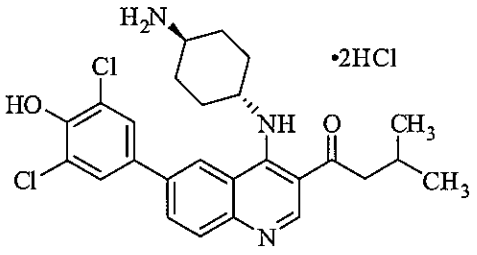


Following general procedure D,

1-{6-bromo-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}ethanone (30 mg, 0.072 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (41 mg, 0.150 mmol) to afford the desired product (19.4 mg, 56%) as a yellow-brown solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.81 (s, 1H), 8.26 (d, $J$ = 1.8 Hz, 1H), 8.07–7.96 (m, 2H), 7.56–7.48 (m, 1H), 7.44 (dd, $J$ = 11.6, 2.2 Hz, 1H), 3.48 (d, $J$ = 12.6 Hz, 2H), 3.38–3.33 (m, 4H), 3.23–3.13 (m, 4H), 2.71 (s, 3H), 2.16–2.06 (m, 5H), 2.00 (d, $J$ = 11.1 Hz, 2H), 1.78–1.65 (m, 2H);ESI MS *m/z* 482 $[C_{27}H_{29}ClN_3O_2 + H]^+$; HPLC 98.9% (AUC), $t_R$ = 10.36 min.

Example 267

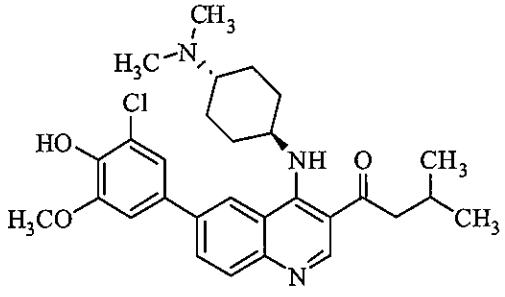
1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}-3-methylbutan-1-one dihydrochloride




Following general procedure D, *tert*-butyl *trans*-4-[6-(3,5-dichloro-4-hydroxyphenyl)-3-(3-methylbutanoyl)quinolin-4-ylamino]cyclohexyl carbamate (36 mg, 0.061 mmol) was reacted with TFA (2 mL) to afford the desired product (10.4 mg, 35%) as a white solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.16 (s, 1H), 8.46 (s, 1H), 8.29 (d, $J$ = 8.7 Hz, 1H), 8.00 (d, $J$ = 8.8 Hz, 1H), 7.74 (s, 2H), 4.56 (s, 1H), 3.27 (s, 1H), 3.03 (d, $J$ = 6.8 Hz, 2H), 2.51 (s, 2H), 2.36–2.21 (m, 3H), 1.96–1.83 (m, 2H), 1.67 (d, $J$ = 12.5 Hz, 2H), 1.05 (d, $J$ = 6.6 Hz, 6H); ESI MS *m/z* 486 $[C_{26}H_{29}Cl_2N_3O_2 + H]^+$; HPLC 98.2% (AUC), $t_R$ = 10.02 min.

Example 348

1-{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[*trans*-4-(dimethylamino)cyclohexylamino]quinolin-3-yl}-3-methylbutan-1-one

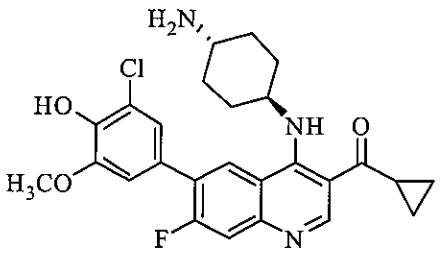



Following general procedure D, 1-{6-bromo-4-[*trans*-4-(dimethylamino)cyclohexylamino]quinolin-3-yl}-3-methylbutan-1-one

(13 mg, 0.030 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (21 mg, 0.075 mmol) to afford the desired product (8.8 mg, 58%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 8.94 (s, 1H), 8.35 (d, $J$ = 1.8 Hz, 1H), 8.03 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.90 (d, $J$ = 8.7 Hz, 1H), 7.29 (d, $J$ = 2.1 Hz, 1H), 7.22 (d, $J$ = 2.1 Hz, 1H), 4.24 (t, $J$ = 10.8 Hz, 1H), 3.99 (s, 3H), 2.94 (d, $J$ = 7.0 Hz, 2H), 2.82 (s, 1H), 2.53 (s, 6H), 2.42 (d, $J$ = 12.0 Hz, 2H), 2.33–2.21 (m, 1H), 2.14 (d, $J$ = 12.0 Hz, 2H), 1.72–1.53 (m, 4H), 1.03 (d, $J$ = 6.7 Hz, 6H); ESI MS $m/z$ 510 [$C_{29}H_{36}ClN_3O_3$ + H]$^+$; HPLC >99% (AUC), $t_R$ = 11.38 min.

Example 284

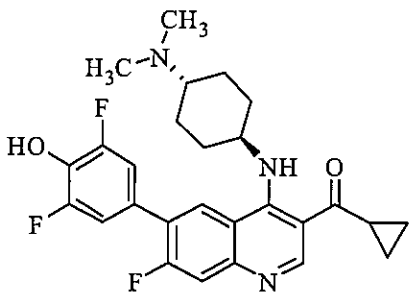
{4-[*trans*-4-aminocyclohexylamino]-6-(3-chloro-4-hydroxy-5-methoxyphenyl)-7-fluoroquinolin-3-yl}(cyclopropyl)methanone



Following general procedure A-2, *tert*-butyl *trans*-4-[6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-(cyclopropanecarbonyl)-7-fluoroquinolin-4-ylamino]cyclohexylcarbamate (53 mg, 0.091 mmol) was reacted with TFA (2 mL) to afford the desired product (30 mg, 48%) as a light yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.23 (s, 1H), 8.35 (d, $J$ = 7.8 Hz, 1H), 7.65 (d, $J$ = 11.2 Hz, 1H), 7.21 (d, $J$ = 10.6 Hz, 2H), 4.20 (s, 1H), 3.95 (s, 3H), 2.84 (s, 1H), 2.39 (d, $J$ = 12.4 Hz, 2H), 2.18 (d, $J$ = 11.5 Hz, 2H), 1.83–1.64 (m, 2H), 1.62–1.43 (m, 2H), 1.31–1.09 (m, 4H); ESI MS $m/z$ 484 [$C_{26}H_{27}ClFN_3O_3$ + H]$^+$; HPLC 98.1% (AUC), $t_R$ = 8.84 min.

Example 294

Cyclopropyl{6-(3,5-difluoro-4-hydroxyphenyl)-4-[*trans*-4-(dimethylamino)cyclohexylamino]-7-fluoroquinolin-3-yl}methanone

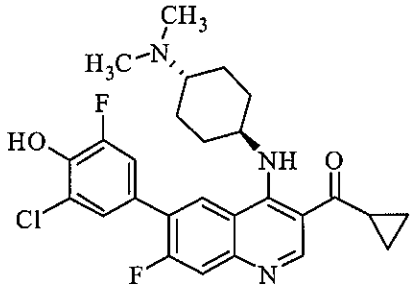


Following general procedure F, {6-bromo-4-[*trans*-4-(dimethylamino)cyclohexylamino]-7-fluoroquinolin-3-yl}(cyclopropyl)met

hanone (43 mg, 0.099 mmol) was reacted with 2,6-difluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (38 mg, 0.149 mmol) to afford the desired product (14 mg, 29%) as a light yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.27 (s, 1H), 8.37 (d, $J$ = 7.8 Hz, 1H), 7.68 (d, $J$ = 11.1 Hz, 1H), 7.33 (d, $J$ = 7.8 Hz, 2H), 4.31 (s, 1H), 3.47–3.35 (m, 1H), 3.27 (s, $J$ = 6.8 Hz, 1H), 2.88 (s, 5H), 2.87–2.75 (m, 1H), 2.43 (s, 2H), 2.26 (s, 2H), 1.88–1.64 (m, 4H), 1.35–1.13 (m, 4H), ESI MS $m/z$ 484 $[C_{27}H_{28}F_3N_3O_2 + H]^+$; HPLC 98.3% (AUC), $t_R$ = 8.83 min.

Example 295

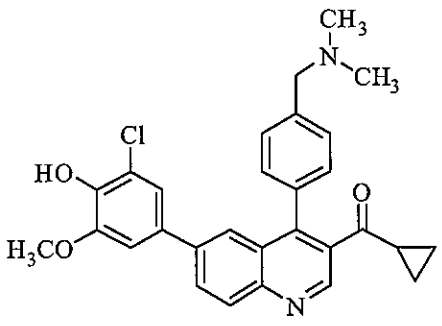
{6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[*trans*-4-(dimethylamino)cyclohexylamino]-7-fluoro quinolin-3-yl}(cyclopropyl)methanone



Following general procedure F, {6-bromo-4-[*trans*-4-(dimethylamino)cyclohexylamino]-7-fluoroquinolin-3-yl}(cyclopropyl)met hanone (38 mg, 0.087 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (35 mg, 0.131 mmol) to afford the desired product (39 mg, 90%) as a green solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.19 (s, 1H), 8.29 (d, $J$ = 8.1 Hz, 1H), 7.60 (d, $J$ = 11.8 Hz, 1H), 7.49 (s, 1H), 7.42 (dt, $J$ = 11.6, 2.0 Hz, 1H), 4.18 (s, 1H), 2.86 (s, 6H), 2.85–2.78 (m, 1H), 2.42 (s, 2H), 2.19 (s, 2H), 1.76–1.62 (m, 4H), 1.22–1.07 (m, 5H); ESI MS $m/z$ 500 $[C_{27}H_{28}ClF_2N_3O_2 + H]^+$; HPLC 97.4% (AUC), $t_R$ = 9.21 min.

Example 356

6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-{4-[(dimethylamino)methyl]phenyl}quinolin-3-yl]( cyclopropyl)methanone

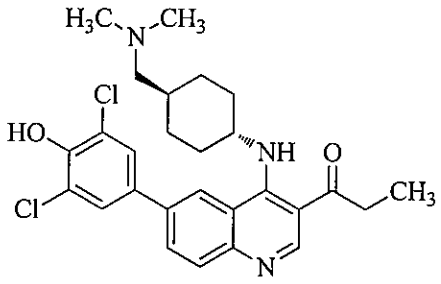


Following general procedure F,

[4-chloro-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl](cyclopropyl)methanone (18 mg, 0.046 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (20 mg, 0.067 mmol) to afford the desired product (10 mg, 45%) as a light brown-yellow solid: $^1$H NMR (300 MHz, $CD_3OD$ + Acetic Acid-$d_6$) $\delta$ 8.99 (s, 1H), 8.26–8.10 (m, 2H), 7.75 (d, $J$ = 7.6 Hz, 3H), 7.62 (d, $J$ = 8.1 Hz, 2H), 7.08 (dd, $J$ = 14.8, 2.0 Hz, 2H), 4.41 (s, 2H), 3.91 (s, $J$ = 10.1 Hz, 3H), 2.89 (s, 6H), 2.11–2.00 (m, 1H), 1.08–0.97 (m, 2H), 0.83–0.73 (m, 2H); ESI MS *m/z* 487 [$C_{29}H_{27}ClN_2O_3$ + H]$^+$; HPLC 96.5% (AUC), $t_R$ = 12.01 min.

Example 715

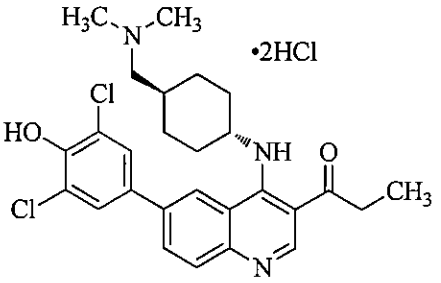
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((trans-4-((dimethylamino)methyl)cyclohexyl)amino) quinolin-3-yl)propan-1-one



Following general procedure M, 1-(6-bromo-4-((trans-4-((dimethylamino)methyl)cyclohexyl) amino)quinolin-3-yl)propan-1-one (125 mg, 0.30 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (95 mg, 0.33 mmol) to afford the desired product (53 mg, 35%) as a yellow solid. $^1$H NMR (500 MHz, DMSO - $d_6$) $\delta$ 10.50 (d, $J$ = 8.0 Hz, 1H), 8.96 (s, 1H), 8.31 (d, $J$ = 2.1 Hz, 1H), 8.04 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.85 (d, $J$ = 8.7 Hz, 1H), 7.72 (s, 2H), 4.14 – 4.06 (m, 1H), 3.13 (q, $J$ = 7.2 Hz, 2H), 2.23 – 2.15 (m, 2H), 2.18 (s, 6H), 2.15 – 2.10 (m, 1H), 1.88 (d, $J$ = 12.9 Hz, 2H), 1.61 – 1.43 (m, 3H), 1.17 – 1.01 (m, 5H). ESI MS *m/z* 500 [$C_{27}H_{31}Cl_2N_3O_2$ + H]$^+$; HPLC >99% (AUC), $t_R$ = 8.70 min.

Example 716

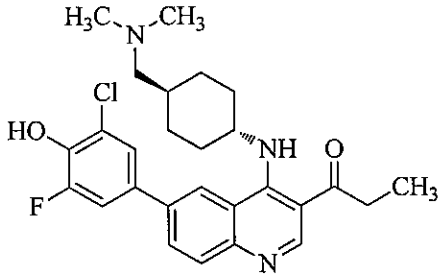
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((trans-4-((dimethylamino)methyl)cyclohexyl)amino) quinolin-3-yl)propan-1-one dihydrochloride



To a solution of 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((trans-4-((dimethylamino)methyl) cyclohexyl)amino)quinolin-3-yl)propan-1-one (3.75 g, 7.49 mmol) in methanol (150 mL) and dichloromethane (150 mL) was added HCl (1.25 M in methanol, 30 mL, 37.5 mmol). The solution was allowed to stir for 5 min, then concentrated under reduced pressure. The resultant solid was triturated with dichloromethane (25 mL), then dried under vacuum at 85 °C to afford the desired product (4.1 g, 95%) as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.12 (br s, 1H), 8.47 (br s, 1H), 8.26 (dd, $J$ = 8.7, 1.8 Hz, 1H), 7.99 (d, $J$ = 8.8 Hz, 1H), 7.73 (s, 2H), 4.51 (br s, 1H), 3.18 (q, $J$ = 7.2 Hz, 2H), 3.09 (d, $J$ = 6.5 Hz, 2H), 2.93 (s, 6H), 2.45 (d, $J$ = 12.3 Hz, 2H), 2.11 – 2.02 (m, 3H), 1.88 – 1.76 (m, 2H), 1.40 – 1.30 (m, 2H), 1.24 (t, $J$ = 7.1 Hz, 3H). APCI MS *m/z* 500 $[C_{27}H_{31}Cl_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 8.99 min.

Example 714

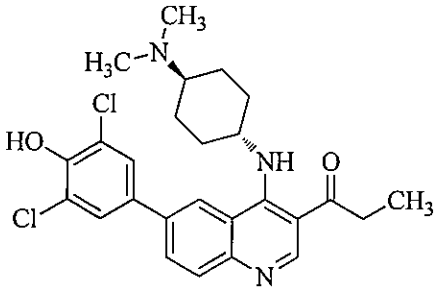
1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((trans-4-((dimethylamino)methyl) cyclohexyl)amino)quinolin-3-yl)propan-1-one




Following general procedure M, 1-(6-bromo-4-((trans-4-((dimethylamino)methyl)cyclohexyl) amino)quinolin-3-yl)propan-1-one (125 mg, 0.30 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (90 mg, 0.33 mmol) to afford the desired product (41 mg, 28%) as a yellow solid. $^1$H NMR (500 MHz, DMSO - $d_6$) $\delta$ 10.46 (d, $J$ = 8.0 Hz, 1H), 8.96 (s, 1H), 8.33 (d, $J$ = 2.2 Hz, 1H), 8.04 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.86 (d, $J$ = 8.7 Hz, 1H), 7.64 – 7.57 (m, 2H), 4.13 – 4.07 (m, 1H), 3.13 (q, $J$ = 7.2 Hz, 2H), 2.22 – 2.15 (m, 2H), 2.13 (s, 6H), 1.87 (d, $J$ = 12.9 Hz, 2H), 1.57 – 1.42 (m, 3H), 1.16 – 0.99 (m, 5H). ESI MS *m/z* 484 $[C_{27}H_{31}ClFN_3O_2 + H]^+$; HPLC 98.5% (AUC), $t_R$ = 8.36 min.

Example 754

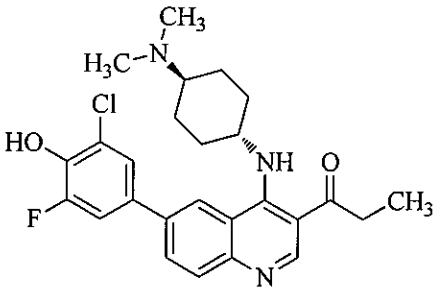
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((trans-4-(dimethylamino)cyclohexyl)amino) quinolin-3-yl)propan-1-one



Following general procedure M, 1-(6-bromo-4-((trans-4-(dimethylamino)cyclohexyl)amino) quinolin-3-yl)propan-1-one (125 mg, 0.31 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (98 mg, 0.34 mmol) to afford the desired product (74 mg, 49%) as a yellow solid. $^1$H NMR (500 MHz, DMSO - *d6*) $\delta$ 10.58 (d, $J$ = 7.9 Hz, 1H), 8.96 (s, 1H), 8.30 (d, $J$ = 2.1 Hz, 1H), 8.03 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.84 (d, $J$ = 8.7 Hz, 1H), 7.771 (s, 2H), 4.19 – 4.15 (br s, 1H), 3.13 (q, $J$ = 7.2 Hz, 2H), 2.56 – 2.51 (m, 1H), 2.32 (s, 6H), 2.26 – 2.22 (m, 2H), 1.96 – 1.89 (m, 2H), 1.56 – 1.47 (m, 4H), 1.14 (t, $J$ = 7.2 Hz, 3H). APCI MS *m/z* 486 $[C_{26}H_{29}Cl_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 8.28 min.

Example 757

1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((trans-4-(dimethylamino)cyclohexyl)amino) quinolin-3-yl)propan-1-one

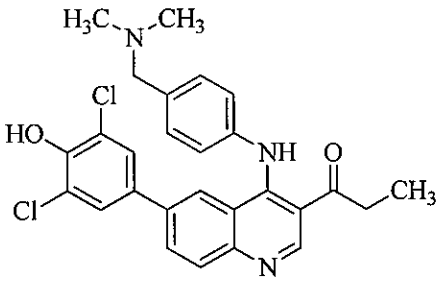


Following general procedure M, 1-(6-bromo-4-((trans-4-(dimethylamino)cyclohexyl)amino) quinolin-3-yl)propan-1-one (125 mg, 0.31 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (93 mg, 0.34 mmol) to afford the desired product (81 mg, 56%) as a yellow solid. $^1$H NMR (500 MHz, DMSO - $d_6$) $\delta$ 10.56 (d, $J$ = 8.0 Hz, 1H), 8.97 (s, 1H), 8.34 (d, $J$ = 2.1 Hz, 1H), 8.04 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.85 (d, $J$ = 8.7 Hz, 1H), 7.65 – 7.58 (m, 2H), 4.18 – 4.12 (m, 1H), 3.13 (q, $J$ = 7.2 Hz, 2H), 2.39 – 2.32 (m, 1H), 2.27 – 2.19 (m, 8H), 1.93 – 1.86 (m, 2H), 1.56 – 1.39 (m, 4H), 1.12 (t, $J$ = 7.2 Hz, 3H). ESI MS *m/z* 470 $[C_{26}H_{29}ClFN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 7.97 min.

Example 771

1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((4-((dimethylamino)methyl)phenyl)amino)

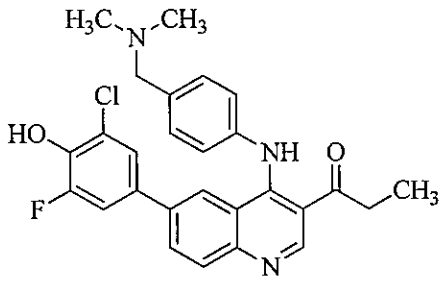
quinolin-3-yl)propan-1-one



Following general procedure M, 1-(6-bromo-4-((4-((dimethylamino)methyl)phenyl)amino) uinolin-3-yl)propan-1-one (125 mg, 0.30 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (96 mg, 0.33 mmol) to afford the desired product (113 mg, 76%) as a yellow solid. $^1$H NMR (500 MHz, DMSO - $d_6$) $\delta$ 11.98 (s, 1H), 9.01 (s, 1H), 8.09 – 7.88 (m, 3H), 7.36 (s, 2H), 7.33 – 7.28 (m, 2H), 7.17 – 7.08 (m, 2H), 3.47 (s, 2H), 3.08 (q, $J$ = 7.1 Hz, 2H), 2.16 (s, 6H), 0.98 (t, $J$ = 7.1 Hz, 3H).

Example 770

1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((4-((dimethylamino)methyl)phenyl)amino) quinolin-3-yl)propan-1-one

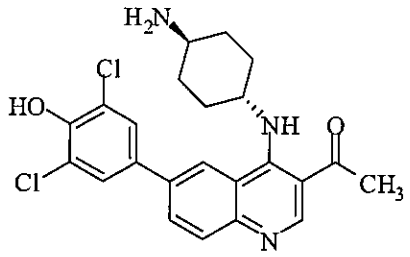


Following general procedure M, 1-(6-bromo-4-((4-((dimethylamino)methyl)phenyl)amino) quinolin-3-yl)propan-1-one (125 mg, 0.30 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (91 mg, 0.33 mmol) to afford the desired product (89 mg, 62%) as a yellow solid. $^1$H NMR (300 MHz, DMSO - $d_6$) $\delta$ 11.00 (s, 1H), 9.02 (s, 1H), 8.09 – 7.88 (m, 3H), 7.35 – 7.18 (m, 4H), 7.16 – 7.09 (m, 2H), 3.42 (s, 2H), 3.09 (q, $J$ = 7.1 Hz, 2H), 2.14 (s, 6H), 0.98 (t, $J$ = 7.1 Hz, 3H). APCI MS $m/z$ 478 $[C_{27}H_{25}ClFN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 8.10 min.

Example 939

1-(4-((1R,4R)-4-aminocyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)ethano

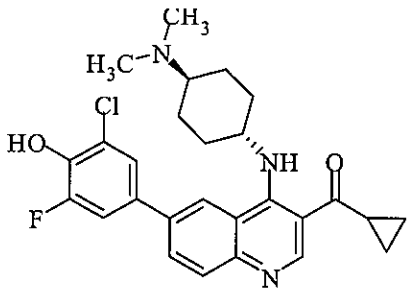
ne



Following general procedure A, 1 tert-butyl (1R,4R)-4-(3-acetyl-6-(3,5-dichloro-4-hydroxy phenyl)quinolin-4-ylamino)cyclohexylcarbamate (4.5 g, 8.3 mmol) was treated with a solution of 3N HCl to afford desired product (3.6 g, 99%) as a pale yellow solid: $^1$H NMR (500 MHz, $D_2O$) $\delta$ 8.93 (s, 1H), 7.89 (d, $J$ = 8.6 Hz, 1H), 7.76 (d, $J$ = 8.7 Hz, 1H), 7.64 (s, 1H), 7.06 (s, 2H), 4.08 (m, 1H), 3.31 (t, $J$ = 12.0 Hz, 1H), 2.18 (d, $J$ = 12.0 Hz, 4H), 1.80 (q, $J$ = 12.1 Hz, 2H), 1.50 (q, $J$ = 12.1 Hz, 2H); APCI MS *m/z* 444 $[C_{23}H_{23}Cl_2N_3O_2 + H]^+$; HPLC 98.3% (AUC), $t_R$ = 6.93 min.

Example 264

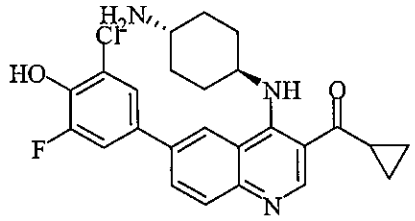
(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1R,4R)-4-(dimethylamino)cyclohexylamino)quinoli n-3-yl)(cyclopropyl)methanone



Following general procedure F, (6-bromo-4-((1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanon e (5.0 g, 12 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (3.9 g, 14.4 mmol) to afford the desired product (3.0 g, 52%) as a yellow solid: $^1$H NMR (300 MHz, DMSO) $\delta$ 9.84 (s, 1H), 9.06 (s, 1H), 8.38 (s, 1H), 8.04 (dd, $J$ = 8.8, 1.8 Hz, 1H), 7.86(d, $J$ = 8.8 Hz, 1H), 7.61 (m, 2H), 3.99 (m, 1H), 2.90 (dt, $J$ = 8.0, 3.0 Hz, 1H), 2.35 (m, 1H), 2.23 (s, 5H), 2.16 (d, $J$ = 12.6 Hz, 4H), 1.89 (d, $J$ = 11.2 Hz, 2H), 1.43 (dt, $J$ = 22.4, 12.6 Hz, 4H), 1.06 (m, 4H); ESI MS *m/z* 482 $[C_{27}H_{29}ClFN_3O_2 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 4.85 min.

Example 936

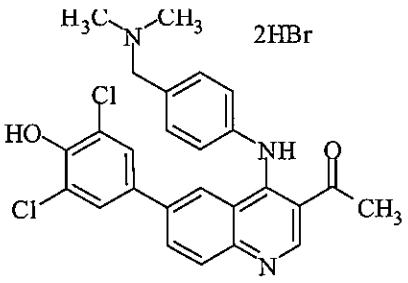
(4-((1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone



(tert-butyl (1R,4R)-4-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino)cyclohexylcarbamate (5.1 g, 9.2 mmol) was treated with a solution of HCl in dioxane (275 mL, 4 N). The mixture was stirred for 8 h at ambient temperature, producing a off white precipitate. The precipitate was collected by vacuum filtration and purified by titration of dichloromethane in a solution of methanol to afford desired product (3.01 g, 62%) as an off-white solid: $^1$H NMR (300 MHz, $D_2O$) $\delta$ 9.03 (s, 1H), 7.90 (d, $J$ = 8.8 Hz, 1H), 7.78 (s, 1H), 7.71 (d, $J$ = 8.8 Hz, 1H), 7.12 (d, $J$ = 11.7 Hz, 1H), 7.05 (s, 1H), 4.04 (s, 1H), 3.27 (t, $J$ = 12.0 Hz, 1H), 2.62 (p, $J$ = 6.1 Hz, 1H), 2.14 (d, $J$ = 11.9 Hz, 4H), 1.71 (q, $J$ = 12.3 Hz, 2H), 1.47 (q, $J$ = 12.1 Hz, 2H), 1.20 (m, 4H); APCI MS $m/z$ 454 $[C_{25}H_{25}ClFN_3O_2 + H]^+$; HPLC 97.4% (AUC), $t_R$ = 10.64 min.

Example 942

1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)ethanone

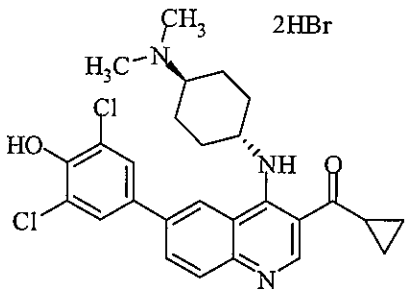


Following general procedure F, 1-(6-bromo-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)ethanone (2.0 g, 5.09

mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (2.2 g, 7.6 mmol) to obtain the free base. The purified product was suspended in dichloromethane / methanol (1:1, 40 mL) and HBr gas was bubbled through the suspension until a solution formed. The solution was concentrated to dryness and the resultant solid was triturated with diethyl ether. The mixture was filtered, washed with diethyl ether, and dried to obtain desired product (3.0 g, 94% over two steps) as a yellow solid: $^1$H NMR (300 MHz, DMSO) $\delta$ 11.93 (s, 1H), 10.59 (s, 1H), 9.81 (s, 1H), 9.24 (s, 1H), 8.37 (m, 2H), 8.11 (d, $J$ = 8.8 Hz, 1H), 7.66 (d, $J$ = 8.5 Hz, 2H), 7.56 (s, 2H), 7.51 (d, $J$ = 8.5 Hz, 2H), 4.39 (d, $J$ = 4.0 Hz, 2H), 2.74 (d, $J$ = 4.0 Hz, 6H), 2.54 (s, 3H). APCI MS $m/z$ 480 $[C_{26}H_{23}Cl_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 4.79 min.

Exapmle 941

cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-(dimethylamino)cyclohexylamino) quinolin-3-yl)methanone

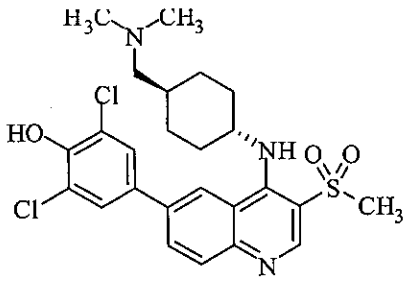



Following general procedure F, (6-bromo-4-((1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanon e (3.7 g, 8.9 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (3.8 g, 13.3 mmol) to obtain the free base. The purified product was suspended in dichloromethane / methanol (1:1, 40 mL) and HBr gas was bubbled through the suspension until a solution formed. The solution was concentrated to dryness and the resultant solid was triturated with diethyl ether. The mixture was filtered, washed with diethyl ether, and dried to obtain desired product (3.1 g, 53% over two steps) as a yellow solid: $^1$H NMR (300 MHz, MeOD) $\delta$ 9.34 (s, 1H), 8.48 (s, 1H), 8.27 (dd, $J$ = 8.8, 1.8 Hz, 1H), 8.01 (d, $J$ = 8.8 Hz, 1H), 7.76 (s, 2H), 4.60 (s, 1H), 3.52 (s, 1H), 2.93 (s, 6H), 2.86 (m, 1H), 2.52 (s, 2H), 2.34 (s, 2H), 1.89 (m, 4H), 1.26 (m, 3H); APCI MS $m/z$ 498 $[C_{27}H_{29}Cl_2N_3O_2 + H]^+$; HPLC 98.9% (AUC), $t_R$ = 5.08 min.

Example 420

2,6-dichloro-4-(4-((1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)-3-(methylsulfonyl)qui

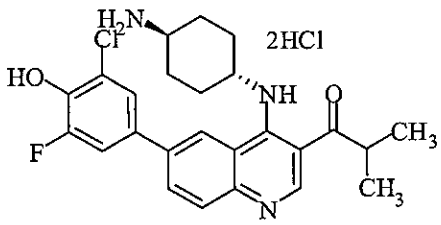
nolin-6-yl)phenol



Following general procedure F, 6-bromo-N-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)-3-(methylsulfonyl)quinolin-4-amine (5.6 mg, 13 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (4.4 g, 15 mmol) to obtain the desired product (5.3 g, 77%) as a tan solid: $^1$H NMR (300 MHz, MeOD) $\delta$ 8.76 (s, 1H), 8.26 (d, $J$ = 1.8 Hz, 1H), 8.04 (dd, $J$ = 8.8, 1.8 Hz, 1H), 7.94 (d, $J$ = 8.8 Hz, 1H), 7.64 (s, 2H), 4.15 (tt, $J$ = 11.4, 3.9 Hz, 1H), 3.23 (s, 3H), 2.98 (d, $J$ = 6.6 Hz, 2H), 2.85 (s, 6H), 2.35 (d, $J$ = 12.6 Hz, 2H), 1.95 (m, 3H), 1.66 (q, $J$ = 12.5 Hz, 2H), 1.25 (q, $J$ = 12.5 Hz, 2H); ESI MS *m/z* 522 $[C_{25}H_{29}Cl_2N_3O_3S + H]^+$; HPLC 99.8% (AUC), $t_R$ = 5.61 min.

Example 937

1-(4-((1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)-2-methylpropan-1-one

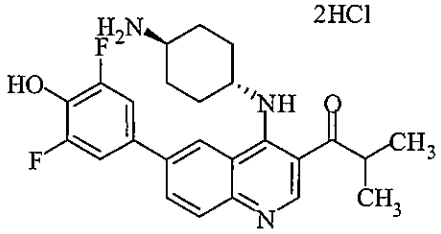


tert-butyl (1r,4r)-4-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-isobutyrylquinolin-4-ylamino)cyclohexylcarbamate (5.1 g, 9.2 mmol) was treated with a solution of HCl in dioxane (75 mL, 4 N). The mixture was stirred for 20 h at ambient temperature, producing a off white precipitate. The precipitate was collected by vacuum filtration and purified by titration of dichloromethane in a solution of methanol to afford desired product (4.7 g, %) as a yellow solid:

$^1$H NMR (500 MHz, $D_2O$) $\delta$ 9.00 (s, 1H), 7.97 (dd, $J$ = 8.8, 1.8 Hz, 1H), 7.91 (s, 1H), 7.79 (d, $J$ = 8.8 Hz, 1H), 7.18 (dd, $J$ = 11.6, 2.3 Hz, 1H), 7.13 (s, 1H), 4.19 (s, 1H), 3.62 (dt, $J$ = 13.6, 6.8 Hz, 1H), 3.34 (tt, $J$ = 11.7, 3.9 Hz, 1H), 2.22 (m, 4H), 1.78 (q, $J$ = 12.4 Hz, 2H), 1.54 (q, $J$ = 12.4 Hz, 2H), 1.21 (d, $J$ = 6.7 Hz, 6H); APCI MS *m/z* 456 $[C_{25}H_{27}ClFN_3O_2 + H]^+$; HPLC 99.3% (AUC), $t_R$ = 5.38 min.

Example 938

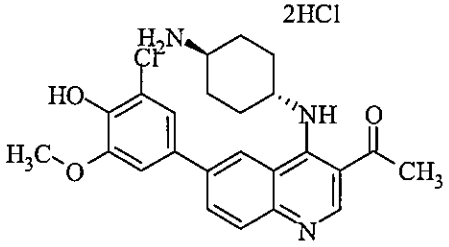
1-(4-((1R,4R)-4-aminocyclohexylamino)-6-(3,5-difluoro-4-hydroxyphenyl) quinolin-3-yl)-2-methylpropan-1-one




tert-butyl (1R,4R)-4-(6-(3,5-difluoro-4-hydroxyphenyl)-3-isobutyrylquinolin -4-ylamino)cyclohexylcarbamate (8 g, 15 mmol) was treated with a solution of HCl in dioxane (125 mL, 4 N). The mixture was stirred for 16 h at ambient temperature, producing a off white precipitate. The precipitate was collected by vacuum filtration and purified by titration of dichloromethane in a solution of methanol to afford desired product (6.2 g, 81%) as a pale yellow solid: $^1$H NMR (500 MHz, $D_2O$) $\delta$ 8.96 (s, 1H), 7.90 (dd, $J$ = 8.8, 1.8 Hz, 1H), 7.86 (d, $J$ = 2.0 Hz, 1H), 7.74 (d, $J$ = 8.7 Hz, 1H), 6.96 (d, $J$ = 9.2 Hz, 2H), 4.14 (s, 1H), 3.58 (dt, $J$ = 13.6, 6.8 Hz, 1H), 3.33 (tt, $J$ = 11.6, 3.8 Hz, 1H), 2.20 (m, 4H), 1.76 (q, $J$ = 12.8, 2H), 1.52 (q, $J$ = 12.8, Hz, 2H), 1.20 (d, $J$ = 6.7 Hz, 6H); APCI MS *m/z* 440 $[C_{25}H_{27}F_2N_3O_2 + H]^+$; HPLC 99.7% (AUC), $t_R$ = 7.52 min.

Example 940

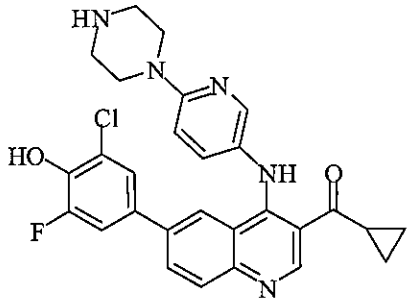
1-(4-((1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl) quinolin-3-yl)ethanone



Following general procedure A, tert-butyl (1R,4R)-4-(3-acetyl-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-4-ylamino)cyclohexylcarbamate (6.2 g, 11.5 mmol) was treated with a solution of 3N HCl to afford desired product (5.6 g, 95%) as a yellow solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.11 (s, 1H), 8.47 (s, 1H), 8.31 (dd, $J$ = 8.7, 1.8 Hz, 1H), 7.99 (d, $J$ = 8.7 Hz, 1H), 7.33 (d, $J$ = 2.1 Hz, 1H), 7.27 (d, $J$ = 2.1 Hz, 1H), 4.52 (s, 1H), 4.00 (s, 3H), 2.75 (s, 3H), 2.52 (d, $J$ = 12.6 Hz, 2H), 2.25 (d, $J$ = 12.6 Hz, 2H), 1.88 (q, $J$ = 12.5 Hz, 2H), 1.64 (q, $J$ = 12.5 Hz, 2H); APCI MS *m/z* 440 $[C_{24}H_{26}ClN_3O_3 + H]^+$; HPLC 98.8% (AUC), $t_R$ = 5.45 min.

Example 425

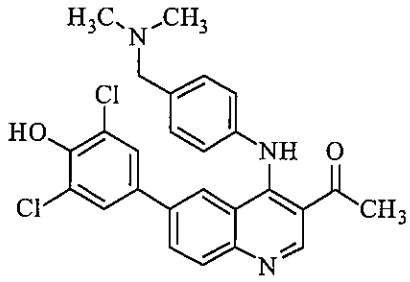
(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone




Following general procedure F, tert-butyl 4-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyridin-2-yl)piperazine-1-carboxylate (8,4 g, 15 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (5.0 g, 18 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (3.9 g, 53% over 2 steps) as a yellow/orange solid: $^1$H NMR (300 MHz, MeOD) $\delta$ 9.26 (s, 1H), 8.07 (d, $J$ = 2.8 Hz, 1H), 7.89 (s, 2H), 7.75 (s, 1H), 7.47 (dd, $J$ = 9.0, 2.8 Hz, 1H), 7.02 (s, 1H), 6.96 (d, $J$ = 9.0 Hz, 1H), 6.84 (dd, $J$ = 12.2, 2.4 Hz, 1H), 3.72 (t, $J$ = 5.2 Hz, 5H), 3.12 (t, $J$ = 5.2 Hz, 5H), 2.92 (m, 1H), 1.22 (m, 2H), 1.12 (m, 2H); ESI MS *m/z* 518 $[C_{28}H_{25}ClFN_5O_2 + H]^+$; HPLC 98.7% (AUC), $t_R$ = 8.67 min.

Example 374

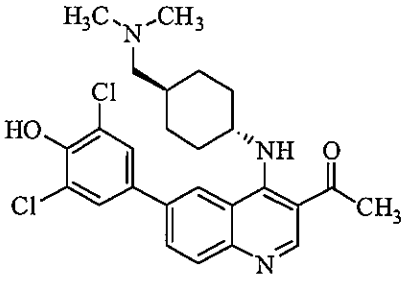
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((4-((dimethylamino)methyl)phenyl)amino)quinolin-3-yl)ethanone



Following general procedure D,
1-(6-bromo-4-((4-((dimethylamino)methyl)phenyl)amino)quinolin-3-yl)ethanone (50 mg, 0.13 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (84 mg, 0.29 mmol) to afford the desired product (42.9 mg, 71%) as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.13 (s, 1H), 7.97 – 7.89 (m, 2H), 7.74 (d, $J$ = 1.6 Hz, 1H), 7.45 (d, $J$ = 8.1 Hz, 2H), 7.28 – 7.22 (m, 2H), 7.11 (s, 2H), 3.83 (s, 2H), 2.78 (s, 3 H), 2.41 (s, 6H). ESI MS *m/z* 480 $[C_{26}H_{23}Cl_2N_3O_2 + H]^+$; HPLC 98.3% (AUC), $t_R$ = 10.60 min.

Example 379

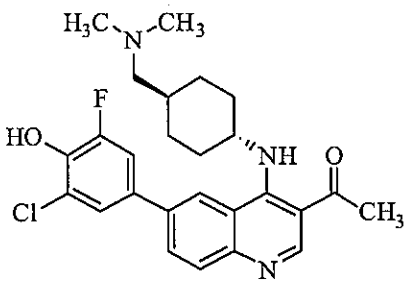
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((*trans*-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)ethanone



Following general procedure D,
1-(6-bromo-4-((*trans*-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)ethanone (32 mg, 0.079 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (51 mg, 0.176 mmol) to afford the desired product (24.5 mg, 64%) as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 8.93 (s, 1H), 8.34 (d, $J$ = 2.0 Hz, 2H), 7.99 (dd, $J$ = 8.7, 2.0 Hz, 1H), 7.89 (d, $J$ = 8.7 Hz, 1H), 7.62 (s, 2H), 4.27 – 4.20 (m, 1H), 2.80 – 2.74 (d, $J$ = 6.9 Hz, 2H), 2.71 – 2.63 (m, 9H), 2.37 (d, $J$ = 12.8 Hz, 2H), 1.99 (d, $J$ = 13.2 Hz, 2H), 1.89 – 1.85 (m, 1H), 1.70 – 1.58 (m, 2H), 1.33 – 1.21 (m, 2H). ESI MS *m/z* 486 $[C_{26}H_{29}Cl_2N_3O_2 + H]^+$; HPLC 97.9% (AUC), $t_R$ = 10.81 min.

Example 379

1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((*trans*-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)ethanone

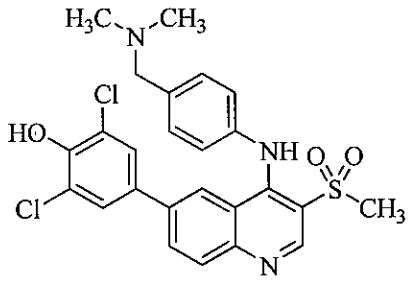


Following general procedure D,

1-(6-bromo-4-((*trans*-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)ethanone (32 mg, 0.079 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (32 mg, 0.118 mmol) to afford the desired product (24.0 mg, 65%) as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 8.91 (s, 1H), 8.33 (d, $J$ = 1.9 Hz, 1H), 7.97 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.87 (d, $J$ = 8.7 Hz, 1H), 7.47 (s, 1H), 7.37 (d, $J$ = 11.8Hz, 1H), 4.27 – 4.18 (m, H), 2.69 (s, 3H), 2.59 – 2.55 (m, 2H), 2.52 (s, 6H), 2.34 (d, $J$ = 12.7 Hz, 2H), 1.99 (d, $J$ = 13.2 Hz, 2H), 1.84 – 1.74 (m, 1H), 1.67 – 1.55 (m, 2H), 1.28 – 1.17 (m, 2H).ESI MS *m/z* 470 $[C_{26}H_{29}ClFN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.56 min.

Example 400

2,6-dichloro-4-(4-((4-((dimethylamino)methyl)phenyl)amino)-3-(methylsulfonyl)quinolin-6-yl)phenol

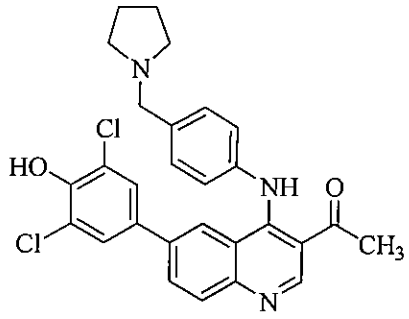


Following general procedure D,

6-bromo-N-(4-((dimethylamino)methyl)phenyl)-3-(methylsulfonyl)quinolin-4-amine (43 mg, 0.10 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (53 mg, 0.183 mmol) to afford the desired product (31.7 mg, 61%) as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.00 (s, 1H), 8.06 – 7.97 (m, 2H), 7.74 (s, 3H), 7.46 – 7.38 (m, 2H), 7.21 (d, $J$ = 8.0 Hz, 2H), 7.13 (s, 2H), 3.86 (s, 2H), 3.27 (s, 3H), 2.45 (s, 6H). ESI MS *m/z* 516 $[C_{25}H_{23}Cl_2N_3O_2S + H]^+$; HPLC 94.5% (AUC), $t_R$ = 11.57 min.

Example 415

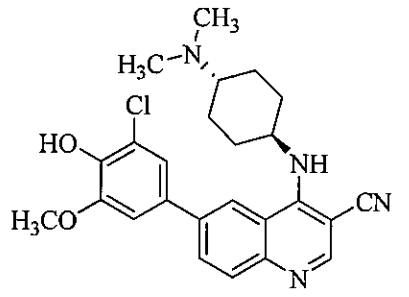
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((4-(pyrrolidin-1-ylmethyl)phenyl)amino)quinolin-3-yl)ethanone



Following general procedure D, 1-(6-bromo-4-((4-(pyrrolidin-1-ylmethyl)phenyl)amino)quinolin-3-yl)ethanone (42.4 mg, 0.10 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (38.4 mg, 0.133 mmol) to afford the desired product (28.4 mg, 56%) as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.17(s, 1H), 8.02 – 7.94 (m, 2H), 7.77 (s, 1H), 7.55 (d, $J$ = 8.4 Hz, 2H), 7.32 (d, $J$ = 8.4 Hz, 2H), 7.20 (s, 2H), 4.41 (s, 2H), 3.27 (br s, 4H), 2.78 (s, 3H), 2.07 (br s, 4H). ESI MS *m/z* 506 $[C_{28}H_{25}Cl_2N_3O_2 + H]^+$; HPLC 95.1% (AUC), $t_R$ = 10.81 min.

Example 447

6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((*trans*-4-(dimethylamino)cyclohexyl)amino)quinoline-3-carbonitrile



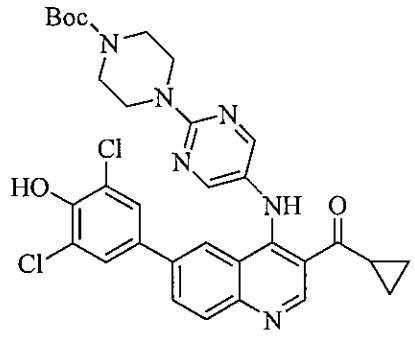
Following general procedure D, 6-bromo-4-((*trans*-4-(dimethylamino)cyclohexyl)amino)quinoline-3-carbonitrile (28 mg, 0.075 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (32 mg, 0.113 mmol) to afford the desired product (11.9 mg, 35%) as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 8.46 – 8.40 (m, 2H), 8.02 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.86 (d, $J$ = 8.7 Hz, 1H), 7.42 (d, $J$ = 2.0 Hz, 1H), 7.29 (d, $J$ = 2.0 Hz, 1H), 4.48 – 4.38 (m, 1H), 3.99 (s, 3H), 2.50 – 2.39 (m, 1H), 2.35 (s, 6H), 2.29 (d, $J$ = 11.8 Hz, 2H), 2.06 (d, $J$ = 12.0 Hz, 2H), 1.73 – 1.61 (m, 2H), 1.59 – 1.47 (m,

2H). ESI MS *m/z* 451 $[C_{25}H_{27}ClN_4O_2 + H]^+$; HPLC 98.8% (AUC), $t_R$ = 10.61 min.

Example 1000

*tert*-butyl

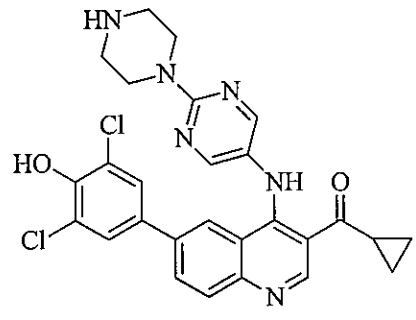
4-(5-((3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)pyrimidin-2-yl)piperazine-1-carboxylate




Following general procedure D, *tert*-butyl 4-(5-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl)amino)pyrimidin-2-yl)piperazine-1-carboxylate (54 mg, 0.10 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.15 mmol) to afford the desired product (66 mg, >99%) as a yellow-brown solid. ESI MS *m/z* 635 $[C_{32}H_{32}Cl_2N_6O_4 + H]^+$

Example 497

cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((2-(piperazin-1-yl)pyrimidin-5-yl)amino)quinolin-3-yl)methanone

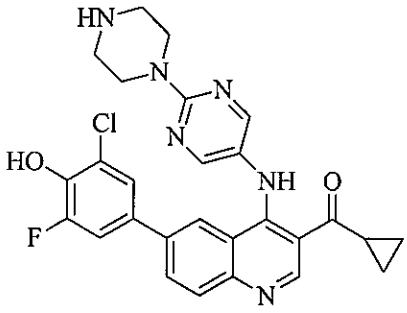



Following general procedure A-2, *tert*-butyl 4-(5-((3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)pyrimidin-2-yl)piperazine-1-carboxylate (0.10 mmol) was reacted with TFA (2 mL) to afford the desired product (7.4 mg, 14% over two steps) as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.24 (s, 1H), 8.30 (s, 2H), 7.93 (d, $J$ = 1.3 Hz, 2H), 7.83 (d, $J$ = 1.3 Hz, 1H), 7.21 (s, 2H), 3.98 (t, $J$ = 5.2

Hz, 4H), 3.06 (t, $J$ = 5.2 Hz, 4H), 2.94 – 2.86 (m, 1H), 1.24 – 1.08 (m, 4H). ESI MS $m/z$ 535 $[C_{27}H_{24}Cl_2N_6O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.54 min.

Example 496

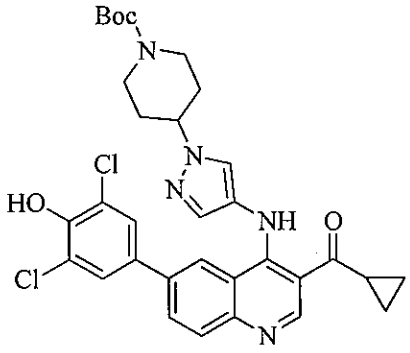
(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((2-(piperazin-1-yl)pyrimidin-5-yl)amino)quinolin-3-yl)(cyclopropyl)methanone



To a suspension of *tert*-butyl 4-(5-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl)amino)pyrimidin-2-yl)piperazine-1-carboxylate (54 mg, 0.10 mmol) and $Pd(dppf)Cl_2$ (11mg, 0.015 mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (1.0 M in $H_2O$, 400 µL, 0.4 mmol). $N_2$ gas was bubbled through the reaction mixture and the vessel was sealed. The mixture was then heated under microwave irradiation conditions at 140 °C for 30 min. The solution was allowed to cool to rt, then directly subjected to column chromatography (silica, 0–20% methanol/dichloromethane). The resultant residue was dissolved in THF (3 mL) and TFA (2 mL) and heated at 65 °C for 16 hours. The mixture was then cooled to room temperature and concentrated. The resultant residue was purified by preparative HPLC (C18 silica, 10–90% methanol/water with 0.05% TFA). The residue was eluted through an ion-exchange column (using methanol and 7 N methanol in ammonia) to obtain the desired product (13.0 mg, 25%) as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.24 (s, 1H), 8.30 (s, 2H), 7.98 – 7.90 (m, 2H), 7.84 (s, 1H), 7.14 – 7.09 (m, 1H), 6.93 (dd, $J$ = 12.0, 2.4 Hz, 1H), 3.96 (t, $J$ = 5.2 Hz, 4H), 3.05 (t, $J$ = 5.2 Hz, 4H), 2.94 – 2.85 (m, 1H), 1.24 – 1.08 (m, 4H). ESI MS $m/z$ 519 $[C_{27}H_{24}ClFN_6O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.34 min.

Example 1165

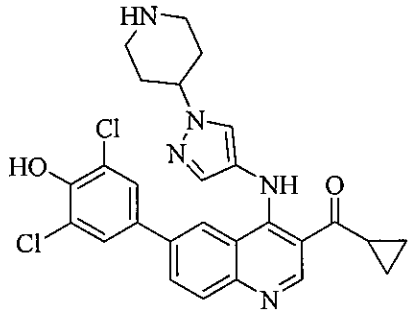
*tert*-butyl 4-(4-((3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)-1*H*-pyrazol-1-yl)piperidine-1-carboxylate



Following general procedure D, *tert*-butyl 4-(4-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl)amino)-1*H*-pyrazol-1-yl)piperidine-1-carboxylate (54 mg, 0.10 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.15 mmol) to afford the desired product (36 mg, 58%) as a yellow-brown solid. ESI MS *m/z* 622 $[C_{32}H_{33}Cl_2N_5O_4 + H]^+$

Example 511

cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1-(piperidin-4-yl)-1*H*-pyrazol-4-yl)amino)quinolin-3-yl)methanone

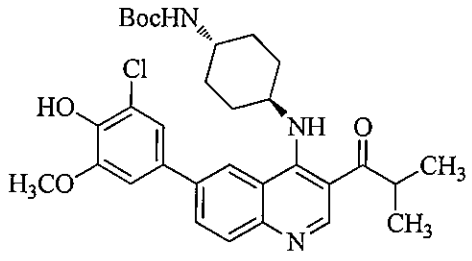


Following general procedure A-2, *tert*-butyl 4-(4-((3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)-1*H*-pyrazol-1-yl)piperidine-1-carboxylate (36 mg, 0.058 mmol) was reacted with TFA (2 mL) to afford the desired product (21.5 mg, 41%) as a yellow solid. $^1$H NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.48 (br s, 1H), 8.22 (d, $J$ = 9.2 Hz, 1H), 8.01 (d, $J$ = 8.4 Hz, 2H), 7.69 (s, 1H), 7.39 (br s, 2H), 4.68 – 4.58 (m, 1H), 3.57 (dt, $J$ = 13.2, 3.8 Hz, 2H), 3.27 – 3.17 (m, 2H), 2.88 (br s, 1H), 2.36 – 2.25 (m, 4H), 1.41 – 1.10 (m, 4H). ESI MS *m/z* 522 $[C_{27}H_{25}Cl_2N_5O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 9.75 min.

Example 1166

*tert*-butyl (*trans*-4-((6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-isobutyrylquinolin-4-yl)amino)cyclohexy

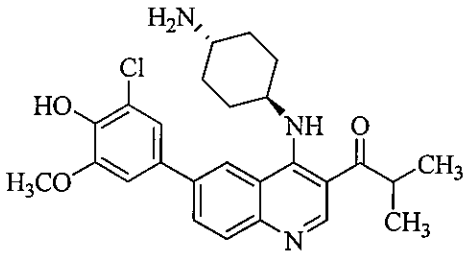
l)carbamate




Following general procedure D, *tert*-butyl (*trans*-4-((6-bromo-3-isobutyrylquinolin-4-yl)amino)cyclohexyl)carbamate (49 mg, 0.10 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.15 mmol) to afford the desired product (77 mg, >99%) as a viscous brown oil. ESI MS *m/z* 568 $[C_{31}H_{38}ClN_3O_5 + H]^+$

Example 502

1-(4-((*trans*-4-aminocyclohexyl)amino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)-2-methylpropan-1-one

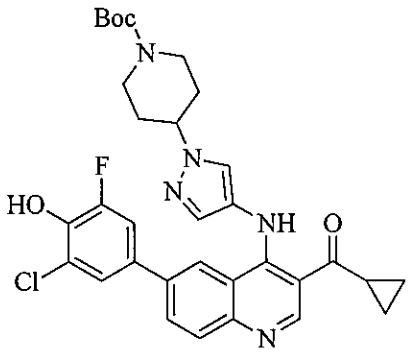



Following general procedure A-2, *tert*-butyl (*trans*-4-((6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-isobutyrylquinolin-4-yl)amino)cyclohexyl)carbamate (0.10 mmol) was reacted with TFA (2 mL) to afford the desired product (16.6 mg, 35% over 2 steps) as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 8.96 (s, 1H), 8.34 (d, $J$ = 2.1 Hz, 2H), 8.03 (dd, $J$ = 8.6, 2.1 Hz, 1H), 7.90 (d, $J$ = 8.6 Hz, 1H), 7.28 (d, $J$ = 2.2 Hz, 1H), 7.20 (d, $J$ = 2.2 Hz, 1H), 4.22 – 4.13 (m, 1H), 3.98 (s, 3H), 3.81 – 3.71 (m, 2H), 3.03 – 2.94 (m, 1H), 2.38 – 2.32 (d, $J$ = 12.6 Hz, 2H), 2.13 – 2.06 (m, 2H), 1.73 – 1.61 (q, $J$ = 12.5 Hz, 2H), 1.50 – 1.38 (m, 2H), 1.24 (d, $J$ = 6.7 Hz, 6H). ESI MS *m/z* 468 $[C_{26}H_{30}ClN_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.34 min.

Example 1167

*tert*-butyl 4-(4-((6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-yl)amino)-1

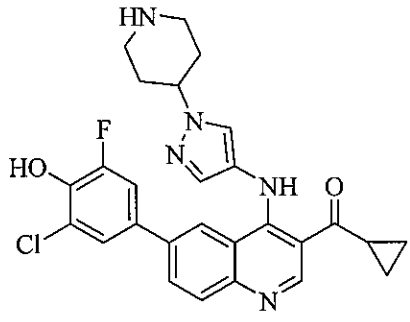
*H*-pyrazol-1-yl)piperidine-1-carboxylate




Following general procedure D, *tert*-butyl 4-(4-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl)amino)-1*H*-pyrazol-1-yl)piperidine-1-carboxylate (54 mg, 0.10 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (41 mg, 0.15 mmol) to afford the desired product (60 mg, 99%) as a yellow-brown solid. ESI MS *m/z* 606 $[C_{32}H_{33}ClFN_5O_4 + H]^+$

Example 520

*tert*-butyl 4-(4-((6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-yl)amino)-1*H*-pyrazol-1-yl)piperidine-1-carboxylate

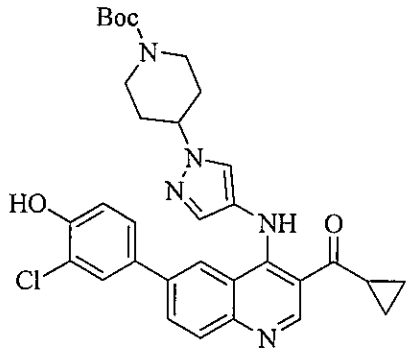



Following general procedure A-2, *tert*-butyl 4-(4-((6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-yl)amino)-1*H*-pyrazol-1-yl)piperidine-1-carboxylate (60 mg, 0.099 mmol) was reacted with TFA (2 mL) to afford the desired product (25.2 mg, 50%) as a yellow solid. $^1$H NMR (500 MHz, DMSO-*d6*) $\delta$ 10.94 (s, 1H), 9.09 (s, 1H), 8.16 (d, $J$ = 2.1 Hz, 1H), 8.01 (dd, $J$ = 8.8, 2.1 Hz, 1H), 7.90 – 7.84 (m, 2H), 7.43 (s, 1H), 7.30 (s, 1H), 7.19 (d, $J$ = 12.1 Hz, 1H), 4.31 – 4.23 (m, 1H), 3.12 (d, $J$ = 12.6 Hz, 2H), 2.92 – 2.83 (m, 1H), 2.70 (t, $J$ = 12.3 Hz, 2H), 2.03 – 1.96 (m, 2H), 1.92 – 1.81 (m, 2H), 1.02 – 0.95 (m, 4H). ESI MS *m/z* 506 $[C_{27}H_{25}ClFN_5O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 9.41 min.

Example 1168

*tert*-butyl

4-(4-((6-(3-chloro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-yl)amino)-1*H*-pyrazol-1-yl)piperidine-1-carboxylate

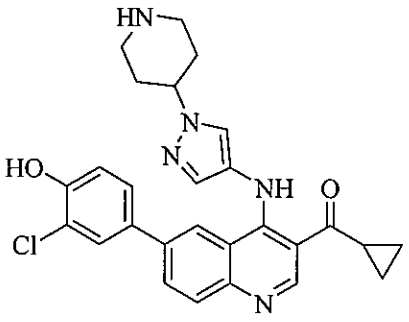



Following general procedure D, *tert*-butyl 4-(4-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl)amino)-1*H*-pyrazol-1-yl)piperidine-1-carboxylate (54 mg, 0.10 mmol) was reacted with (3-chloro-4-hydroxyphenyl)boronic acid (34 mg, 0.20 mmol) to afford the desired product (62 mg, >99%) as a yellow-brown solid. ESI MS *m/z* 588 $[C_{32}H_{34}ClN_5O_4 + H]^+$

Example 519

ALB 150143

(6-(3-chloro-4-hydroxyphenyl)-4-((1-(piperidin-4-yl)-1*H*-pyrazol-4-yl)amino)quinolin-3-yl)(cyclopropyl)methanone

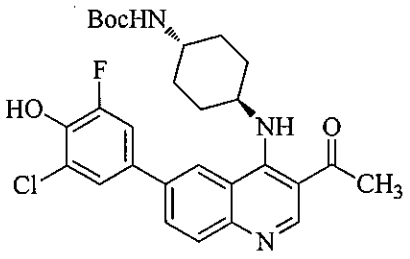



Following general procedure A-2, *tert*-butyl 4-(4-((6-(3-chloro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-yl)amino)-1*H*-pyrazol-1-yl)piperidine-1-carboxylate (0.10 mmol) was reacted with TFA (2 mL) to afford the desired product (27 mg, 55% over 2 steps) as a yellow solid. $^1$H NMR (500 MHz, DMSO-$d_6$) $\delta$ 10.99 (s, 1H), 9.12 (s, 1H), 8.18 (d, $J$ = 2.2 Hz, 1H), 8.02 – 7.96 (m, 1H), 7.92 – 7.86 (m, 2H), 7.45 (d, $J$ = 2.3 Hz, 1H), 7.41 (s, 1H), 7.28 – 7.22 (m, 1H), 7.01 (d, $J$ = 8.5 Hz, 1H), 4.24 – 4.14 (m, 1H),

3.06 – 2.99 (m, 2H), 2.94 – 2.85 (m, 1H), 2.62 – 2.53 (m, 2H), 1.95 – 1.89 (m, 2H), 1.83 – 1.71 (m, 2H), 1.02 – 0.97 (m, 4H). ESI MS *m/z* 488 $[C_{27}H_{26}ClN_5O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 9.30 min.

Example 1169

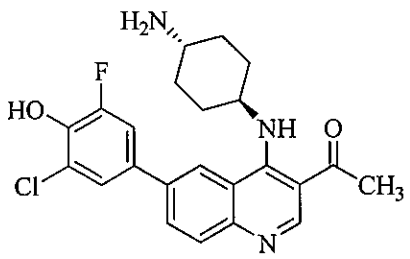
*tert*-butyl (*trans*-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)carbamate




Following general procedure D, *tert*-butyl (*trans*-4-((3-acetyl-6-bromoquinolin-4-yl)amino)cyclohexyl)carbamate (46 mg, 0.10 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (41 mg, 0.15 mmol) to afford the desired product (38 mg, 72%) as a light brown solid. ESI MS *m/z* 528 $[C_{28}H_{31}ClFN_3O_4 + H]^+$

Example 527

1-(4-((*trans*-4-aminocyclohexyl)amino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl) quinolin-3-yl)ethanone

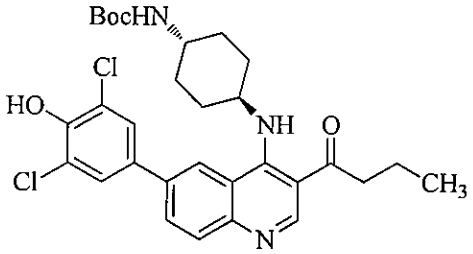



To a suspension of *tert*-butyl (*trans*-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)carbamate (38 mg, 0.072 mmol) in THF (3 mL) was added water (2 mL) and 6N aqueous HCl (2 mL). The resultant solution was heated at 65 °C for 4 h. The reaction mixture was cooled and concentrated. The resultant residue was purified by preparative HPLC (C18 silica, 10–90% methanol/water with 0.05% TFA). The residue was eluted through an ion-exchange column

(using methanol and 7 N methanol in ammonia) to obtain the desired product (18.1 mg, 59%) as a yellow solid. $^1$H NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.12 (s, 1H), 8.47 (s, 1H), 8.32 – 8.26 (m, 1H), 7.99 (d, $J$ = 8.7 Hz, 1H), 7.59 (s, 1H), 7.52 (d, $J$ = 11.5 Hz, 1H), 4.57 – 4.53 (m, 1H), 2.74 (s, 3H), 2.51 (d, $J$ = 12.3 Hz, 2H), 2.26 (d, $J$ = 12.3 Hz, 2H), 1.87 (q, $J$ = 12.5 Hz, 2H), 1.71 – 1.62 (m, 2H). ESI MS *m/z* 428 $[C_{23}H_{23}ClFN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 9.43 min.

Example 1170

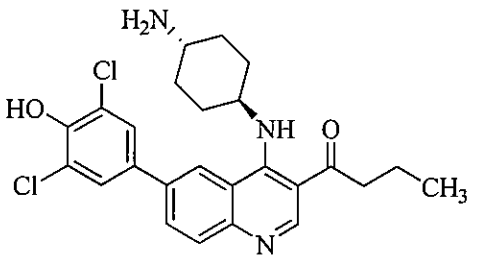
*tert*-butyl (*trans*-4-((3-butyryl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)carbamate




Following general procedure D, *tert*-butyl (*trans*-4-((6-bromo-3-butyrylquinolin-4-yl)amino)cyclohexyl)carbamate (49 mg, 0.10 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (47 mg, 0.16 mmol) to afford the desired product (35.2 mg, 61%) as a yellow-brown solid. ESI MS *m/z* 572 $[C_{30}H_{35}Cl_2N_3O_4 + H]^+$

Example 535

1-(4-((*trans*-4-aminocyclohexyl)amino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)butan-1-one

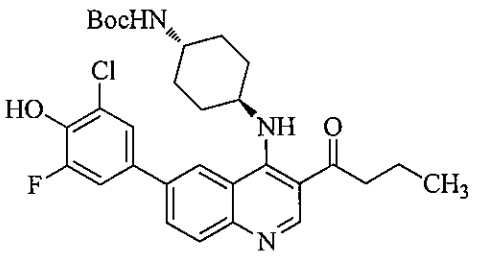



To a suspension of *tert*-butyl (*trans*-4-((3-butyryl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)carbamat

e (35.2 mg, 0.061 mmol) in THF (3 mL) was added water (2 mL) and 6N aqueous HCl (2 mL). The resultant solution was heated at 65 °C for 4 h. The reaction mixture was cooled and concentrated The resultant residue was purified by preparative HPLC (C18 silica, 10–90% acetonitrile/water with 0.05% TFA). The residue was eluted through an ion-exchange column (using methanol and 7 N methanol in ammonia) to obtain the desired product (3.7 mg, 13%) as a yellow solid. $^1$H NMR (500 MHz, MeOD + TFA-*d*) δ 9.15 (s, 1H), 8.46 (s, 1H), 8.27 (d, $J$ = 8.8 Hz, 1H), 8.00 (d, $J$ = 8.8 Hz, 1H), 7.72 (s, 2H), 4.53 (br s, 1H), 3.12 (t, $J$ = 7.2 Hz, 2H), 2.52 (s, 2H), 2.28 (d, $J$ = 12.3 Hz, 2H), 1.95 – 1.75 (m, 4H), 1.73 – 1.64 (m, 2H), 1.06 (t, $J$ = 7.4 Hz, 3H). ESI MS *m/z* 472 $[C_{25}H_{27}Cl_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.86 min.

Example 1171

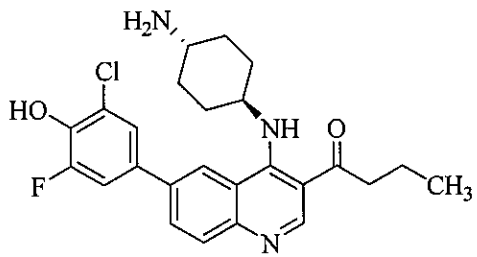
*tert*-butyl (*trans*-4-((3-butyryl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)carbamate




Following general procedure D, *tert*-butyl (*trans*-4-((6-bromo-3-butyrylquinolin-4-yl)amino)cyclohexyl)carbamate (49 mg, 0.10 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (41 mg, 0.15 mmol) to afford the desired product (36 mg, 64%) as a yellow-brown solid. ESI MS *m/z* 556 $[C_{30}H_{35}ClFN_3O_4 + H]^+$

Example 532

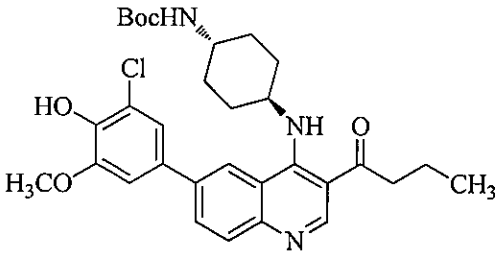
1-(4-((*trans*-4-aminocyclohexyl)amino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)butan-1-one



To a suspension of *tert*-butyl (*trans*-4-((3-butyryl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)carbamate (36 mg, 0.065 mmol) in THF (3 mL) was added water (2 mL) and 6N aqueous HCl (2 mL). The resultant solution was heated at 65 °C for 4 h. The reaction mixture was cooled and concentrated. The resultant residue was triturated with diethyl ether. The residue was eluted through an ion-exchange column (using methanol and 7 N methanol in ammonia) to obtain the desired product (21.1 mg, 71%) as a yellow solid. $^1$H NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.15 (s, 1H), 8.47(s, 1H), 8.28 (dd, $J$ = 8.7, 1.8 Hz, 1H), 7.99 (d, $J$ = 8.7 Hz, 1H), 7.59 (s, 1H), 7.51 (d, $J$ = 11.4 Hz, 1H), 4.55 (br s, 1H), 3.13 (t, $J$ = 7.2 Hz, 2H), 2.53 – 2.49 (m, 2H), 2.26 (d, $J$ = 12.1 Hz, 2H), 1.94 – 1.74 (m, 4H), 1.68 – 1.62 (m, 2H), 1.06 (t, $J$ = 7.4 Hz, 3H). ESI MS *m/z* 456 $[C_{25}H27ClFN3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.83 min.

Example 1172

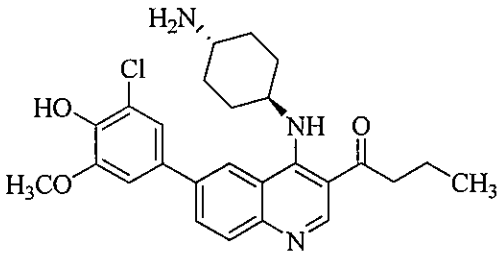
*tert*-butyl (*trans*-4-((3-butyryl-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-4-yl)amino)cyclohexyl)carbamate




Following general procedure D, *tert*-butyl (*trans*-4-((6-bromo-3-butyrylquinolin-4-yl)amino)cyclohexyl)carbamate (49 mg, 0.10 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.15 mmol) to afford the desired product (36 mg, 63%) as a yellow solid. ESI MS *m/z* 568 $[C_{31}H_{38}ClN_3O_5 + H]^+$

Example 529

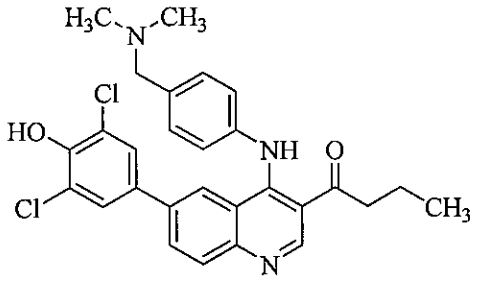
1-(4-((*trans*-4-aminocyclohexyl)amino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)butan-1-one



To a suspension of *tert*-butyl (*trans*-4-((3-butyryl-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-4-yl)amino)cyclohexyl)carbamate (36 mg, 0.063 mmol) in THF (3 mL) was added water (2 mL) and 6N aqueous HCl (2 mL). The resultant solution was heated at 65 °C for 4 h. The reaction mixture was cooled and concentrated. The resultant residue was triturated with diethyl ether. The residue was eluted through an ion-exchange column (using methanol and 7 N methanol in ammonia) to obtain the desired product (22 mg, 75%) as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 8.96 (s, 1H), 8.34 (d, $J$ = 2.0 Hz, 1H), 8.02 (dd, $J$ = 8.7, 2.0 Hz, 1H), 7.90 (d, $J$ = 8.7 Hz, 1H), 7.28 (d, $J$ = 2.1 Hz, 1H), 7.20 (d, $J$ = 2.1 Hz, 2H), 4.24 – 4.18 (m, 1H), 3.98 (s, 3H), 3.11 – 3.00 (m, 3H), 2.37 (d, $J$ = 12.9 Hz, 2H), 2.10 (d, $J$ = 12.2 Hz, 2H), 1.84 – 1.74 (m, $J$ = 7.4 Hz, 2H), 1.71 – 1.65 (m, $J$ = 12.6 Hz, 2H), 1.49 – 1.43 (m, 2H), 1.04 (t, $J$ = 7.4 Hz, 3H). ESI MS *m/z* 468 [$C_{26}H_{30}ClN_3O_3$ + H]$^+$; HPLC >99% (AUC), $t_R$ = 10.17 min.

Example 530

1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((4-((dimethylamino)methyl)phenyl)amino) quinolin-3-yl)butan-1-one

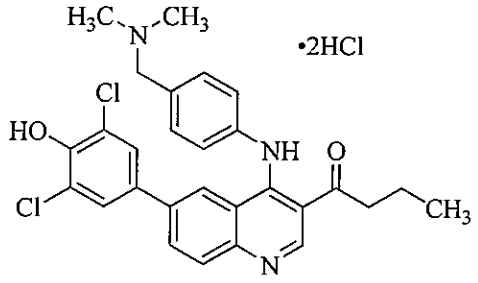


Following general procedure D, 1-(6-bromo-4-((4-((dimethylamino)methyl)phenyl)amino)quinolin-3-yl)butan-1-one (43 mg, 0.10 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (47 mg, 0.16 mmol) to afford the desired product (21.8 mg, 43%) as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.12 (s, 1H), 7.97 – 7.87 (m, 2H), 7.73 (d, $J$ = 1.8 Hz, 1H), 7.46 – 7.39 (m, 2H), 7.26 – 7.19 (m, 2H), 7.10 (s, 2H), 3.80 (s, 2H), 3.17 (t, $J$ = 7.3 Hz, 2H), 2.39 (s, 6H), 1.81

(h, $J$ = 7.4 Hz, 2H), 1.05 (t, $J$ = 7.4 Hz, 3H). ESI MS $m/z$ 508 $[C_{28}H_{27}Cl_2N_3O_2 + H]^+$; HPLC 99% (AUC), $t_R$ = 11.22 min.

Example 531

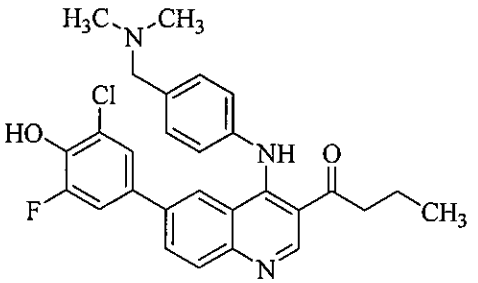
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((4-((dimethylamino)methyl)phenyl)amino)quinolin-3-yl )butan-1-one dihydrochloride



To a suspension of 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((4-((dimethylamino)methyl)phenyl)amino)quinolin-3-yl )butan-1-one (6.5 mg, 0.0082 mmol) in methanol (4 mL) was added 2N HCl in ether (2.0 mL, 4 mmol). The resultant clear yellow solution was concentrated to afford the desired product as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.35 (s, 1H), 8.23 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.03 (d, $J$ = 8.8 Hz, 1H), 7.85 (d, $J$ = 1.9 Hz, 1H), 7.78 – 7.72 (m, 2H), 7.65 – 7.58 (m, 2H), 7.18 (s, 2H), 4.48 (s, 2H), 3.20 (t, $J$ = 7.2 Hz, 2H), 2.88 (s, 6H), 1.81 (h, $J$ = 7.3 Hz, 2H), 1.07 (t, $J$ = 7.4 Hz, 3H). ESI MS $m/z$ 508 $[C_{28}H_{27}Cl_2N_3O_2 + H]^+$; HPLC 93.5% (AUC), $t_R$ = 11.88 min.

Example 537

1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((4-((dimethylamino)methyl)phenyl) amino)quinolin-3-yl)butan-1-one

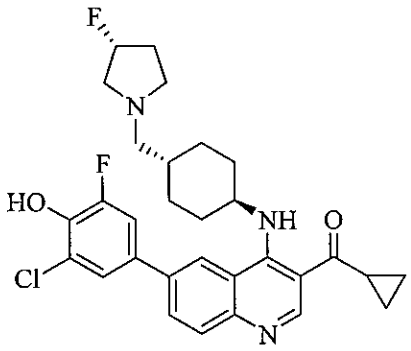


Following general procedure D, 1-(6-bromo-4-((4-((dimethylamino)methyl)phenyl)amino)quinolin-3-yl)butan-1-one (43 mg, 0.10 mmol) was reacted with

2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (41 mg, 0.15 mmol) to afford the desired product (30.9 mg, 63%) as a yellow solid. $^1$H NMR (500 MHz, MeOD + TFA-*d*) δ 9.35 (s, 1H), 8.22 (dd, *J* = 8.8, 1.9 Hz, 1H), 8.03 (d, *J* = 8.8 Hz, 1H), 7.85 (d, *J* = 1.9 Hz, 1H), 7.77 – 7.70 (m, 2H), 7.65 – 7.58 (m, 2H), 7.08 (dd, *J* = 11.5, 2.1 Hz, 1H), 6.95 (s, *J* = 2.1 Hz, 1H), 4.46 (s, 2H), 3.19 (t, *J* = 7.2 Hz, 2H), 2.88 (s, 6H), 1.81 (h, *J* = 7.4 Hz, 2H), 1.07 (t, *J* = 7.4 Hz, 3H). ESI MS *m/z* 492 $[C_{28}H_{27}ClFN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.90 min.

Example 570

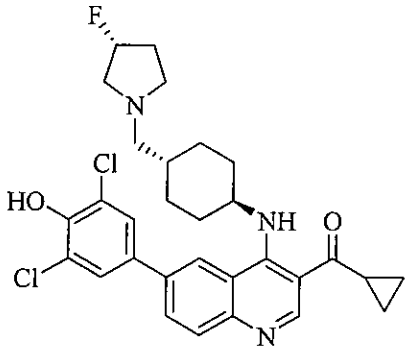
(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((*trans*-4-(((*R*)-3-fluoropyrrolidin-1-yl)methyl)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone




Following general procedure D, (6-bromo-4-((*trans*-4-(((*R*)-3-fluoropyrrolidin-1-yl)methyl)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone (47 mg, 0.10 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.16 mmol) to afford the desired product (33.9 mg, 63%) as a yellow solid. $^1$H NMR (500 MHz, $CDCl_3$) $^1$H NMR (500 MHz, $CDCl_3$) δ 10.78 (br s, 1H), 9.24 (s, 1H), 8.24 (d, *J* = 2.1 Hz, 1H), 8.03 (d, *J* = 8.7 Hz, 1H), 7.84 (dd, *J* = 8.7, 2.1 Hz, 1H), 7.44 – 7.39 (d, *J* = 2.0 Hz, 1H), 7.29 (dd, *J* = 11.1, 2.0 Hz, 1H), 5.25 – 5.10 (m, 1H), 4.10 – 4.04 (m, 1H), 2.91 – 2.65 (m, 4H), 2.51 – 2.27 (m, 5H), 2.24 – 2.01 (m, 5H), 1.65 – 1.50 (m, 3H), 1.31 – 1.21 (m, 1H), 1.13 – 1.04 (m, 4H). ESI MS *m/z* 540 $[C_{30}H_{32}ClF_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.95 min.

Example 571

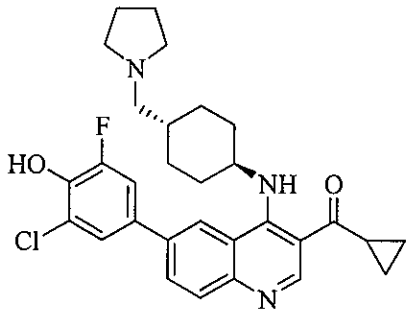
cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((*trans*-4-(((*R*)-3-fluoropyrrolidin-1-yl)methyl)cyclohexyl)amino)quinolin-3-yl)methanon



Following general procedure D, (6-bromo-4-((*trans*-4-(((*R*)-3-fluoropyrrolidin-1-yl)methyl)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone (47 mg, 0.10 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.15 mmol) to afford the desired product (25.7 mg, 46%) as a yellow solid. $^1$H NMR (500 MHz, $CDCl_3$) $\delta$ 10.81 (br s, 1H), 9.24 (s, 1H), 8.24 (s, 1H), 8.04 (d, $J$ = 8.7 Hz, 1H), 7.85 (dd, $J$ = 8.7, 2.0 Hz, 2H), 7.54 (s, 2H), 5.25 – 5.10 (m, 1H), 4.10 – 4.04 (m, 1H), 2.85 – 2.65 (m, $J$ = 8.1, 4.6 Hz, 4H), 2.50 – 2.28 (m, 5H), 2.21 – 2.04 (m, 5H), 1.65 – 1.50 (m, 3H), 1.30 – 1.22 (m, 1H), 1.14 – 1.04 (m, 4H). ESI MS *m/z* 556 $[C_{30}H_{32}Cl_2FN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.19 min.

Example 587

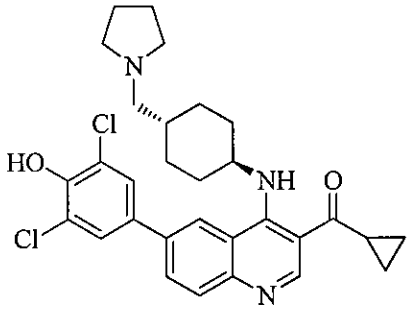
(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((*trans*-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure M, (6-bromo-4-((*trans*-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino) quinolin-3-yl)(cyclopropyl)methanone (46 mg, 0.10 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.16 mmol) to afford the desired product (32 mg, 61%) as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.10 (s, 1H), 8.28 (s, 1H), 7.94 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.85 (d, $J$ = 8.7 Hz, 1H), 7.47 – 7.43 (m, 1H), 7.35 (dd, $J$ = 11.9, 2.4 Hz, 1H), 4.15 – 4.07 (m, 1H), 3.23 – 3.15 (m, 4H), 2.92 (d, $J$ = 6.8 Hz, 2H), 2.87 – 2.78 (m, 1H), 2.30 (d, $J$ = 12.7 Hz, 2H), 2.06 – 1.97 (m, 6H), 1.87 – 1.78 (m, 1H), 1.56 (q, $J$ = 12.4 Hz, 2H), 1.30 – 1.14 (m, 4H), 1.13 – 1.05 (m, 2H). ESI MS *m/z* 522 $[C_{30}H_{33}ClFN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.04 min.

Example 584

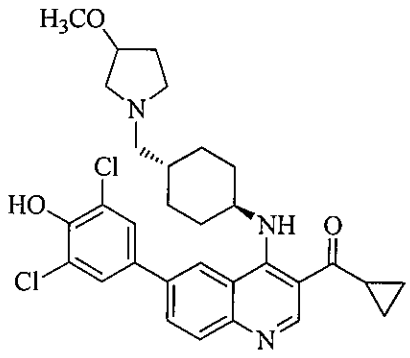
cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((*trans*-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)methanone



To a suspension of (6-bromo-4-((*trans*-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone (46 mg, 0.10 mmol), 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.15 mmol) and $Pd(dppf)Cl_2$ (11 mg, 0.015 mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (1.0 M in $H_2O$, 0.4 mL, 0.4 mmol). $N_2$ gas was bubbled through the reaction mixture and the mixture was then heated at 80 °C for 2 h. The solution was allowed to cool to room temperature, then directly subjected to column chromatography (silica, 0–20% methanol/dichloromethane). The resultant residue was dissolved in ethyl acetate and washed with saturated sodium bicarbonate solution. The organic layer was dried over anhydrous sodium sulfate and concentrated to afford the desired product (22.1 mg, 41%) as a yellow solid. $^1H$ NMR (500 MHz, MeOD) $\delta$ 9.09 (s, 1H), 8.28 (d, $J$ = 2.1 Hz, 1H), 7.97 – 7.91 (m, 1H), 7.84 (d, $J$ = 8.7 Hz, 1H), 7.55 (s, 2H), 4.19 – 4.10 (m, 1H), 3.14 – 3.07 (m, 4H), 2.89 – 2.78 (m, 3H), 2.31 (d, $J$ = 12.6 Hz, 5H), 2.04 – 1.97 (m, 4H), 1.83 – 1.79 (m, 1H), 1.57 (q, $J$ = 12.3 Hz, 4H), 1.32 – 1.04 (m, 6H). ESI MS *m/z* 538 $[C_{30}H_{33}Cl_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.29 min.

Example 598

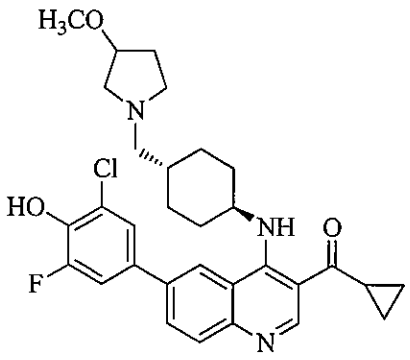
cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((*trans*-4-((3-methoxypyrrolidin-1-yl)methyl)cyclohexyl)amino)quinolin-3-yl)methanone



To a suspension of (6-bromo-4-((*trans*-4-((3-methoxypyrrolidin-1-yl)methyl)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone (49 mg, 0.10 mmol), 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.15 mmol) and $Pd(dppf)Cl_2$ (11 mg, 0.015 mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (1.0 M in $H_2O$, 0.4 mL, 0.4 mmol). $N_2$ gas was bubbled through the reaction mixture and the mixture was then heated at 80 °C for 2 h. The solution was allowed to cool to room temperature, then directly subjected to column chromatography (silica, 0–20% methanol/dichloromethane). The resultant residue was dissolved in ethyl acetate and washed with saturated sodium bicarbonate solution. The organic layer was dried over anhydrous sodium sulfate and concentrated to afford the desired product (30.6 mg, 54%) as a yellow solid. $^1$H NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.36 (br s, 1H), 8.47 (br s, 1H), 8.27 (dd, $J$ = 8.7, 1.8 Hz, 1H), 7.98 (d, $J$ = 8.7 Hz, 1H), 7.75 – 7.71 (s, 2H), 4.53 – 4.49 (br s, 1H), 4.19 (d, $J$ = 18.9 Hz, 1H), 3.85 – 3.74 (m, 2H), 3.35 (s, 3H), 3.28 – 3.26 (m, 1H), 3.25 – 3.12 (m, 3H), 2.84 (br s, 1H), 2.45 – 2.29 (m, 3H), 2.20 – 1.97 (m, 4H), 1.80 – 1.73 (m, 2H), 1.37 –1.18 (m, 6H). ESI MS *m/z* 568 $[C_{31}H_{35}Cl_2N_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.42 min.

Example 627

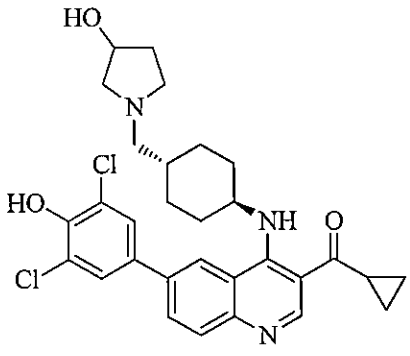
(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((*trans*-4-((3-methoxypyrrolidin-1-yl)methyl)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone



Following general procedure M, (6-bromo-4-((*trans*-4-((3-methoxypyrrolidin-1-yl)methyl)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone (49 mg, 0.10 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (41 mg, 0.15 mmol) to afford the desired product (34 mg, 62%) as an off-white solid. $^1$H NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.35 (br s, 1H), 8.47 (br s, 1H), 8.26 (dd, $J$ = 8.8, 1.8 Hz, 1H), 7.98 (d, $J$ = 8.7 Hz, 1H), 7.59 (br s, 1H), 7.51 (d, $J$ = 11.4 Hz, 1H), 4.50 (br s, 1H), 4.18 (d, $J$ = 19.4 Hz, 1H), 3.85 – 3.74 (m, 2H), 3.36 (s, 3 H), 3.22 – 3.13 (m, 3H), 2.84 (s, 1H), 2.45 – 2.29 (m, 3H), 2.22 – 2.05 (m, 4H), 1.80 – 1.71 (m, 2H), 1.35 – 1.19 (m, 6H). ESI MS *m/z* 552 $[C_{31}H_{35}ClFN_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.30 min.

Example 600

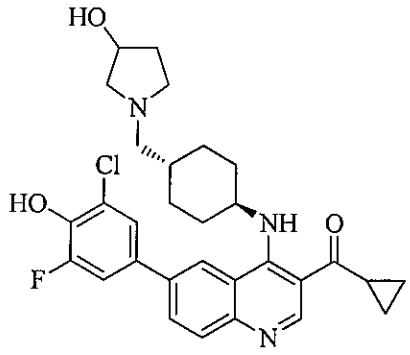
cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((*trans*-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexyl)amino)quinolin-3-yl)methanone




Following general procedure M, (6-bromo-4-((*trans*-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone (47 mg, 0.10 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.15 mmol) to afford the desired product (34 mg, 61%) as an off-white solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.13 (s, 1H), 8.34 (d, $J$ = 2.0 Hz, 1H), 7.98 (dd, $J$ = 8.7, 2.0 Hz, 1H), 7.92 – 7.87 (m, 1H), 7.63 (s, 2H), 4.59-4.54 (m, 1H), 4.53 – 4.47 (m, 1H), 4.17 – 4.11 (m, 1H), 3.16 – 3.10 (m, 2H), 2.94 (d, $J$ = 7.0 Hz, 2H), 2.88 – 2.79 (m, 1H), 2.33 (d, $J$ = 12.9 Hz, 2H), 2.28 – 2.17 (m, 1H), 2.06 – 1.96 (m, 3H), 1.84 (br s, 1H), 1.59 (q, $J$ = 12.2 Hz, 2H), 1.31 – 1.06 (m, 6H). ESI MS *m/z* 554 $[C_{30}H_{33}Cl_2N_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.11 min.

Example 631

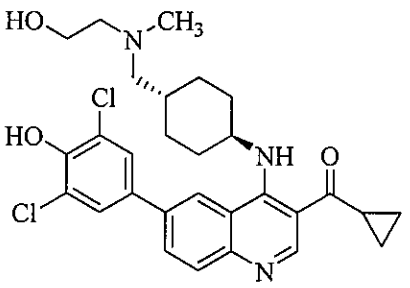
(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((*trans*-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone



Following general procedure M, (6-bromo-4-((*trans*-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone (25 mg, 0.053 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (27 mg, 0.10 mmol) to afford the desired product (17 mg, 60%) as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.11 (s, 1H), 8.34 (d, $J$ = 2.0 Hz, 1H), 7.97 (dd, $J$ = 8.7, 2.0 Hz, 1H), 7.88 (d, $J$ = 8.7 Hz, 1H), 7.48 (s, 1H), 7.38 (d, $J$ = 11.8, 1H), 4.46 – 4.38 (m, 1H), 4.18 – 4.10 (m, 1H), 3.08 – 3.01 (m, 2H), 2.93 – 2.78 (m, 3H), 2.70 – 2.64 (m, 2H), 2.331 (d, $J$ = 12.9 Hz, 2H), 2.23 – 2.12 (m, 1H), 2.01 (t, $J$ = 13.6 Hz, 2H), 1.87 – 1.80 (m, 1H), 1.75 – 1.71 (m, 1H), 1.56 (q, $J$ = 12.4 Hz, 2H), 1.27 – 1.05 (m, 6H). ESI MS *m/z* 538 $[C_{30}H_{33}ClFN_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.78 min.

Example 634

cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((*trans*-4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexyl)amino)quinolin-3-yl)methanone

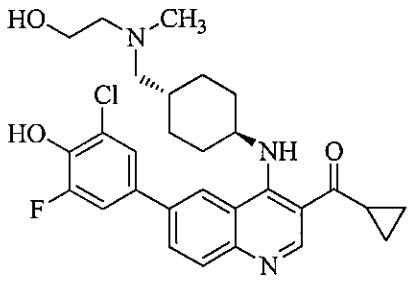


Following general procedure M, 6-bromo-4-((*trans*-4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone (46 mg, 0.10 mmol) was reacted with

2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.15 mmol) to afford the desired product (30.7 mg, 57%) as a yellow solid. $^1$H NMR (500 MHz, MeOD) δ 9.10 (s, 1H), 8.32 (d, $J$ = 2.0 Hz, 1H), 7.96 (dd, $J$ = 8.7, 2.0 Hz, 1H), 7.87 (d, $J$ = 8.7 Hz, 1H), 7.58 (s, 2H), 4.18 – 4.10 (m, 1H), 3.73 (t, $J$ = 5.7 Hz, 2H), 2.87 – 2.78 (m, 3H), 2.63 – 2.56 (m, 2H), 2.53 (s, 3H), 2.30 (d, $J$ = 12.6 Hz, 2H), 2.02 (d, $J$ = 13.0 Hz, 2H), 1.79 – 1.75 (m, 1H),1.56 (q, $J$ = 12.2 Hz, 2H), 1.30 – 1.15 (m, 4H), 1.12 – 1.05 (m, 2H). ESI MS *m/z* 542 [$C_{29}H_{33}Cl_2N_3O_3$ + H]$^+$; HPLC >99% (AUC), $t_R$ = 11.14 min.

Example 632

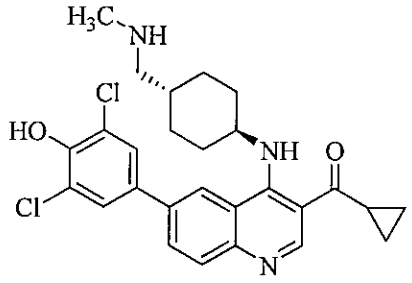
(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((*trans*-4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone




Following general procedure M, 6-bromo-4-((*trans*-4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone (40 mg, 0.087 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (35 mg, 0.13 mmol) to afford the desired product (27 mg, 59%) as a light yellow solid. $^1$H NMR (500 MHz, MeOD) δ 9.12 (s, 1H), 8.37 (d, $J$ = 2.0 Hz, 1H), 7.99 (dd, $J$ = 8.7, 2.0 Hz, 1H), 7.89 (d, $J$ = 8.8 Hz, 2H), 7.50 (d, $J$ = 2.1 Hz, 1H), 7.41 (dd, $J$ = 11.7, 2.1 Hz, 1H), 4.17 – 4.13 (m, 1H), 3.73 (t, $J$ = 5.8 Hz, 2H), 2.87 – 2.80 (m, 3H), 2.59 (d, $J$ = 6.8 Hz, 2H), 2.53 (s, 3H), 2.31 (d, $J$ = 13.1 Hz, 2H), 2.01 (d, $J$ = 13.1 Hz, 2H), 1.79 – 1.75 (m, 1H), 1.61 – 1.55 (m, 1H), 1.25 – 1.14 (m, 4H), 1.13 – 1.05 (m, 2H). ESI MS *m/z* 526 [$C_{29}H_{33}ClFN_3O_3$ + H]$^+$; HPLC >99% (AUC), $t_R$ = 10.80 min.

Example 685

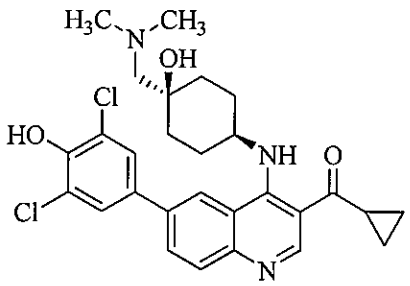
cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((*trans*-4-((methylamino)methyl)cyclohexyl)amino)quinolin-3-yl)methanone



To a suspension of (6-bromo-4-((*trans*-4-((methylamino)methyl)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)meth anone (42 mg, 0.10 mmol), 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.15 mmol) and $Pd(dppf)Cl_2$ (11 mg, 0.015 mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (1.0 M in $H_2O$, 0.4 mL, 0.4 mmol). $N_2$ gas was bubbled through the reaction mixture and the mixture was then heated at 80 °C for 2 h. The solution was allowed to cool to room temperature, diluted with saturated sodium bicarbonate solution and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate and concentrated. The resultant residue was purified by preparative HPLC (C18 silica, 10–90% methanol/water with 0.05% TFA). The residue was eluted through an ion-exchange column (using methanol and 7 N methanol in ammonia) to obtain the desired product (14.7 mg, 29%) as a yellow solid. $^1H$ NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.35 (br s, 1H), 8.47 (br s, 1H), 8.27 (dd, $J$ = 8.8, 1.8 Hz, 1H), 7.98 (d, $J$ = 8.7 Hz, 1H), 7.74 (s, 2H), 4.52 (br s, 1H), 2.94 (d, $J$ = 6.9 Hz, 2H), 2.83 (br s, 2H), 2.73 (s, 3H), 2.46 – 2.42 (br s, 2H), 2.05 (d, $J$ = 13.0 Hz, 2H), 1.88 (br s, 1H), 1.77 – 1.68 (m, 2H), 1.36 – 1.19 (m, 6H). ESI MS *m/z* 498 $[C_{27}H_{29}Cl_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.08 min.

Example 652

cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((*cis*-4-((dimethylamino)methyl)-4-hydroxycyc lohexyl)amino)quinolin-3-yl)methanone

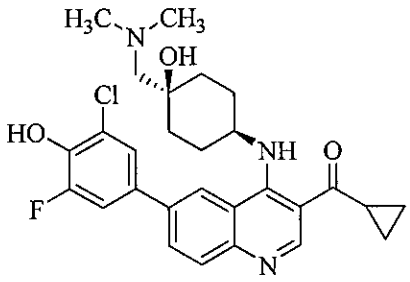


Following general procedure M, (6-bromo-4-((*cis*-4-((dimethylamino)methyl)-4-hydroxycyclohexyl)amino)quinolin-3-yl)(cyclop

ropyl)methanone (35 mg, 0.078 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (35 mg, 0.12 mmol) to afford the desired product (28.8 mg, 70%) as an orange solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.12 (s, 1H), 8.31 (d, $J$ = 2.0 Hz, 1H), 7.96 (dd, $J$ = 8.7, 2.0 Hz, 1H), 7.91 – 7.84 (m, 1H), 7.60 (s, 2H), 4.20 – 4.12 (m, 1H), 2.88 – 2.80 (m, 2H), 2.77 (s, 2 H), 2.66 (s, 3H), 2.09 (d, $J$ = 12.3 Hz, 2H), 2.00 – 1.84 (m, 4H), 1.68 – 1.58 (m, 2H), 1.23 – 1.13 (m, 2H), 1.14 – 1.05 (m, 2H). ESI MS *m/z* 528 $[C_{28}H_{31}Cl_2N_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.70 min.

Example 673

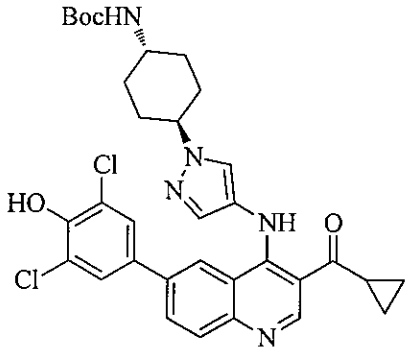
(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((*cis*-4-((dimethylamino)methyl)-4-hydroxycyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone




Following general procedure M, (6-bromo-4-((*cis*-4-((dimethylamino)methyl)-4-hydroxycyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone (35 mg, 0.078 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (35 mg, 0.13 mmol) to afford the desired product (26.7 mg, 67%) as a yellow-brown solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.14 (s, 1H), 8.35 (d, $J$ = 2.0 Hz, 1H), 7.97 (dd, $J$ = 8.7, 2.0 Hz, 1H), 7.92 – 7.84 (m, 1H), 7.51 – 7.46 (m, 1H), 7.39 (dd, $J$ = 11.8, 2.3 Hz, 1H), 4.20 – 4.12 (m, 1H), 2.90 – 2.78 (m, 1H), 2.74 (s, 2H), 2.64 (s, 3H), 2.12 – 2.06 (d, $J$ = 12.5 Hz, 2H), 2.00 – 1.82 (m, 4H), 1.72 – 1.56 (m, 2H), 1.23 – 1.12 (m, 2H), 1.14 – 1.05 (m, 2H). ESI MS *m/z* 512 $[C_{28}H_{31}ClFN_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.47 min.

Example 1173

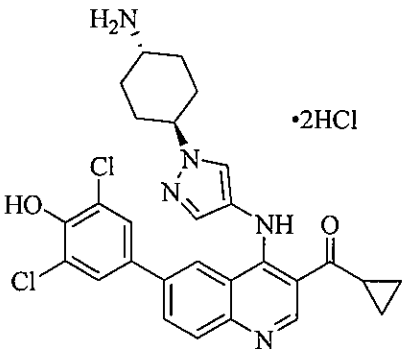
*tert*-butyl (*trans*-4-(4-((3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)-1*H*-pyrazol-1-yl)cyclohexyl)carbamate



Following general procedure M, *tert*-butyl (*trans*-4-(4-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl)amino)-1*H*-pyrazol-1-yl)cyclohexyl)carbamate (45 mg, 0.081 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.15 mmol) to afford the desired product (23 mg, 45%) as a yellow-brown solid. ESI MS *m/z* 636 $[C_{33}H_{35}Cl_2N_5O_4 + H]^+$

Example 706

(4-((1-(*trans*-4-aminocyclohexyl)-1*H*-pyrazol-4-yl)amino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone dihydrochloride

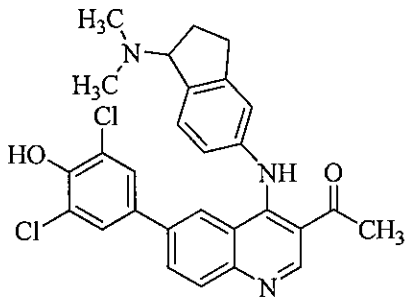


To a solution of *tert*-butyl (*trans*-4-(4-((3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)-1*H*-pyrazol-1-yl)cyclohexyl)carbamate (23 mg, 0.036 mmol) in THF (3 mL) was added trifluoroacetic acid (2 mL). The resultant mixture was heated at 65 °C for 16 h. The mixture was then cooled to room temperature and concentrated. The resultant residue was purified by preparative HPLC (C18 silica, 10–90% acetonitrile/water with 0.05% TFA). The residue was dissolved in methanol (5 mL) and HCl (2 M in diethyl ether, 2.0 mL, 4 mmol) was added. The resultant solution was concentrated to give the desired product (11.1 mg, 50%) as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.50 (br s, 1H), 8.22 (d, $J$ = 8.7 Hz, 1H), 8.13 (br s, 1H), 8.00 (d, $J$ = 8.7 Hz, 2H), 7.63 (s, 2H), 7.36 (br s, 2H), 4.35 – 4.31 (m, 1H), 3.26 – 3.17 (m, 1H), 2.97 – 2.89

(br s, 1H), 2.28 – 2.16 (m, 4H), 2.04 – 1.91 (m, 2H), 1.70 – 1.58 (m, 2H), 1.33 – 1.20 (m, 4H). ESI MS *m/z* 536 $[C_{28}H_{27}Cl_2N_5O_2 + H]^+$; HPLC 96.0% (AUC), $t_R$ = 11.44 min.

Example 720

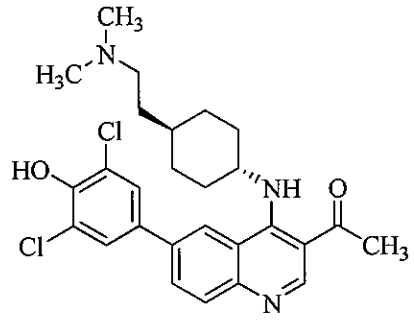
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1-(dimethylamino)-2,3-dihydro-1H-inden-5-yl)amino)quinolin-3-yl)ethanone



Following general procedure M,
1-(6-bromo-4-((1-(dimethylamino)-2,3-dihydro-1H-inden-5-yl)amino)quinolin-3-yl)ethanone (19 mg, 0.0448 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (35 mg, 0.12 mmol) to afford the desired product (13.9 mg, 61%) as an orange solid. $^1$H NMR (500 MHz, DMSO) $\delta$ 11.27 (s, 1H), 9.07 (s, 1H), 8.03 (dd, $J$ = 8.7, 2.1 Hz, 1H), 7.96 – 7.87 (m, 2H), 7.35 – 7.27 (m, 3H), 7.16 (d, $J$ = 2.1 Hz, 1H), 7.03 – 6.97 (m, 1H), 4.45 (br s, 1H), 2.95 – 2.84 (m, 1H), 2.84 – 2.73 (m, 1H), 2.65 (s, 3H), 2.21 (s, 6H), 2.14 – 2.06 (m, 2H).
ESI MS *m/z* 505 $[C_{28}H_{25}Cl_2N_3O_2 + H]^+$; HPLC 98.5% (AUC), $t_R$ = 11.22 min.

Example 739

1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((*trans*-4-(2-(dimethylamino)ethyl)cyclohexyl)amino)quinolin-3-yl)ethanone

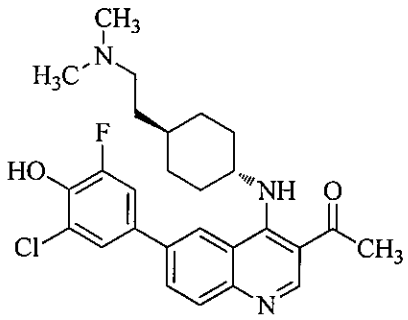


Following general procedure M,

1-(6-bromo-4-((*trans*-4-(2-(dimethylamino)ethyl)cyclohexyl)amino)quinolin-3-yl)ethanone (63 mg, 0.15 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (65 mg, 0.225 mmol) to afford the desired product (7.3 mg, 9.7%) as a yellow solid. $^1$H NMR (500 MHz, DMSO) $\delta$ 10.69 (d, $J$ = 8.0 Hz, 1H), 8.92 (s, 1H), 8.27 (d, $J$ = 2.1 Hz, 1H), 8.01 (dd, $J$ = 8.6, 2.1 Hz, 1H), 7.82 (d, $J$ = 8.7 Hz, 1H), 7.66 (s, 2H), 4.21 – 4.12 (m, 1H), 2.65 (s, 3H), 2.48 – 2.41 (m, 2H), 2.28 (s, 3H), 2.23 – 2.16 (m, 2H), 1.88 – 1.81 (m, 2H), 1.51 – 1.38 (m, 5H), 1.23 – 1.12 (m, 2H). ESI MS *m/z* 500 $[C_{27}H_{31}Cl_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.40 min.

Example 741

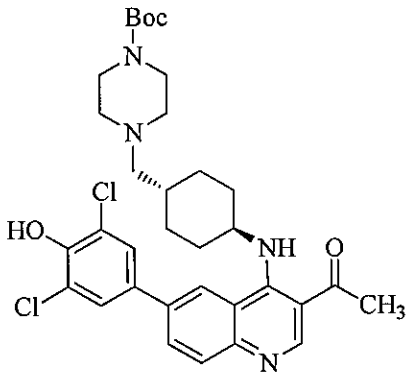
1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((*trans*-4-(2-(dimethylamino)ethyl)cyclohexyl)amino)quinolin-3-yl)ethanone




Following general procedure M, 1-(6-bromo-4-((*trans*-4-(2-(dimethylamino)ethyl)cyclohexyl)amino)quinolin-3-yl)ethanone (63 mg, 0.15 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (61 mg, 0.225 mmol) to afford the desired product (37 mg, 51%) as a yellow solid. $^1$H NMR (500 MHz, DMSO) $\delta$ 10.65 (d, $J$ = 7.9 Hz, 1H), 8.93 (s, 1H), 8.31 (d, $J$ = 2.1 Hz, 1H), 8.03 (dd, $J$ = 8.7, 2.1 Hz, 1H), 7.85 (d, $J$ = 8.7 Hz, 1H), 7.61 – 7.54 (m, 2H), 4.20 – 4.11 (m, 1H), 2.66 (s, 3H), 2.28 (t, $J$ = 7.3 Hz, 2H), 2.22 – 2.15 (m, 2H), 2.15 (s, 6H), 1.84 (d, $J$ = 12.5 Hz, 2H), 1.51 – 1.31 (m, 5H), 1.21 – 1.09 (m, 2H). ESI MS *m/z* 484 $[C_{27}H_{31}ClFN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.13 min.

Example 1174

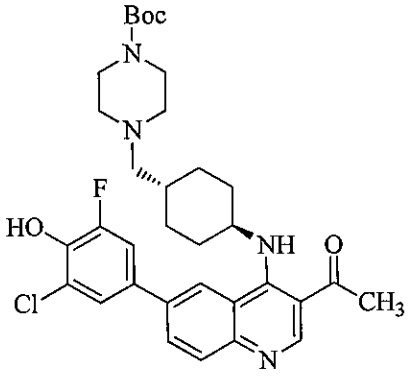
*tert*-butyl 4-((*trans*-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)methyl)piperazine-1-carboxylate



To a suspension of *tert*-butyl 4-((*trans*-4-((3-acetyl-6-bromoquinolin-4-yl)amino)cyclohexyl)methyl)piperazine-1-carboxylate (55 mg, 0.10 mmol), 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.15 mmol) and $Pd(dppf)Cl_2$ (11 mg, 0.015 mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (1.0 M in $H_2O$, 0.4 mL, 0.4 mmol). $N_2$ gas was bubbled through the reaction mixture and the mixture was then heated at 80 °C for 2 h. The solution was allowed to cool to room temperature, then directly subjected to column chromatography (silica, 0–20% methanol/dichloromethane) to afford the desired product (50 mg, 80%) as a brown solid. ESI MS *m/z* 627 $[C_{33}H_{40}Cl_2N_4O_4 + H]^+$

Example 1175

*tert*-butyl 4-((*trans*-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)methyl)piperazine-1-carboxylate

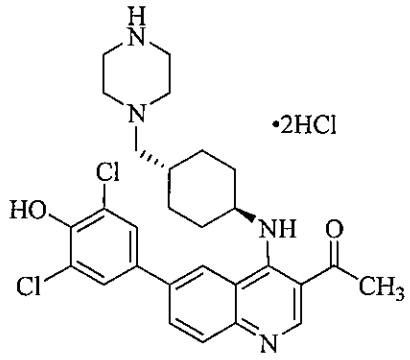


Following general procedure M, *tert*-butyl 4-((*trans*-4-((3-acetyl-6-bromoquinolin-4-yl)amino)cyclohexyl)methyl)piperazine-1-carboxylate (55 mg, 0.10 mmol) was reacted with

2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (41 mg, 0.15 mmol) to afford the desired product (66 mg, >99%) as an off-white solid. ESI MS *m/z* 611 $[C_{33}H_{40}ClFN_4O_4 + H]^+$

Example 772

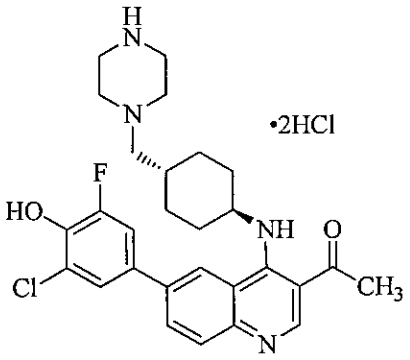
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((*trans*-4-(piperazin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)ethanone dihydrochloride




To a solution of *tert*-butyl 4-((*trans*-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)methyl) piperazine-1-carboxylate (50 mg, 0.80 mmol) in THF (5 mL) was added aqueous 1 N HCl (4 mL) and the reaction mixture was heated at 65 °C for 4 h. The reaction mixture was cooled to room temperature and concentrated. The resultant residue was purified by preparative HPLC (C18 silica, 10–90% acetonitrile/water with 0.05% TFA). The residue was dissolved in methanol (5 mL) and HCl (1 M in water, 2.0 mL, 2 mmol) was added. The resultant solution was concentrated to give the desired product (19.9 mg, 41%) as an off-white solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.10 (s, 1H), 8.48 (s, 1H), 8.28 (dd, $J$ = 8.7, 1.8 Hz, 1H), 7.97 (d, $J$ = 8.7 Hz, 1H), 7.73 (s, 2H), 4.57 – 4.53 (m, 1H), 3.67 – 3.63 (br s, 4H), 3.63 – 3.31 (br s, 2H), 3.14 – 3.10 (br s, 2H), 2.74 (s, 3H), 2.46 (d, $J$ = 12.2 Hz, 2H), 2.18 (d, $J$ = 12.8 Hz, 2H), 2.08 (br s, 1H), 1.80 (q, $J$ = 12.4 Hz, 2H), 1.41 – 1.34 (m, 2H). ESI MS *m/z* 527 $[C_{28}H_{32}Cl_2N_4O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 9.49 min.

Example 783

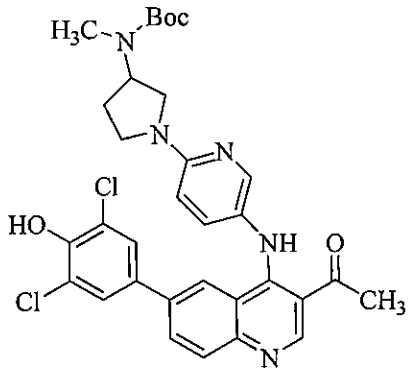
1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((*trans*-4-(piperazin-1-ylmethyl)cyclohexyl)amino) quinolin-3-yl)ethanone dihydrochloride



To a solution of *tert*-butyl 4-((*trans*-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)methyl)piperazine-1-carboxylate (66 mg, 0.10 mmol) in THF (5 mL) was added water (5 mL) and aqueous 6 N HCl (1.0 mL). The reaction mixture was heated at 65 °C for 2 h, cooled to room temperature and concentrated. The resultant residue was purified by preparative HPLC (C18 silica, 10–90% acetonitrile/water with 0.05% TFA). The residue was dissolved in methanol (5 mL) and HCl (6 M in water, 0.5 mL, 3 mmol) was added. The resultant solution was concentrated to give the desired product (24.2 mg, 41%) as an off-white solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.10 (s, 1H), 8.48 (s, 1H), 8.27 (dd, $J$ = 8.7, 1.7 Hz, 1H), 7.98 (d, $J$ = 8.7 Hz, 1H), 7.59 (s, 1H), 7.52 (d, $J$ = 11.3 Hz, 1H), 4.57 – 4.53 (br s, 1H), 3.67 (br s, 4H), 3.50 (br s, 2H), 3.17 (br s, 2H), 2.74 (s, 3H), 2.46 (d, $J$ = 11.9 Hz, 2H), 2.18 (d, $J$ = 12.5 Hz, 2H), 2.10 (br s, 1H), 1.83 – 1.77 (m, 2H), 1.41 – 1.34 (m, 2H). ESI MS *m/z* 511 [$C_{28}H_{32}ClFN_4O_2$ + H]$^+$; HPLC 98.3% (AUC), $t_R$ = 9.38 min.

Example 1176

*tert*-butyl (1-(5-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)pyridin-2-yl)pyrrolidin-3-yl)(methyl)carbamate

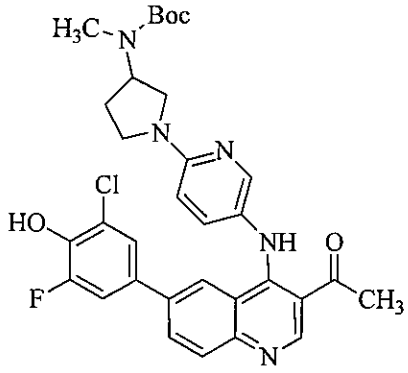


Following general procedure M, *tert*-butyl (1-(5-((3-acetyl-6-bromoquinolin-4-yl)amino)pyridin-2-yl)pyrrolidin-3-yl)(methyl)carbamate

(80 mg, 0.15 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (72 mg, 0.25 mmol) to afford the desired product (94 mg, 100%) as a brown solid. ESI MS *m/z* 622 $[C_{32}H_{33}Cl_2N_5O_4 + H]^+$

Example 1177

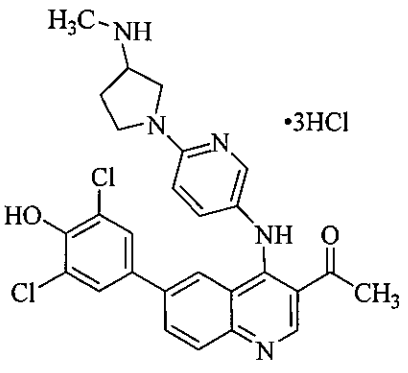
*tert*-butyl (1-(5-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)pyridin-2-yl)pyrrolidin-3-yl)(methyl)carbamate



Following general procedure M, *tert*-butyl (1-(5-((3-acetyl-6-bromoquinolin-4-yl)amino)pyridin-2-yl)pyrrolidin-3-yl)(methyl)carbamate (80 mg, 0.15 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (68 mg, 0.25 mmol) to afford the desired product (85 mg, 95%) as a brown solid. ESI MS *m/z* 606 $[C_{32}H_{33}ClFN_5O_4 + H]^+$

Example 788

1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((6-(3-(methylamino)pyrrolidin-1-yl)pyridin-3-yl)amino)quinolin-3-yl)ethanone trihydrochloride

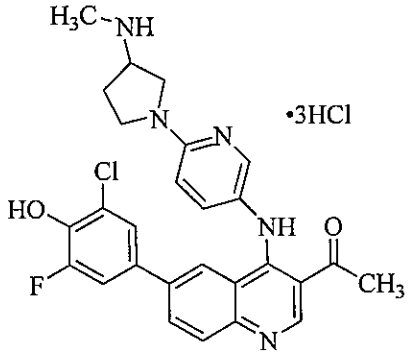


To a solution of *tert*-butyl (1-(5-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)pyridin-2-yl)pyrrolidin-3-yl)(methyl)carbamate (94 mg, 0.15 mmol) in THF (5 mL) was added water (3 mL) and HCl (6 M in water, 2 mL, 12 mmol). The reaction mixture was heated at 65 °C for 4 h, cooled to room temperature and concentrated. The resultant residue was purified by preparative HPLC (C18 silica, 10–90% acetonitrile/water with 0.05% TFA). The residue was dissolved in methanol (5 mL) and HCl (6 M in water, 1.0 mL, 6 mmol) was added. The resultant solution was concentrated to give the desired product (81.2 mg, 85%) as an orange solid. $^1$H NMR (500 MHz, MeOD) δ 9.32 (s, 1H), 8.32 – 8.25 (m, 2H), 8.13 – 8.05 (m, 2H), 8.03 – 7.97 (m, 1H), 7.37 (s, 2H), 7.22 (d, $J$ = 9.1 Hz, 1H), 4.17 – 4.07 (m, 2H), 4.00 – 3.90 (m, 2H), 3.86 – 3.77 (m, 1H), 2.84 (s, 3H), 2.79 (s, 3H), 2.71 – 2.60 (m, 1H), 2.48 – 2.38 (m, 1H).

ESI MS *m/z* 522 $[C_{27}H_{25}Cl_2N_5O_2 + H]^+$; HPLC 97.5% (AUC), $t_R$ = 10.00 min.

Example 785

1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((6-(3-(methylamino)pyrrolidin-1-yl)pyridin-3-yl)amino)quinolin-3-yl)ethanone trihydrochloride

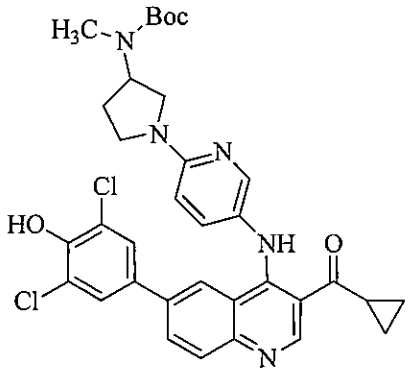



To a solution of *tert*-butyl (1-(5-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)pyridin-2-yl)pyrrolidin-3-yl)(methyl)carbamate (85 mg, 0.14 mmol) in THF (5 mL) was added water (3 mL) and HCl (6 M in water, 2 mL, 12 mmol). The reaction mixture was heated at 65 °C for 3 h, cooled to room temperature and concentrated. The resultant residue was triturated with dichloromethane to give the desired product (55 mg, 64%) as an orange solid. $^1$H NMR (500 MHz, MeOD) δ 9.31 (s, 1H), 8.31 – 8.23 (m, 2H), 8.10 – 8.03 (m, 2H), 7.95 (dd, $J$ = 9.4, 2.4 Hz, 1H), 7.22 (dd, $J$ = 11.5, 2.3 Hz, 1H), 7.18 – 7.11 (m, 2H), 4.14 – 4.08 (m, 2H), 3.98 – 3.86 (m, 2H), 3.83 – 3.74 (m, 1H), 2.84 (s, 3H), 2.79 (s, 3H), 2.71 – 2.60 (m, 1H), 2.47 – 2.36 (m, 1H).

ESI MS *m/z* 506 $[C_{27}H_{25}ClFN_5O_2 + H]^+$; HPLC 97.4% (AUC), $t_R$ = 9.62 min.

Example 1178

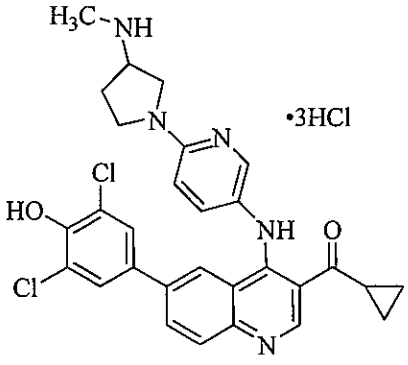
*tert*-butyl
(1-(5-((3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)pyridin
-2-yl)pyrrolidin-3-yl)(methyl)carbamate



Following general procedure M, *tert*-butyl
(1-(5-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl)amino)pyridin-2-yl)pyrrolidin-3-yl)(met
hyl)carbamate (98 mg, 0.173 mmol) was reacted with
2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (80 mg, 0.275 mmol) to
afford the desired product (90 mg, 80%) as a brown solid. ESI MS *m/z* 647 $[C_{34}H_{35}Cl_2N_5O_4 + H]^+$

Example 804

cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((6-(3-(methylamino)pyrrolidin-1-yl)pyridin-3-
yl)amino)quinolin-3-yl)methanone trihydrochloride

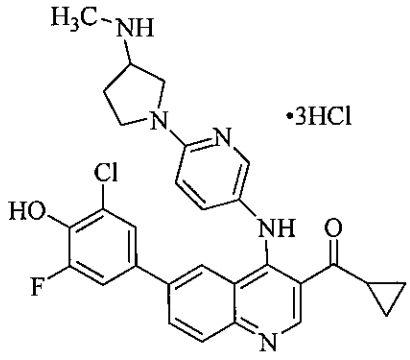


To a solution of *tert*-butyl
(1-(5-((3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)pyridin
-2-yl)pyrrolidin-3-yl)(methyl)carbamate (90 mg, 0.14 mmol) in THF (3 mL) was added TFA (2
mL). The reaction mixture was heated at 65 °C for 16 h, cooled to room temperature and
concentrated. The resultant residue was purified by preparative HPLC (C18 silica, 10–90%

acetonitrile/water with 0.05% TFA). The residue was dissolved in methanol (8 mL) and HCl (6 M in water, 1.0 mL, 6 mmol) was added. The resultant solution was concentrated to give the desired product (12.3 mg, 13%) as an orange solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.37 (s, 1H), 8.31 – 8.19 (m, 3H), 8.05 (d, $J$ = 8.8 Hz, 1H), 7.87 (dd, $J$ = 9.3, 2.7 Hz, 1H), 7.44 (s, 2H), 7.05 (d, $J$ = 9.3 Hz, 1H), 4.12 – 4.01 (m, 2H), 3.93 – 3.81 (m, 2H), 3.80 – 3.71 (m, 1H), 2.88 – 2.79 (m, 1H), 2.83 (s, 3H), 2.69 – 2.58 (m, 1H), 2.43 – 2.32 (m, 1H), 1.26 – 1.18 (m, 4H). ESI MS *m/z* 548 $[C_{29}H_{27}Cl_2N_5O_2 + H]^+$; HPLC 95.9% (AUC), $t_R$ = 10.31 min.

Example 789

(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((6-(3-(methylamino)pyrrolidin-1-yl)pyridin-3-yl)amino)quinolin-3-yl)(cyclopropyl)methanone trihydrochloride

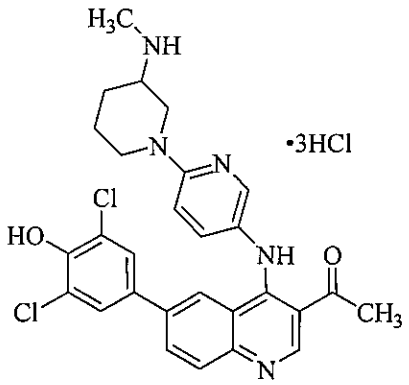



To a suspension of *tert*-butyl (1-(5-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl)amino)pyridin-2-yl)pyrrolidin-3-yl)(methyl)carbamate (88 mg, 0.155 mmol), 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (68 mg, 0.25 mmol) and Pd(dppf)$Cl_2$ (11 mg, 0.015 mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (1.0 M in $H_2O$, 0.4 mL, 0.4 mmol). $N_2$ gas was bubbled through the reaction mixture and the mixture was then heated at 80 °C for 2 h. The solution was allowed to cool to room temperature, diluted with a saturated $NaHCO_3$ solution and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, 0–20% methanol/dichloromethane) afforded a brown solid. This solid was dissolved in THF (3 mL) and TFA (2 mL). The reaction mixture was heated at 65 °C for 16 h, cooled to room temperature and concentrated. The resultant residue was purified by preparative HPLC (C18 silica, 10–90% acetonitrile/water with 0.05% TFA). The residue was dissolved in methanol (8 mL) and HCl (6 M in water, 1.0 mL, 6 mmol) was added. The resultant solution was concentrated to give the desired product (46.5 mg, 47%) as an orange solid. $^1$H NMR (500

MHz, MeOD) $\delta$ 9.34 (s, 1H), 8.36 (s, 1H), 8.31 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.24 (d, $J$ = 2.5 Hz, 1H), 8.08 (d, $J$ = 8.8 Hz, 1H), 8.02 – 7.95 (m, 1H), 7.41 – 7.33 (m, 2H), 7.20 (dd, $J$ = 9.6, 2.5 Hz, 1H), 4.17 – 4.07 (m, 2H), 3.99 – 3.88 (ddd, $J$ = m, 2H), 3.85 – 3.76 (m, 1H), 2.84 (s, 3H), 2.83 – 2.75 (m, 1H), 2.72 – 2.61 (m, 1H), 2.49 – 2.38 (m, 1H), 1.24 – 1.12 (m, 4H). ESI MS *m/z* 532 $[C_{29}H_{27}ClFN_5O_2 + H]^+$; HPLC 98.8% (AUC), $t_R$ = 10.10 min.

Example 806

1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((6-(3-(methylamino)piperidin-1-yl)pyridin-3-yl)amino)quinolin-3-yl)ethanone trihydrochloride

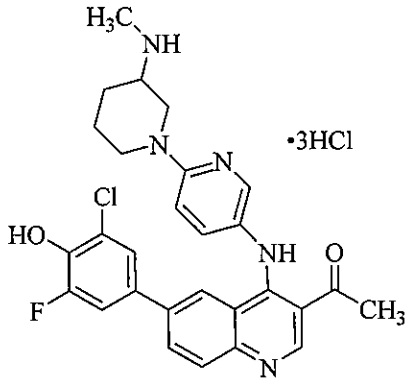



To a suspension of *tert*-butyl (1-(5-((3-acetyl-6-bromoquinolin-4-yl)amino)pyridin-2-yl)piperidin-3-yl)(methyl)carbamate (80 mg, 0.144 mmol), 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (80 mg, 0.28 mmol) and $Pd(dppf)Cl_2$ (11 mg, 0.015 mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (1.0 M in $H_2O$, 0.4 mL, 0.4 mmol). $N_2$ gas was bubbled through the reaction mixture and the mixture was then heated at 80 °C for 2 h. The solution was allowed to cool to room temperature, diluted with a saturated $NaHCO_3$ solution and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, 0–20% methanol/dichloromethane) afforded a brown solid. This solid was dissolved in THF (3 mL), water (2 mL) and HCl (6 M in water, 2 mL, 12 mmol). The reaction mixture was heated at 65 °C for 3 h, cooled to room temperature and concentrated. The resultant residue was purified by preparative HPLC (C18 silica, 10–90% acetonitrile/water with 0.05% TFA). The residue was dissolved in methanol (8 mL) and HCl (6 M in water, 1.0 mL, 6 mmol) was added. The resultant solution was concentrated to give the desired product (55.4 mg, 60%) as an orange solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.30 (s, 1H), 8.29 – 8.21 (m, 2H), 8.06 – 8.00 (m, 2H), 7.83 (dd, $J$ = 9.1, 2.7 Hz, 1H), 7.30 (s, 2H), 7.30 – 7.26 (m, 1H), 4.47 (br s, 1H), 3.98 (d, $J$ = 13.4 Hz, 1H), 3.63 (br s, 1H), 3.50 – 3.40 (m, 1H), 3.37 – 3.32 (m, 1H), 2.80 (s, 3H), 2.80 (s, 3H), 2.30 – 2.23 (m, 1H), 2.03 – 1.95 (m, 1H), 1.88 – 1.69 (m, 2H). ESI

MS *m/z* 536 $[C_{28}H_{27}Cl_2N_5O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.17 min.

Example 815

1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((6-(3-(methylamino)piperidin-1-yl)pyridin-3-yl)amino)quinolin-3-yl)ethanone trihydrochloride

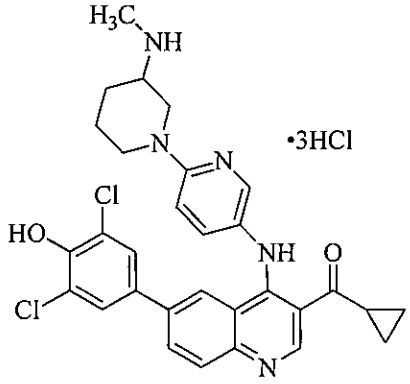



To a suspension of *tert*-butyl (1-(5-((3-acetyl-6-bromoquinolin-4-yl)amino)pyridin-2-yl)piperidin-3-yl)(methyl)carbamate (80 mg, 0.144 mmol), 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (68 mg, 0.28 mmol) and $Pd(dppf)Cl_2$ (11 mg, 0.015 mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (1.0 M in $H_2O$, 0.4 mL, 0.4 mmol). $N_2$ gas was bubbled through the reaction mixture and the mixture was then heated at 80 °C for 2 h. The solution was allowed to cool to room temperature, diluted with a saturated $NaHCO_3$ solution and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, 0–20% methanol/dichloromethane) afforded a brown solid. This solid was dissolved in THF (3 mL), water (3 mL) and HCl (6 M in water, 2 mL, 12 mmol). The reaction mixture was heated at 65 °C for 4 h, cooled to room temperature and concentrated. The resultant residue was purified by preparative HPLC (C18 silica, 10–90% acetonitrile/water with 0.05% TFA). The residue was dissolved in methanol (8 mL) and HCl (6 M in water, 1.0 mL, 6 mmol) was added. The resultant solution was concentrated to give the desired product (63.2 mg, 70%) as an orange solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.28 (s, 1H), 8.29 – 8.19 (m, 2H), 8.04 – 7.96 (m, 2H), 7.78 (d, $J$ = 9.5 Hz, 1H), 7.24 (d, $J$ = 9.3 Hz, 1H), 7.13 – 7.06 (m, 2H), 4.46 (br s, 1H), 3.96 (d, $J$ = 13.1 Hz, 1H), 3.61 (br s, 1H), 3.48 – 3.37 (m, 1H), 2.82 (s, 3H), 2.80 (s, 3H), 2.28 – 2.24 (m, 1H), 2.02 – 1.94 (m, 1H), 1.88 – 1.70 (m, 2H). ESI MS *m/z* 520 $[C_{32}H_{32}Cl_2N_4O_2 + H]^+$; HPLC 98.8% (AUC), $t_R$ = 9.82 min.

Example 807

cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((6-(3-(methylamino)piperidin-1-yl)pyridin-3-y

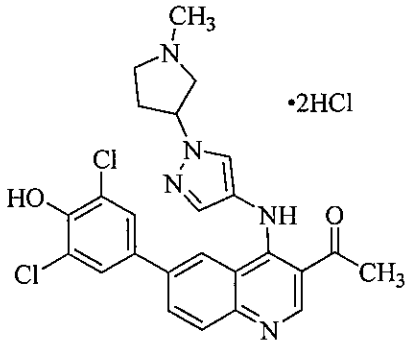
l)amino)quinolin-3-yl)methanone trihydrochloride



To a suspension of *tert*-butyl (1-(5-((6-bromo-3-(cyclopropanecarbonyl)quinolin-4-yl)amino)pyridin-2-yl)piperidin-3-yl)(methyl)carbamate (80 mg, 0.137 mmol), 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (80 mg, 0.28 mmol) and $Pd(dppf)Cl_2$ (11 mg, 0.015 mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (1.0 M in $H_2O$, 0.4 mL, 0.4 mmol). $N_2$ gas was bubbled through the reaction mixture and the mixture was then heated at 80 °C for 2 h. The solution was allowed to cool to room temperature, diluted with a saturated $NaHCO_3$ solution and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, 0–20% methanol/dichloromethane) afforded a brown solid. This solid was dissolved in THF (3 mL) and TFA (2 mL). The reaction mixture was heated at 65 °C for 16 h, cooled to room temperature and concentrated. The resultant residue was purified by preparative HPLC (C18 silica, 10–90% acetonitrile/water with 0.05% TFA). The residue was dissolved in methanol (8 mL) and HCl (6 M in water, 1.0 mL, 6 mmol) was added. The resultant solution was concentrated to give the desired product (39.6 mg, 43%) as an orange solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.39 (s, 1H), 8.29 – 8.21 (m, 2H), 8.19 (s, 1H), 8.04 (d, $J$ = 8.8 Hz, 1H), 7.78 (dd, $J$ = 9.3, 2.7 Hz, 1H), 7.40 (s, 2H), 7.25 (d, $J$ = 9.3 Hz, 1H), 4.44 (br s, 1H), 4.00 – 3.92 (m, 1H), 3.61 (br s, 1H), 3.48 – 3.36 (m, 1H), 3.37 – 3.32 (m, 1H), 2.89 – 2.81 (s, 1H), 2.80 (s, 3H), 2.28 – 2.22 (m, 1H), 2.02 – 1.94 (m, 1H), 1.87 – 1.69 (m, 2H), 1.24 – 1.16 (m, 4H). ESI MS *m/z* 561 $[C_{30}H_{29}Cl_2N_5O_2 + H]^+$; HPLC 97.8% (AUC), $t_R$ = 10.73 min.

Example 814

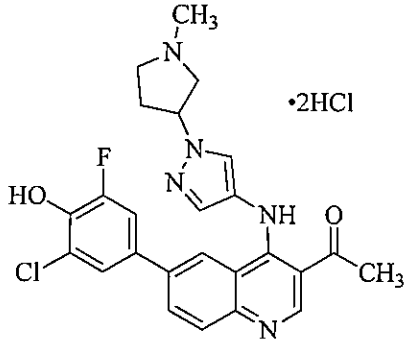
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1-(1-methylpyrrolidin-3-yl)-1*H*-pyrazol-4-yl)amino)quinolin-3-yl)ethanone dihydrochloride



To a suspension of 1-(6-bromo-4-((1-(1-methylpyrrolidin-3-yl)-1*H*-pyrazol-4-yl)amino)quinolin-3-yl)ethanone (80 mg, 0.19 mmol), 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (80 mg, 0.28 mmol) and $Pd(dppf)Cl_2$ (11 mg, 0.015 mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (1.0 M in $H_2O$, 0.4 mL, 0.4 mmol). $N_2$ gas was bubbled through the reaction mixture and the mixture was then heated at 80 °C for 2 h. The solution was allowed to cool to room temperature, diluted with a saturated $NaHCO_3$ solution and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, 0–20% methanol/dichloromethane) afforded a residue that was further purified by preparative HPLC (C18 silica, 10–90% acetonitrile/water with 0.05% TFA). The resultant residue was dissolved in methanol (8 mL) and HCl (6 M in water, 1.0 mL, 6 mmol) was added. The resultant solution was concentrated to give the desired product (66.2 mg, 60%) as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.27 (br s, 1H), 8.26 – 8.17 (m, 2H), 8.11 (s, 1H), 8.02 (d, $J$ = 8.8 Hz, 1H), 7.79 (s, 1H), 7.37 (s, 2H), 5.41 (br s, 1H), 4.25 – 3.93 (m, 2H), 3.84 – 3.32 (m, 2H), 3.21 – 3.03 (m, 3H), 2.82 – 2.78 (br s, 1H), 2.80 (3, 3H), 2.39 (br s, 1H). ESI MS *m/z* 496 $[C_{25}H_{23}Cl_2N_5O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 9.56 min.

Example 813

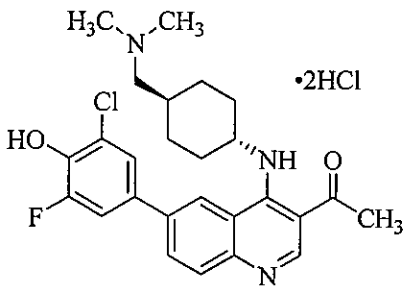
1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1-(1-methylpyrrolidin-3-yl)-1*H*-pyrazol-4-yl) amino)quinolin-3-yl)ethanone dihydrochloride



To a suspension of 1-(6-bromo-4-((1-(1-methylpyrrolidin-3-yl)-1*H*-pyrazol-4-yl)amino)quinolin-3-yl)ethanone (80 mg, 0.19 mmol), 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (68 mg, 0.25 mmol) and $Pd(dppf)Cl_2$ (11 mg, 0.015 mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (1.0 M in $H_2O$, 0.4 mL, 0.4 mmol). $N_2$ gas was bubbled through the reaction mixture and the mixture was then heated at 80 °C for 2 h. The solution was allowed to cool to room temperature, diluted with a saturated $NaHCO_3$ solution and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, 0–20% methanol/dichloromethane) afforded a residue that was dissolved in methanol (8 mL) and HCl (6 M in water, 1.0 mL, 6 mmol) was added. The resultant solution was concentrated to give the desired product (69.8 mg, 65%) as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.28 (s, 1H), 8.26 – 8.17 (m, 2H), 8.12 (s, 1H), 8.05 – 7.99 (d, $J$ = 8.8 Hz, 1H), 7.82 – 7.77 (m, 1H), 7.25 (s, 1H), 7.13 (d, $J$ = 11.3 Hz, 1H), 5.46 – 5.34 (m, 1H), 4.28 – 3.96 (m, 2H), 3.88 – 3.55 (m, 1H), 3.41 – 3.32 (m, 1H), 3.15 (s, 1H), 3.05 (s, 2H), 2.93 – 2.81 (m, 1H), 2.80 (s, 3H), 2.68 – 2.33 (m, 1H). ESI MS *m/z* 480 $[C_{25}H_{23}ClFN_5O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 9.44 min.

Example 943

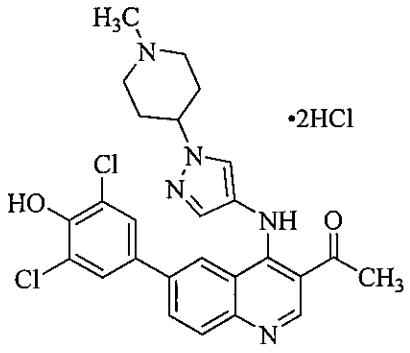
1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((*trans*-4-((dimethylamino)methyl)cyclohexyl) amino)quinolin-3-yl)ethanone dihydrochloride



To a suspension of 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((*trans*-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)ethanone (3.06 g, 6.51 mmol) in methanol (250 mL) was added HCl (1.25 M in MeOH, 25 mL, 31.2 mmol). The resultant suspension was partially concentrated, filtered and rinsed with ethyl acetate to give the desired product (3.10 g, 88%) as a light yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.00 (s, 1H), 8.38 (d, $J$ = 2.0 Hz, 1H), 8.10 (dd, $J$ = 8.7, 2.0 Hz, 1H), 7.93 (d, $J$ = 8.7 Hz, 1H), 7.54 (dd, $J$ = 2.2, 1.5 Hz, 1H), 7.46 (dd, $J$ = 11.5, 2.3 Hz, 1H), 4.38 – 4.29 (m, 1H), 3.06 (d, $J$ = 6.6 Hz, 2H), 2.91 (s, 6H), 2.71 (s, 3H), 2.40 (d, $J$ = 12.7 Hz, 2H), 2.04 – 1.95 (m, 3H), 1.75 – 1.65 (m, 2H), 1.31 (q, $J$ = 12.8 Hz, 2H). ESI MS *m/z* 470 $[C_{26}H_{29}ClFN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 9.75 min.

Example 836

1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1-(1-methylpiperidin-4-yl)-1*H*-pyrazol-4-yl)amino)quinolin-3-yl)ethanone dihydrochloride

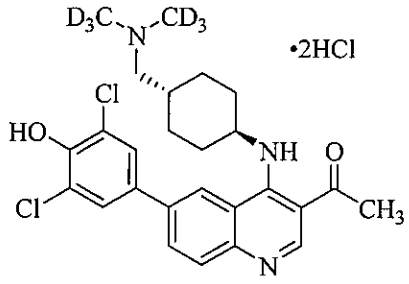


To a suspension of 1-(6-bromo-4-((1-(1-methylpiperidin-4-yl)-1*H*-pyrazol-4-yl)amino)quinolin-3-yl)ethanone (50 mg, 0.116 mmol), 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.15 mmol) and Pd(dppf)$Cl_2$ (11 mg, 0.015 mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (1.0 M in $H_2O$, 0.4 mL, 0.4 mmol). $N_2$ gas was bubbled through the reaction mixture and the mixture was then heated at 80 °C for 2 h. The solution was allowed to cool to room temperature, diluted with a saturated $NaHCO_3$ solution and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate and concentrated. Purification by column chromatography (silica, 0–20% methanol/dichloromethane) afforded a residue that was dissolved in methanol (4 mL) and HCl (1.25 M in methanol, 1.0 mL, 1.25 mmol) was added. The resultant solution was concentrated to give the desired product (18.6 mg, 27%) as a yellow solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.26 (s, 1H), 8.25 – 8.18 (m, 1H), 8.18 – 8.07 (m, 2H), 8.00 (d, $J$ = 8.8 Hz, 1H), 7.71 (s, 1H), 7.36 – 7.32 (m, 2H), 4.70 – 4.61 (m, 1H), 3.68 (d, 2H), 3.53 –

3.45 (m, 1H), 3.41 – 3.22 (m, 1H), 2.94 (s, 3H), 2.80 (s, 3H), 2.53 – 2.33 (m, 4H). ESI MS *m/z* 510 $[C_{26}H_{25}Cl_2N_5O_2 + H]^+$; HPLC 97.4% (AUC), $t_R$ = 9.46 min.

Example 864

1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((*trans*-4-((dimethyl-$d_6$-amino)methyl)cyclohexyl)amino)quinolin-3-yl)ethanone dihydrochloride

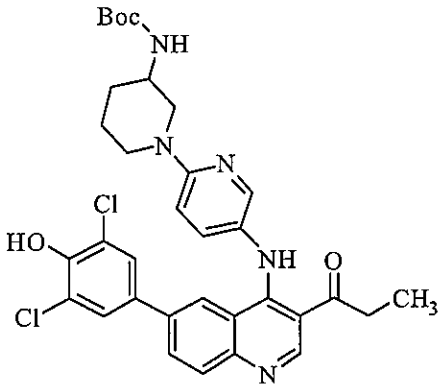



To a suspension of 1-(6-bromo-4-((*trans*-4-((dimethyl-$d_6$-amino)methyl)cyclohexyl)amino)quinolin-3-yl)ethanone (273 mg, 0.67 mmol), 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (289 mg, 1.0 mmol) and Pd(dppf)$Cl_2$ (49 mg, 0.067 mmol) in dioxane (20 mL) was added $Cs_2CO_3$ (1.0 M in $H_2O$, 2 mL, 2 mmol). $N_2$ gas was bubbled through the reaction mixture and the mixture was then heated at 80 °C for 2 h. The solution was allowed to cool to room temperature, diluted with a saturated $NaHCO_3$ solution and extracted with a mixture of $CHCl_3$/isopropanol (3:1). The combined organic layers were dried over anhydrous sodium sulfate. Purification by column chromatography (silica, 0–20% methanol/dichloromethane) afforded a residue that was dissolved in methanol (20 mL) and HCl (1.25 M in methanol, 8.0 mL, 12 mmol) was added. The resultant solution was concentrated to give the desired product (245 mg, 75%) as a light brown solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.11 (s, 1H), 8.47 (s, 1H), 8.27 (dd, $J$ = 8.8, 1.8 Hz, 1H), 7.99 (d, $J$ = 8.8 Hz, 1H), 7.73 (s, 2H), 4.54 (br s, 1H), 3.08 (d, $J$ = 6.6 Hz, 2H), 2.74 (s, 3H), 2.46 (d, $J$ = 12.3 Hz, 2H), 2.10 – 2.00 (m, 3H), 1.87 – 1.75 (m, 2H), 1.36 (q, $J$ = 12.9 Hz, 2H).

ESI MS *m/z* 492 $[C_{26}H_{23}D_6Cl_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 9.81 min.

Example 1179

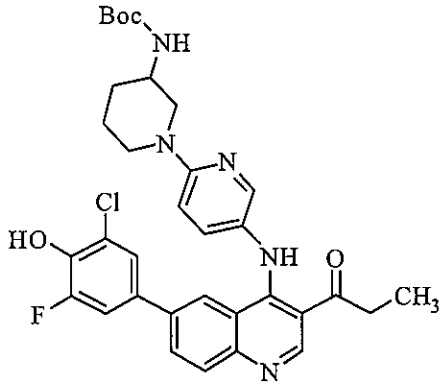
tert-butyl 1-(5-(6-(3,5-dichloro-4-hydroxyphenyl)-3-propionylquinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate



Following general procedure D, tert-butyl tert-butyl 1-(5-(6-bromo-3-propionyl quinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (46 mg, 0.091 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (39 mg, 0.137 mmol) to afford the desired product (35 mg, 60%) as an yellow solid: ESI MS *m/z* 636, $[C_{33}H_{35}Cl_2N_5O_4 + H]^+$

Example 1180

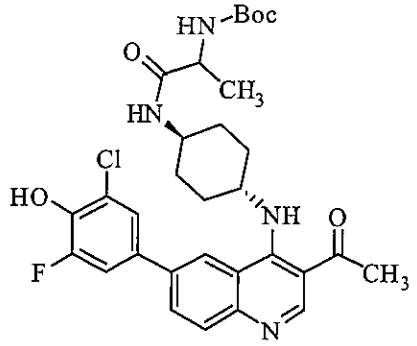
tert-butyl 1-(5-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-propionylquinolin-4-ylamino) pyridin-2-yl)piperidin-3-ylcarbamate



Following general procedure D, tert-butyl 1-(5-(6-bromo-3-propionylquinolin-4-ylamino) pyridin-2-yl)piperidin-3-ylcarbamate (46 mg, 0.091 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (37 mg, 0.137 mmol) to afford the desired product (32 mg, 60%) as an yellow solid: ESI MS *m/z* 619, $[C_{33}H_{35}ClFN_5O_4 + H]^+$

Example 1181

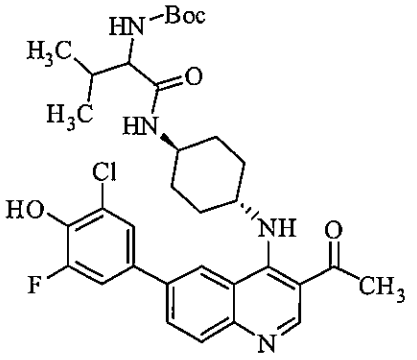
tert-butyl 1-((1R,4R)-4-(3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-ylamino) cyclohexylamino)-1-oxopropan-2-ylcarbamate



Following general procedure D, tert-butyl 1-((1R,4R)-4-(3-acetyl-6-bromoquinolin-4-ylamino) cyclohexylamino)-1-oxopropan-2-ylcarbamate(70 mg, 0.131 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (42 mg, 0.157 mmol) to afford the desired product (42 mg, 53%) as an orange solid: ESI MS *m/z* 599, $[C_{31}H_{36}ClFN_4O_5 + H]^+$

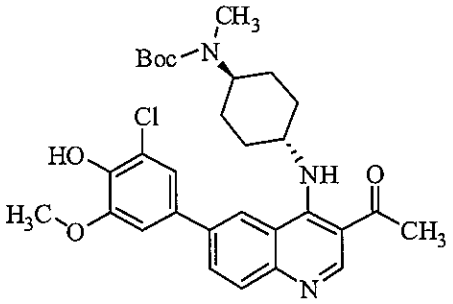
Example 1182

tert-butyl 1-((1R,4R)-4-(3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-ylamino) cyclohexylamino)-3-methyl-1-oxobutan-2-ylcarbamate



Following general procedure D, tert-butyl 1-(1R,4R)-4-(3-acetyl-6-bromoquinolin-4-ylamino) cyclohexylamino)-3-methyl-1-oxobutan-2-ylcarbamate (70 mg, 0.131 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (40 mg, 0.150 mmol) to afford the desired product (24 mg, 31%) as an yellow solid: ESI MS *m/z* 627, $[C_{33}H_{40}ClFN_4O_5 + H]^+$

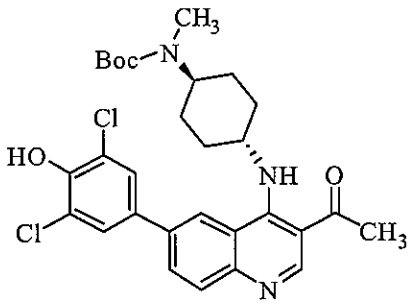
Example 1183tert-Butyl (1r,4r)-4-(3-acetyl-6-(3-chloro-4-hydroxy-5-methoxyphenyl) quinolin-4-ylamino)cyclohexyl(methyl)carbamate



Following general procedure D, tert-butyl (1r,4r)-4-(3-acetyl-6-bromoquinolin-4-ylamino) cyclohexyl(methyl)carbamate (60 mg, 0.126 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.152 mmol) to afford the desired product (53 mg, 72%) as a yellow brown solid; ESI MS *m/z* 580, $[C_{32}H_{38}ClN_3O_5 + H]^+$

Example 1184

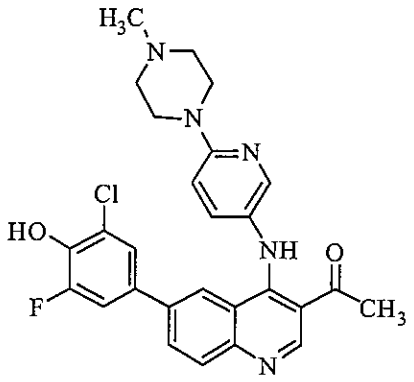
tert-butyl (1r,4r)-4-(3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-4-ylamino)cyclohexyl(methyl)carbamate



Following general procedure D, tert-butyl (1r,4r)-4-(3-acetyl-6-bromoquinolin-4-ylamino)cyclohexyl(methyl)carbamate (60 mg, 0.126 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (44 mg, 0.151 mmol) to afford the desired product (60 mg, 81%) as a yellow brown solid: ESI MS *m/z* 584, $[C_{31}H_{35}Cl_2N_3O_4 + H]^+$

Example 487

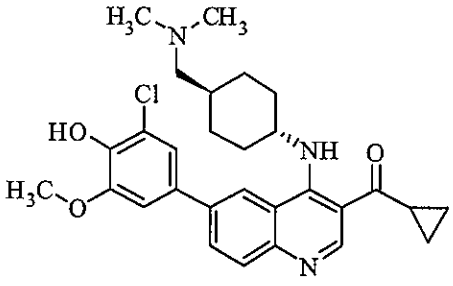
1-(6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone



Following general procedure D, [1-(6-bromo-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone(50 mg, 0.113 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (34 mg, 0.124 mmol) to afford the desired product (18 mg, 31%) as a yellow-orange solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.08 (s, 1H), 8.07 (d, J = 3 Hz, 1H), 7.91 (s, 2H), 7.82 (s, 1H), 7.49 (dd, $J$ = 12, 2.0 Hz, 1H), 7.00–6.92 (m, 3H), 3.66 (t, $J$ = 10 Hz, 4H), 2.77 (s, 3H), 2.62 (t, $J$ =10 Hz, 4H), 2.39 (s, 3H); ESI MS *m/z* 506, $[C_{27}H_{25}ClFN_5O_2 + H]^+$; HPLC 98.9% (AUC), $t_R$ = 14.39 min.

Example 513

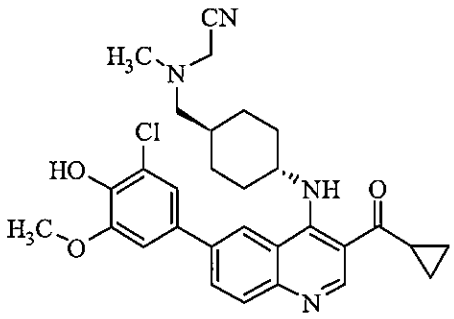
(6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, (6-bromo-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone(60 mg, 0.139 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl -1,3,2- dioxaborolan-2-yl)phenol (48 mg, 0.167 mmol) to afford the desired product (25 mg, 35%) as a green-yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.16 (s, 1H), 8.34 (d, J = 2 Hz, 1H), 7.99 (dd, J = 11, 2 Hz, 1H), 7.89 (d, J = 8.5 Hz, 1H), 7.24 (d, $J$ = 2.5 Hz, 1H), 7.1 (d, J = 2 Hz, 1H ), 4.61 (d, $J$ = 3.5 Hz, 1H), 3.97 (s, 3H), 2.85 (quint, $J$ = 15.5 Hz, 1H), 2.51 (d, J = 7 Hz, 3H) 2.43 (s, 3H), 2.00 (m, 2H), 1.90 (m, 2H) 1.75 (m, 3H), 1.19 (q, J = 10.5 Hz, 2H), 1.10 (quint, J = 14.5, 2H), ; ESI MS *m/z* 508, $[C_{29}H_{34}ClN_3O_3 + H]^+$; HPLC 99.0% (AUC), $t_R$ = 9.64 min.

Example 518

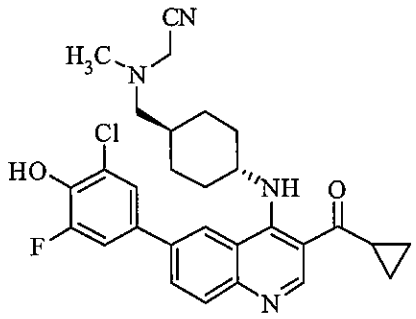
2-((((1R,4R)-4-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-(cyclopropane carbonyl)quinolin-4-ylamino)cyclohexyl)methyl)(methyl)amino)acetonitrile



Following general procedure D, 2-((((1R,4R)-4-(6-bromo-3-(cyclopropanecarbonyl) quinolin-4-ylamino)cyclohexyl)methyl)(methyl)amino)acetonitrile (40 mg, 0.087 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (29 mg, 0.105 mmol) to afford the desired product (15 mg, 32%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.16 (s, 1H), 8.35 (s, 1H), 7.98 (dd, J = 10.5, 1.5 Hz, 1H), 7.88 (d, J = 8.5 Hz, 1H), 7.25 (d, *J* = 2 Hz, 1H), 7.18 (d, J = 1.5 Hz, 1H ), 4.59 (s, 1H), 3.97 (s, 3H), 3.66 (s, 2H) 2.84 (quint, *J* = 15.5 Hz, 1H), 2.39 (d, J = 7 Hz, 2H) 2.35 (s, 3H) 1.98 (m, 2H), 1.87 (m, 2H), 1.73 (m, 3H), 1.45 (q, J = 11 Hz, 2H) 1.21 (q, J = 16.5 Hz, 2H), 1.10 (d, J = 4 Hz, 2H), ; ESI MS *m/z* 533, $[C_{30}H_{33}ClN_4O_3 + H]^+$; HPLC 96.4% (AUC), $t_R$ = 12.62 min.

Example 524

2-((((1R,4R)-4-(6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl) quinolin-4-ylamino)cyclohexyl)methyl)(methyl)amino)acetonitrile

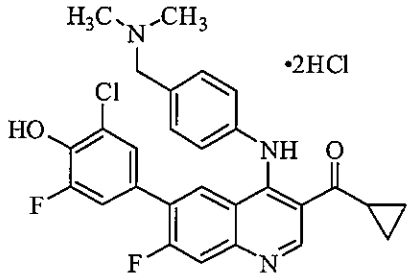


Following general procedure D, 2-((((1R,4R)-4-(6-bromo-3-(cyclopropanecarbonyl)quinolin -4-ylamino)cyclohexyl)methyl)(methyl)amino)acetonitrile (40 mg, 0.087 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (28 mg, 0.105 mmol) to

afford the desired product (18 mg, 39%) as a yellow solid: $^1$H NMR (500 MHz, DMSO-$d_6$) $\delta$ 10.38 (s, 1H), 9.16 (s, 1H), 8.34 (s, 1H), 8.04 (dd, J = 10.5, 1.5 Hz, 1H), 7.88 (d, J = 8.5 Hz, 1H), 7.63 (m, 2H), 4.42 (s, 1H), 3.72 (s, 2H), 2.95 (quint, $J$ = 15.5 Hz, 1H), 2.28 (d, J = 7.5 Hz, 2H) 2.24 (s, 3H) 1.79 (m, 4H), 1.64 (m, 3H), 1.34 (m, 2H), 1.10 (q, J = 12 Hz, 2H), 1.04 (m, 2H), ; ESI MS *m/z* 521, $[C_{29}H_{30}ClFN_4O_2 + H]^+$; HPLC 94.9% (AUC), $t_R$ = 12.59 min.

Example 541

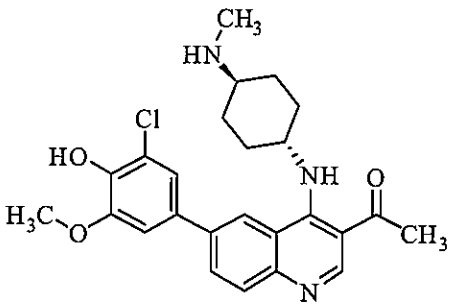
(6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-7-fluoroquinolin-3-yl)(cyclopropyl)methanone




Following general procedure D, ((6-bromo-4-(4-((dimethylamino)methyl)phenylamino)-7-fluoroquinolin-3-yl)(cyclopropyl)methanone (40 mg, 0.090 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (31 mg, 0.113 mmol) to afford the desired product (11 mg, 24%) as a yellow solid: 1H NMR (500 MHz, DMSO-$d_6$) $\delta$ 10.70 (s, 1H), 9.06 (s, 1H), 8.09 (d, J = 8.5 Hz, 1H), 7.75 (d, J = 12 Hz, 1H), 7.26 (d, J = 8.5 Hz, 2H), 7.21 (d, J = 6.5 Hz, 2H), 7.09 (d, J = 8.5, 2H), 3.40 (s, 2H), 2.77 (quint, J = 15 Hz, 1H), 2.13 (s, 6H), 0.86 (m, 4H); ESI MS *m/z* 508, $[C_{28}H_{24}ClF_2N_3O_2 + H]^+$; HPLC 98.7% (AUC), $t_R$ = 10.83 min.

Example 542

1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino) quinolin-3-yl)ethanone

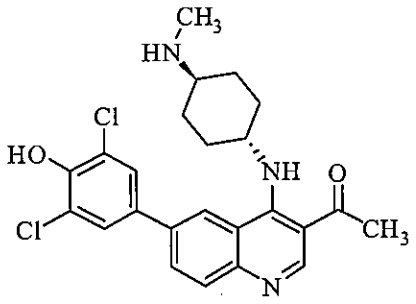



tert-butyl(1r,4r)-4-(3-acetyl-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-4-ylamino)cyclohe

xyl(methyl)carbamate (53 mg, 0.096 mmol) was dissolved in dichloromethane (5 mL). To this solution was added a 2.0 M HCl solution in diethyl ether (2 mL) the mixture was stirred for 16 h at room temperature where a precipitate formed. The precipitate was filtered off, washed with dichloromethane (10 mL), and eluted through an ion-exchange column (using methanol and 7 N ammonia in methanol) to obtain the desired product (11 mg, 25%) as a yellow solid: 1H NMR (500 MHz, DMSO-$d_6$) $\delta$ 10.56 (s, 1H), 8.94 (s, 1H), 8.28 (s, 1H), 8.05 (s, 1H), 7.87 (s, 1H), 7.29 (s, 2H), 4.17 (s, 1H), 3.95 (s, 3H), 2.66 (s, 3H), 2.38 (s, 4H), 2.23 (s, 2H), 2.03 (s, 2H), 1.67 (s, 1H), 1.51 (s, 2H), 1.30 (s, 3H), ESI MS *m/z* 454, $[C_{25}H_{28}ClN_3O_3 + H]^+$; HPLC 99.5% (AUC), $t_R$ = 9.99 min.

Example 558

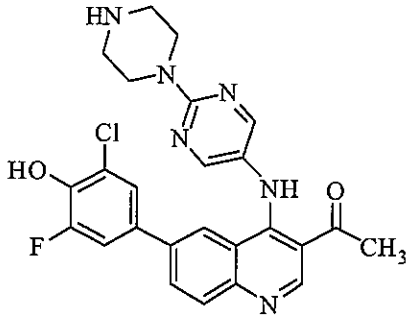
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino) quinolin-3-yl)ethanone



Following procedure A-2 tert-butyl(1r,4r)-4-(3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-4-ylamino)cyclohexyl(methyl)carbamate (60 mg, 0.107 mmol) was treated with TFA (2 mL) to afford the desired product (8 mg, 16%) as a yellow-orange solid: 1H NMR (300 MHz, $CD_3OD$) $\delta$ 9.12 (s, 1H), 8.45 (s, 1H), 8.29 (d, J = 8.7 Hz, 1H), 7.99 (d, J = 8.7 Hz, 1H), 7.73 (s, 2H), 4.59 (s, 1H), 2.74 (s, 6H), 2.54 (t, J = 13.5, 2H), 2.35 (d, J = 11.4 Hz, 2H), 1.85 (m, 2H), 1.64 (m, 2 H), 1.30 (m, 2H); ESI MS *m/z* 458, $[C_{24}H_{25}Cl_2N_3O_2 + H]^+$; HPLC 99.2% (AUC), $t_R$ = 10.01 min.

Example 594

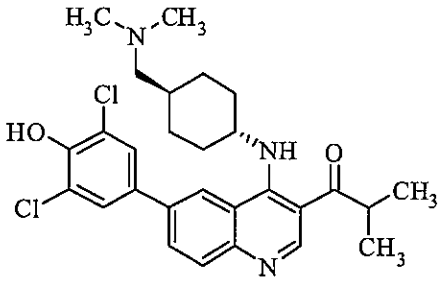
1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino) quinolin-3-yl)ethanone



Following procedure A-2 tert-butyl 4-(5-(3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-ylamino)pyrimidin-2-yl)piperazine-1-carboxylate (50 mg, 0.084 mmol) was treated with TFA (2 mL) to afford the desired product (11 mg, 26%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.29 (s, 1H), 8.55 (s, 2H), 8.23 (dd, J = 11, 2 Hz, 1H), 8.02 (m, 2H), 7.12 (m, 2H), 4.21 (t, J = 10 Hz, 4H), 3.35 (t, J = 10.5 Hz, 4H) 2.80 (s, 3H); ESI MS *m/z* 493, $[C_{25}H_{22}ClFN_6O_2 + H]^+$; HPLC 99.0% (AUC), $t_R$ = 9.90 min.

Example 608

1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexylamino) quinolin-3-yl)-2-methylpropan-1-one

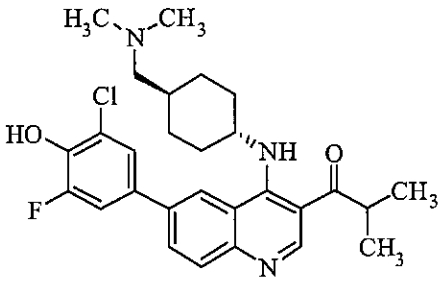


Following general procedure D, 1-(6-bromo-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)-2-methylpropan-1-one (80 mg, 0.185 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (64 mg, 0.222 mmol) to afford the desired product (39 mg, 41%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.17 (s, 1H), 8.47 (s, 1H), 8.26 (dd, J = 10, 1.5 Hz, 1H), 7.99 (d, J = 8.5 Hz, 1H), 7.72 (s, 2H), 4.52 (s, 1H), 3.73 (t, J = 11.5 Hz, 1H) 3.08 (d, J = 6.5 Hz, 2H) 2.92 (s, 6H), 2.44 (s, 2H), 2.05 (d, J = 11.5, 3H), 1.81 (q, J = 35.5, 2H) 1.36 (m, 2H), 1.26 (d, J = 6.5, 6H); ESI MS *m/z* 514, $[C_{28}H_{33}Cl_2N_3O_2 + H]^+$; HPLC 98.9% (AUC), $t_R$ = 11.33 min.

Example 620

1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)

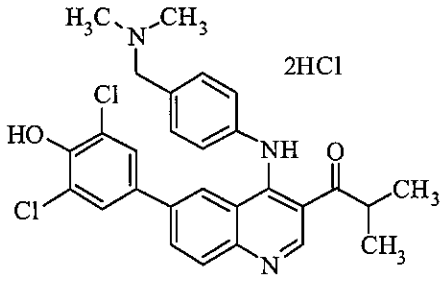
cyclohexylamino)quinolin-3-yl)-2-methylpropan-1-one



Following general procedure D, 1-(6-bromo-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl amino)quinolin-3-yl)-2-methylpropan-1-one (64 mg, 0.148 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (60 mg, 0.222 mmol) to afford the desired product (18 mg, 24%) as a green-yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 8.92 (s, 1H), 8.29 (s, 1H), 7.95 (dd, J = 10.5, 2 Hz, 1H), 7.84 (d, J = 8.7 Hz, 1H), 7.45 (s, 1H), 7.35 (dd, J = 14.1, 2.4 Hz, 1H) 4.16 (s, 1H), 3.74 (quint, J = 13.5 Hz, 1H) 2.59 (d, J = 7.2 Hz, 2H) 2.54 (s, 6H), 2.32 (d, J = 12 Hz, 2H), 1.97 (d, J = 12.9, 2H), 1.60 (q, J = 35.5, 2H) 1.22 (m, 8H), ESI MS *m/z* 498, $[C_{28}H_{33}ClFN_3O_2 + H]^+$; HPLC 98.7% (AUC), $t_R$ = 11.15 min.

Example 641

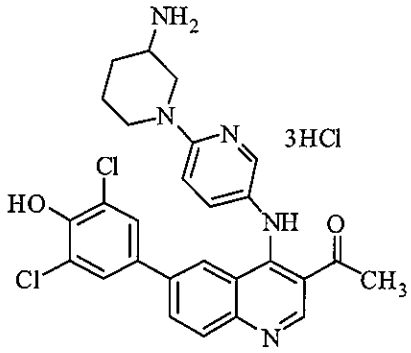
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)-2-methylpropan-1-one



Following general procedure D, 1-(6-bromo-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)-2-methylpropan-1-one (80 mg, 0.186 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (84 mg, 0.291 mmol) to afford the desired product (58 mg, 61%) as a yellow-green solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.09 (s, 1H), 7.90 (s, 2H), 7.74 (s, 1H), 7.42(d, J = 8.4 Hz, 2H), 7.20 (d, J = 8.1 Hz, 2H), 7.10 (s, 2H), 3.81 (m, 3H), 2.41 (s, 6H), 1.24 (d, J = 6.6, 6H), ESI MS *m/z* 508, $[C_{28}H_{27}Cl_2N_3O_2 + H]^+$; HPLC 99.7% (AUC), $t_R$ = 11.16 min.

Example 681

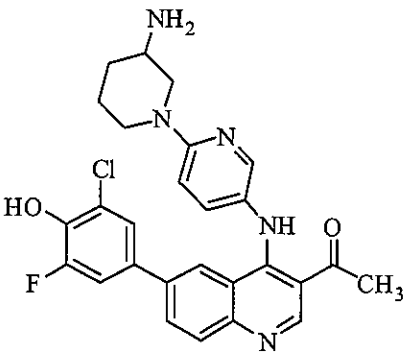
1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)ethanone




tert-butyl 1-(5-(3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (52 mg, 0.080 mmol) was dissolved in dichloromethane (5 mL). To this solution was added a 2.0 M HCl solution in diethyl ether (2 mL) the mixture was stirred for 16 h at room temperature where a precipitate formed. The precipitate was filtered off, washed with dichloromethane (10 mL), dried under vacuum to obtain the desired product as the HCl salt (40 mg, 79%) as a yellow-brown solid: 1H NMR (500 MHz, DMSO-$d_6$) $\delta$ 10.56 (s, 1H), 8.94 (s, 1H), 8.28 (s, 1H), 8.05 (s, 1H), 7.87 (s, 1H), 7.29 (s, 2H), 4.17 (s, 1H), 3.95 (s, 3H), 2.66 (s, 3H), 2.38 (s, 4H), 2.23 (s, 2H), 2.03 (s, 2H), 1.67 (s, 1H), 1.51 (s, 2H), 1.30 (s, 3H); ESI MS *m/z* 454, $[C_{25}H_{28}ClN_3O_3 + H]^+$; HPLC 99.5% (AUC), $t_R$ = 9.99 min.

Example 733

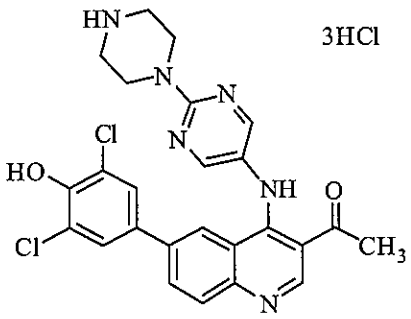
1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl) quinolin-3-yl)ethanone



tert-butyl 1-(5-(3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (80 mg, 0.132 mmol) was dissolved in dichloromethane (5 mL). To this solution was added a 2.0 M HCl solution in diethyl ether (2 mL) the mixture was stirred for 16 h at room temperature where a precipitate formed. The precipitate was filtered off, washed with dichloromethane (10 mL), dried under vacuum to obtain the desired product as the HCl salt (30 mg, 45%) as a yellow-orange solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.26 (s, 1H), 8.24 (d, $J$ = 2.9 Hz, 1H), 8.20 (dd, $J$ = 8.9, 1.9 Hz, 1H), 7.99 (d, $J$ = 8.9 Hz, 1H), 7.95 (d, $J$ = 2.0 Hz, 1H), 7.68 (dd, $J$ = 9.1, 2.8 Hz, 1H), 7.11 (d, $J$ = 9.1 Hz, 1H), 7.04 (m, 2H), 4.54 (s, 1H), 4.02 (d, $J$ = 12.7 Hz, 1H), 2.80 (s, 3H), 2.18 (m, 1H), 1.94 (m, 1H), 1.74 (m, 2H); ESI MS *m/z* 506, $[C_{27}H_{25}ClFN_5O_2 + H]^+$; HPLC 95.2% (AUC), $t_R$ = 10.84 min.

Example 702

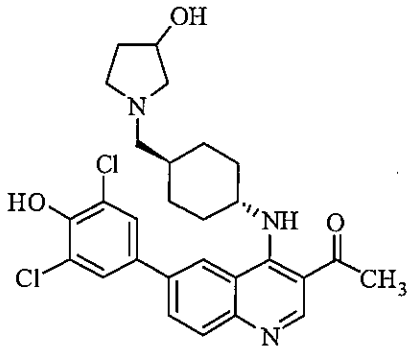
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino) quinolin-3-yl)ethanone




tert-butyl 4-(5-(3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino)pyridin-2-yl)piperazine-1-carboxylate (65mg, 0.106 mmol) was dissolved in dichloromethane (5 mL). To this solution was added a 2.0 M HCl solution in diethyl ether (2 mL) the mixture was stirred for 16 h at room temperature where a precipitate formed. The precipitate was filtered off, washed with dichloromethane (10 mL), dried under vacuum to obtain the desired product as the HCl salt (43 mg, 65%) as a yellow solid: $^1$H NMR (300 MHz, MeOD) $\delta$ 9.28 (s, 1H), 8.29 (d, $J$ = 2.7 Hz, 1H), 8.22 (dd, $J$ = 8.8, 2.0 Hz, 1H), 8.00 (m, 2H), 7.77 (dd, $J$ = 9.2, 2.7 Hz, 1H), 7.24 (s, 2H), 7.19 (d, $J$ = 9.2 Hz, 1H), 3.98 (t, $J$ = 5.3 Hz, 4H), 3.36 (t, $J$ = 5.3 Hz, 4H), 2.80 (s, 3H); ESI MS *m/z* 508, $[C_{25}H_{22}Cl_2N_6O_2 + H]^+$; HPLC 97.4% (AUC), $t_R$ = 10.10 min.

Example 753

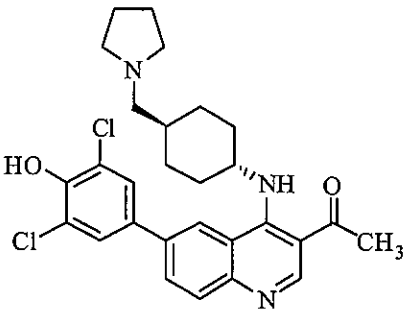
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((3-hydroxypyrrolidin-1-yl)methyl) cyclohexylamino)quinolin-3-yl)ethanone



Following general procedure D, 1-(6-bromo-4-(1R,4R)-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone (75 mg, 0.168 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (60 mg, 0.201 mmol) to afford the desired product (9 mg, 10%) as an yellow solid: $^1$H NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.11 (s, 1H), 8.47 (s, 1H), 8.27 (dd, $J$ = 8.8, 1.8 Hz, 1H), 7.98 (d, $J$ = 8.8 Hz, 1H), 7.72 (s, 2H), 4.56 (m, 2H), 3.81 (m, 1H), 3.60 (d, $J$ = 11.8 Hz, 1H), 3.18 (m, 3H), 2.73 (s, 3H), 2.46 (d, $J$ = 11.8 Hz, 2H), 2.38 (d, $J$ = 7.2 Hz, 1H), 2.07 (m, 4H), 1.79 (q, $J$ = 12.3 Hz, 2H), 1.38 (q, $J$ = 12.3 Hz, 2H); ESI MS *m/z* 528, $[C_{28}H_{31}Cl_2N_3O_3 + H]^+$; HPLC 96.4% (AUC), $t_R$ = 11.04 min.

Example 767

1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino) quinolin-3-yl)ethanone

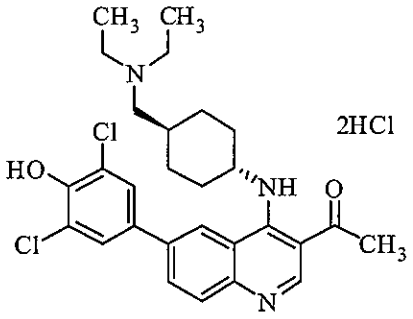


Following general procedure D, 1-(6-bromo-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl) cyclohexylamino)quinolin-3-yl)ethanone (127 mg, 0.295 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (100 mg, 0.354 mmol) to afford the desired product (40 mg, 26%) as an light yellow solid: $^1$H NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.11 (s, 1H), 8.47 (s, 1H), 8.27 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.97 (d, $J$ = 8.7 Hz, 1H), 7.72 (s, 2H), 4.53 (s, 1H), 3.70 (m, 2H), 3.14 (m, 4H), 2.73 (s, 3H), 2.46 (d, $J$ = 12.3 Hz, 2H), 2.18 (m,

1H), 2.06 (m, 5H), 1.80 (q, $J$ = 12.3 Hz, 2H), 1.37 (m, 2H); ESI MS *m/z* 512, $[C_{28}H_{31}Cl_2N_3O_2 + H]^+$; HPLC 97.4% (AUC), $t_R$ = 10.49 min.

Example 790

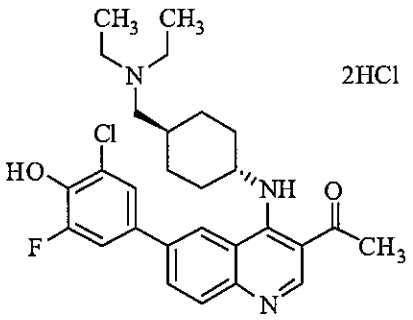
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((diethylamino)methyl) cyclohexylamino)quinolin-3-yl)ethanone




Following general procedure D, 1-(6-bromo-4-(1R,4R)-4-((diethylamino)methyl)cyclohexyl amino)quinolin-3-yl)ethanone (60 mg, 0.139 mmol) was reacted with 2,6-dichloro -4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (50 mg, 0.167 mmol) to afford the desired product (38 mg, 46%) as an off-white solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.11 (s, 1H), 8.47 (s, 1H), 8.28 (dd, $J$ = 8.7, 1.8 Hz, 1H), 7.98 (d, $J$ = 8.7 Hz, 1H), 7.73 (s, 2H), 4.54 (s, 1H), 3.27 (m, 2H), 3.07 (d, $J$ = 6.7 Hz, 2H), 2.74 (s, 3H), 2.46 (d, $J$ = 12.0 Hz, 2H), 2.11 (d, $J$ = 12.7 Hz, 2H), 2.03 (s, 1H), 1.83 (q, $J$ = 12.7 Hz, 2H), 1.38 (m, 8H); ESI MS *m/z* 514, $[C_{28}H_{33}Cl_2N_3O_2 + H]^+$; HPLC 96.5% (AUC), $t_R$ = 10.38 min.

Example 794

1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((diethylamino)methyl)cyclohexyl amino)quinolin-3-yl)ethanone

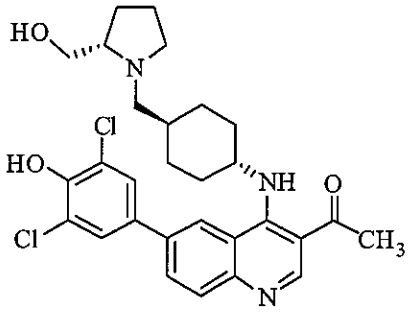



Following general procedure D,
1-(6-bromo-4-(1R,4R)-4-((diethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone (113 mg, 0.261 mmol) was reacted with

2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (100 mg, 0.392 mmol) to afford the desired product (80 mg, 53%) as an off-white solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.11 (s, 1H), 8.48 (s, 1H), 8.27 (dd, $J$ = 8.8, 1.8 Hz, 1H), 7.98 (d, $J$ = 8.8 Hz, 1H), 7.59 (s, 1H), 7.52 (dd, $J$ = 11.5, 2.3 Hz, 1H), 4.54 (s, 1H), 3.28 (m, 2H), 3.08 (d, $J$ = 6.7 Hz, 2H), 2.74 (s, 3H), 2.46 (d, $J$ = 12.2 Hz, 2H), 2.10 (d, $J$ = 12.8 Hz, 2H), 2.02 (m, 1H), 1.81 (q, $J$ = 11.1 Hz, 2H), 1.35 (m, 8H); ESI MS *m/z* 498, $[C_{28}H_{33}ClFN_3O_2 + H]^+$; HPLC 99.5% (AUC), $t_R$ = 10.23 min.

Exapmple 792

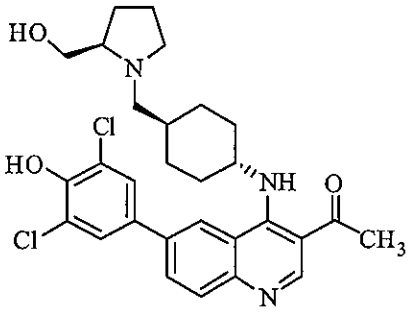
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1S,4r)-4-(((S)-2-(hydroxymethyl)pyrrolidin-1-yl) methyl)cyclohexylamino)quinolin-3-yl)ethanone



Following general procedure D, 1-(6-bromo-4-((1S,4r)-4-(((S)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone (70 mg, 0.152 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (63 mg, 0.228 mmol) to afford the desired product (11 mg, 17%) as an yellow-brown solid: $^1$H NMR (300 MHz, MeOD) $\delta$ 9.11 (s, 1H), 8.49 (s, 1H), 8.28 (dd, $J$ = 8.8, 1.7 Hz, 1H), 7.98 (d, $J$ = 8.8 Hz, 1H), 7.73 (s, 2H), 4.56 (s, 1H), 3.90 (m, 1H), 3.70 (m, 3H), 3.32 (m, 2H), 3.23 (m, 2H), 3.08 (dd, $J$ = 12.8, 5.6 Hz, 1H), 2.74 (s, 3H), 2.46 (d, $J$ = 12.5 Hz, 2H), 2.17 (m, 7H), 1.83 (m, 3H), 1.38 (q, $J$ = 24.5, 11.3 Hz, 2H); ESI MS *m/z* 542, $[C_{29}H_{33}Cl_2N_3O_3 + H]^+$; HPLC 99.2% (AUC), $t_R$ = 10.19 min.

Example 812

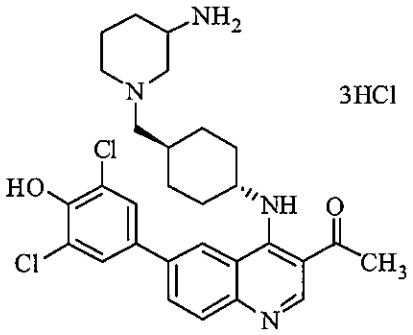
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(((R)-2-(hydroxymethyl)pyrrolidin-1-yl) methyl)cyclohexylamino)quinolin-3-yl)ethanone



Following general procedure D, 1-(6-bromo-4-(1R,4R)-4-(((R)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone (94 mg, 0.204 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (86 mg, 0.306 mmol) to afford the desired product (42 mg, 38%) as a yellow solid: $^1$H NMR (300 MHz, MeOD) δ 9.05 (s, 1H), 8.44 (s, 1H), 8.20 (dd, $J$ = 8.7, 1.8 Hz, 1H), 7.95 (d, $J$ = 8.7 Hz, 1H), 7.71 (s, 2H), 4.44 (s, 1H), 3.89 (m, 1H), 3.70 (m, 3H), 3.09 (m, 1H), 2.72 (s, 3H), 2.43 (d, $J$ = 12.5 Hz, 2H), 2.12 (m, 5H), 1.85 (m, 3H), 1.36 (q, $J$ = 15.0, 13.8 Hz, 2H); ESI MS $m/z$ 542, $[C_{29}H_{33}Cl_2N_3O_3 + H]^+$; HPLC 99.8% (AUC), $t_R$ = 10.12 min.

Example 810

1-(4-(1R,4R)-4-((3-aminopiperidin-1-yl)methyl)cyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)ethanone

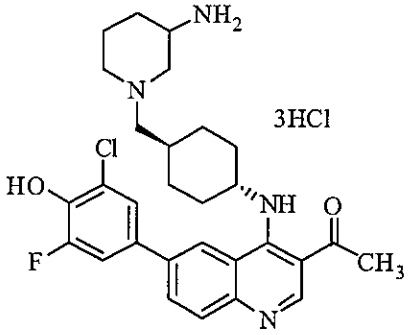


To a suspension of tert-butyl 1-((1R,4R)-4-(3-acetyl-6-bromoquinolin-4-ylamino)cyclohexyl)methyl)piperidin-3-ylcarbamate (80 mg, 0.173 mmol), 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (73 mg, 0.260 mmol) and Pd(dppf)$Cl_2$ (12 mg, 0.017mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (260 μL, 2.0 M solution in $H_2O$). $N_2$ gas was bubbled through the reaction mixture and the vessel was sealed. The mixture was then heated under microwave irradiation conditions to 140 °C for 30 min. The solution was allowed to cool to rt, then directly subjected to purification by preperatory HPLC. The crude mixture was then treated with TFA to deprotect the pendant amine

and reduced to a red-orange residue. This residue was then dissolved in MeOH (2 mL) and treated with a 2.0 M HCl solution in diethyl ether to afford the product (26 mg, 23%) as an off-white solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.01 (s, 1H), 8.37 (s, 1H), 8.17 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.89 (d, $J$ = 8.7 Hz, 1H), 7.62 (s, 2H), 4.45 (s, 1H), 3.73 (s, 2H), 3.61 (s, 1H), 3.11 (d, $J$ = 6.1 Hz, 2H), 2.97 (s, 1H), 2.65 (s, 3H), 2.36 (s, 2H), 2.08 (m, 6H), 1.72 (q, $J$ = 12.4 Hz, 2H), 1.62 (s, 1H), 1.31 (q, $J$ = 11.9 Hz, 2H); ESI MS *m/z* 541, $[C_{29}H_{34}Cl_2N_4O_2 + H]^+$; HPLC 98.3% (AUC), $t_R$ = 9.34 min.

Example 818

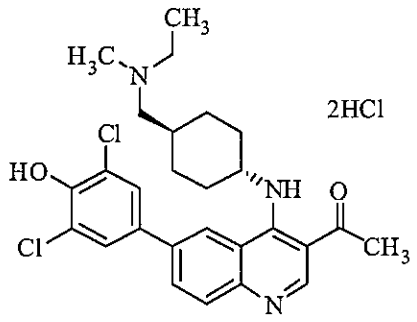
1-(4-(1R,4R)-4-((3-aminopiperidin-1-yl)methyl)cyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone




To a suspension of tert-butyl 1-((1R,4R)-4-(3-acetyl-6-bromoquinolin-4-ylamino)cyclohexyl)methyl)piperidin-3-ylcarbamate (100 mg, 0.217 mmol), 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (88 mg, 0.325 mmol) and Pd(dppf)$Cl_2$ (15 mg, 0.021mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (325 µL, 2.0 M solution in $H_2O$). $N_2$ gas was bubbled through the reaction mixture and the vessel was sealed. The mixture was then heated under microwave irradiation conditions to 140 °C for 30 min. The solution was allowed to cool to rt, then directly subjected to purification by preperatory HPLC. The crude fractions were then treated with TFA to deprotect the pendant amine and reduced to a red-orange residue. This residue was then dissolved in MeOH (2 mL) and treated with a 2.0 M HCl solution in diethyl ether to afford the product (28 mg, 20%) as a brown solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.10 (s, 1H), 8.48 (s, 1H), 8.27 (dd, $J$ = 8.8, 1.8 Hz, 1H), 7.97 (d, $J$ = 8.8 Hz, 1H), 7.59 (s, 1H), 7.52 (dd, $J$ = 11.4, 2.3 Hz, 1H), 4.55 (s, 1H), 3.74 (m, 2H), 3.17 (m, 1H), 3.01 (m, 1H), 2.73 (s, 3H) 2.46 (d, $J$ = 6.3 Hz, 2H), 2.12 (m, 6H), 1.80 (q, $J$ = 12.5 Hz, 2H), 1.68 (m, 1H), 1.38 (m, 2H).; ESI MS *m/z* 525, $[C_{29}H_{34}ClFN_4O_2 + H]^+$; HPLC 95.5% (AUC), $t_R$ = 9.07 min.

Example 817

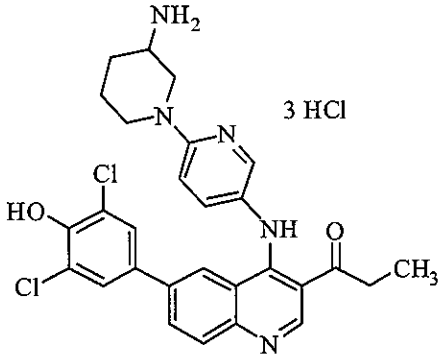
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((ethyl(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)ethanone



Following general procedure D, 1-(6-bromo-4-((1R,4R)-4-((ethyl(methyl)amino)methyl)cyclo hexylamino)quinolin-3-yl)ethanone (68 mg, 0.162 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (69 mg, 0.244 mmol) to afford the desired product (34 mg, 59%) as an off-white solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.11 (s, 1H), 8.47 (s, 1H), 8.28 (dd, $J$ = 8.7, 1.8 Hz, 1H), 7.99 (d, $J$ = 8.8 Hz, 1H), 7.73 (s, 2H), 4.54 (s, 1H), 3.17 (ddd, $J$ = 31.2, 13.3, 7.4 Hz, 2H), 3.03 (m, 1H), 2.90 (s, 3H), 2.74 (s, 3H), 2.46 (d, $J$ = 12.0 Hz, 2H), 2.13 (d, $J$ = 13.6 Hz, 1H), 2.06 (d, $J$ = 12.0 Hz, 2H), 1.80 (m, 2H), 1.37 (m, 5H); ESI MS *m/z* 500, $[C_{27}H_{31}Cl_2N_3O_2 + H]^+$; HPLC 96.5% (AUC), $t_R$ = 10.07 min.

Example 824

1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one

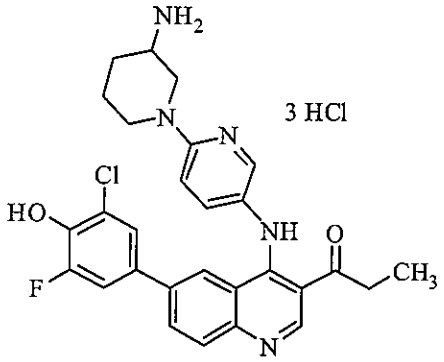


tert-butyl 1-(5-(6-(3,5-dichloro-4-hydroxyphenyl)-3-propionylquinolin-4-ylamino)pyridin-2-yl) piperidin-3-ylcarbamate (35mg, 0.055 mmol) was dissolved in dichloromethane (5 mL). To this solution was added a 2.0 M HCl solution in diethyl ether (2 mL) the mixture was stirred for 16 h at room temperature where a precipitate formed. The precipitate was filtered off, washed with dichloromethane (10 mL), dried under vacuum to obtain the desired product as the HCl salt (12 mg, 33%) as a yellow solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.29 (s, 1H), 8.24 (m, 2H), 8.04 (m, 2H), 7.81 (d, $J$ = 8.3 Hz, 1H), 7.31 (s, 2H), 7.25 (d, $J$ = 8.9 Hz, 1H), 4.53 (s, 1H), 4.06 (d, $J$ = 13.3 Hz, 1H), 3.39 (m, 2H), 3.24 (q, $J$ = 14.1, 7.0 Hz, 2H), 2.22 (m, 1H), 1.98 (m, 1H), 1.74 (m, 2H),

1.25 (t, $J$ = 6.9 Hz, 3H); ESI MS *m/z* 536, $[C_{28}H_{27}Cl_2N_5O_2 + H]^+$; HPLC 98.9% (AUC), $t_R$ = 10.33 min.

Example 825

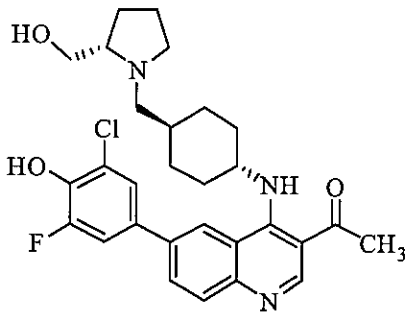
1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one




tert-butyl 1-(5-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-propionylquinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (32mg, 0.051 mmol) was dissolved in dichloromethane (5 mL). To this solution was added a 2.0 M HCl solution in diethyl ether (2 mL) the mixture was stirred for 16 h at room temperature where a precipitate formed. The precipitate was filtered off, washed with dichloromethane (10 mL), dried under vacuum to obtain the desired product as the HCl salt (16 mg, 49%) as an orange solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.28 (s, 1H), 8.23 (m, 2H), 8.01 (m, 2H), 7.75(d, $J$ = 8.5 Hz, 1H), 7.19 (d, $J$ = 8.4 Hz, 1H), 7.10 (t, $J$ = 4.9 Hz, 2H), 4.54 (s, 1H), 4.04 (d, $J$ = 13.0 Hz, 1H), 3.36 (m, 3H), 3.24 (q, $J$ = 13.3, 6.2 Hz, 1H), 2.20 (m, 1H), 1.97 (m, 1H), 1.74 (m, 2H), 1.26 (t, $J$ = 6.6 Hz, 3H); ESI MS *m/z* 520, $[C_{28}H_{27}ClFN_5O_2 + H]^+$; HPLC 98.7% (AUC), $t_R$ = 10.05 min.

Example 844

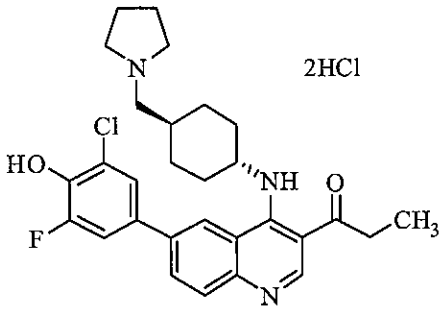
1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1S,4r)-4-(((S)-2-(hydroxymethyl)pyrrolidin-1-yl) methyl) cyclohexylamino)quinolin-3-yl)ethanone



Following general procedure D, 1-(6-bromo-4-((1S,4r)-4-(((S)-2-(hydroxymethyl) pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone (120 mg, 0.260 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (106 mg, 0.391 mmol) to afford the desired product (23 mg, 17%) as an off-white solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.10(s, 1H), 8.48 (s, 1H) 8.26 (dd, $J$ = 8.7, 1.8 Hz, 1H), 7.99 (d, $J$ = 8.7 Hz, 1H), 7.52 (dd, $J$ = 11.3, 2.3 Hz, 1H), 4.53 (s, 1H), 3.90 (dd, $J$ = 12.2, 3.8 Hz, 1H), 3.77 (m, 2H), 3.66 (m, 1H), 3.38 (m, 1H), 3.23 (m, 1H), 3.09 (dd, $J$ = 12.9, 5.5 Hz, 1H), 2.74 (s, 3H), 2.45 (d, $J$ = 12.3 Hz, 2H), 2.24 (m, 2H), 2.10 (m, 4H), 1.89 (m, 1H), 1.79 (q, $J$ = 12.2 Hz, 2H), 1.37 (dt, $J$ = 22.1, 12.6 Hz, 3H); ESI MS *m/z* 526, $[C_{29}H_{33}ClFN_3O_3 + H]^+$; HPLC 97.4% (AUC), $t_R$ = 9.79 min.

Example 846

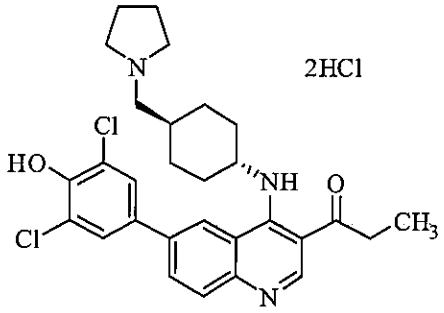
1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl) cyclohexylamino)quinolin-3-yl)propan-1-one




Following general procedure D, 1-(6-bromo-4-((1R,4R)- 4-(pyrrolidin-1-ylmethyl)cyclohexyl amino)quinolin-3-yl)propan-1-one (90 mg, 0.209 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (85 mg, 0.313 mmol) to afford the desired product (43 mg, 35%) as an off-white solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.12 (s, 1H), 8.48 (s, 1H), 8.26 (dd, $J$ = 8.7, 1.7 Hz, 1H), 7.98 (d, $J$ = 8.7 Hz, 1H), 7.59 (s, 1H), 7.52 (d, $J$ = 11.3 Hz, 1H), 4.54 (s, 1H), 3.71 (dt, $J$ = 11.1, 5.4 Hz, 2H), 3.17 (m, 6H), 2.47 (d, $J$ = 12.3 Hz, 2H), 2.17 (m, 2H), 2.07 (m, 2H), 1.81 (q, $J$ = 12.3 Hz, 2H), 1.36 (q, $J$ = 16.3, 15.2 Hz, 2H), 1.24 (t, $J$ = 7.1 Hz, 3H) ESI MS *m/z* 510, $[C_{29}H_{33}ClFN_3O_2 + H]^+$; HPLC 98.8% (AUC), $t_R$ = 10.29 min.

Example 843

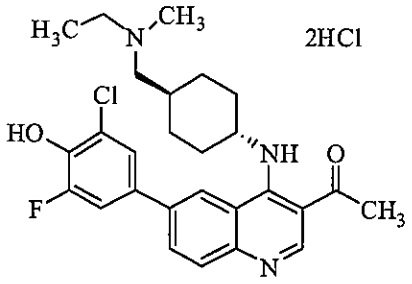
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl) cyclohexylamino)quinolin-3-yl)propan-1-one



Following general procedure D, 1-(6-bromo-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl amino)quinolin-3-yl)propan-1-one (90 mg, 0.209 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (80 mg, 0.314 mmol) to afford the desired product (38 mg, 30%) as an off-white solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.13 (s, 1H), 8.48 (s, 1H), 8.27 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.98 (d, $J$ = 8.7 Hz, 1H), 7.73 (s, 2H), 4.54 (s, 1H), 3.71 (m, 2H), 3.15 (m, 7H), 2.47 (d, $J$ = 12.2 Hz, 2H), 2.17 (m, 2H), 2.07 (m, 4H), 1.81 (q, $J$ = 12.3 Hz, 2H), 1.37 (q, $J$ = 25.1, 12.0 Hz, 2H), 1.24 (t, $J$ = 7.1 Hz, 3H); ESI MS *m/z* 526, $[C_{29}H_{33}Cl_2N_3O_2 + H]^+$; HPLC 99.0% (AUC), $t_R$ = 10.49 min.

Example 845

1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((ethyl(methyl)amino)methyl) cyclohexylamino)quinolin-3-yl)ethanone

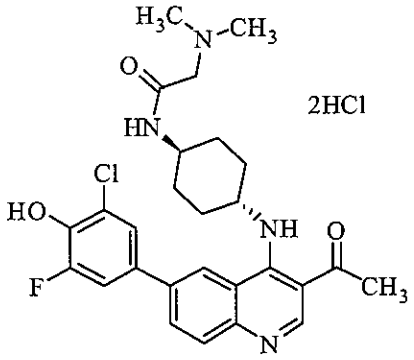


Following general procedure D, 1-(6-bromo-4-(1R,4R)-4-((ethyl(methyl)amino)methyl) cyclohexylamino)quinolin-3-yl)ethanone (98 mg, 0.233 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2- dioxaborolan-2-yl)phenol (97 mg, 0.318 mmol) to afford the desired product (40 mg, 31%) as an off white solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.10 (s, 1H), 8.48 (s, 1H), 8.27 (dd, $J$ = 8.7, 1.8 Hz, 1H), 7.98 (d, $J$ = 8.7 Hz, 1H), 7.59 (s, 1H), 7.52 (dd, $J$ = 11.4, 2.2 Hz, 1H), 4.53 (s, 1H), 3.12 (m, 2H), 2.89 (s, 3H), 2.74 (s, 3H), 2.46 (d, $J$ = 12.5 Hz, 2H), 2.08 (m, 3H), 1.81 (q, $J$ = 12.1 Hz, 2H), 1.37 (m, 5H); ESI MS *m/z* 484, $[C_{27}H_{31}ClFN_3O_2 + H]^+$; HPLC 97.4% (AUC), $t_R$ = 9.90 min.

Example 876

N-(1R,4R)-4-(3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-ylamino)

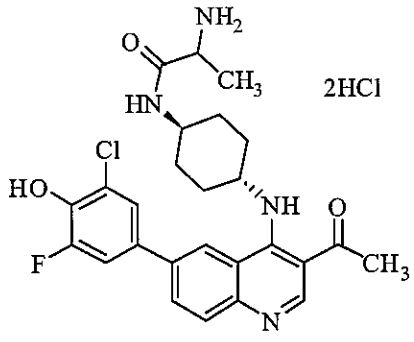
cyclohexyl)-2-(dimethylamino)acetamide




Following general procedure D, 1-(6-bromo-4-(1R,4R)-4-((ethyl(methyl)amino)methyl)cyclo hexylamino)quinolin-3-yl)ethanone (50 mg, 0.112 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (37 mg, 0.134 mmol) to afford the desired product (40 mg, 61%) as a yellow solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.10 (s, 1H), 8.49 (s, 1H), 8.27 (dd, $J$ = 8.7, 1.7 Hz, 1H), 7.98 (d, $J$ = 8.7 Hz, 1H), 7.59 (s, 1H), 7.52 (dd, $J$ = 11.5, 2.3 Hz, 1H), 4.55 (s, 1H), 3.93 (s, 3H), 2.94 (s, 6H), 2.74 (s, 3H), 2.44 (d, $J$ = 12.3 Hz, 2H), 2.17 (d, $J$ = 11.6 Hz, 2H), 1.85 (q, $J$ = 11.0 Hz, 2H), 1.55 (q, $J$ = 12.6 Hz, 2H); ESI MS *m/z* 513, $[C_{27}H_{30}ClFN_4O_3 + H]^+$; HPLC 99.9% (AUC), $t_R$ = 9.49 min.

Example 878

N-(1R,4R)-4-(3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-ylamino) cyclohexyl)-2-aminopropanamide




tert-butyl 1-(1R,4R)-4-(3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-ylamino)cyclo hexylamino)-1-oxopropan-2-ylcarbamate (42 mg, 0.070 mmol) was dissolved in dichloromethane (5 mL). To this solution was added a 2.0 M HCl solution in diethyl ether (2 mL) the mixture was stirred for 16 h at room temperature where a precipitate formed. The precipitate was filtered off,

washed with dichloromethane (10 mL), dried under vacuum to obtain the desired product as the HCl salt (20 mg, 50%) as an off-white solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.10(s, 1H), 8.50 (s, 1H), 8.27 (dd, $J$ = 8.7, 1.7 Hz, 1H), 7.98 (d, $J$ = 8.7 Hz, 1H), 7.59 (s, 1H), 7.52 (dd, $J$ = 11.1, 2.3 Hz, 1H), 4.56 (s, 1H), 3.87 (dt, $J$ = 19.5, 7.0 Hz, 3H), 3.66 (m, 1H), 2.74 (s, 3H), 2.44 (d, $J$ = 12.2 Hz, 2H), 2.15 (m, 2H), 2.97 (m, 1H), 1.85 (q, $J$ = 12.7 Hz, 2H), 1.56 (m, 2H), 1.49 (m, 5H), 1.38 (t, $J$ = 10.1 Hz, 1H).; ESI MS *m/z* 499, $[C_{26}H_{28}ClFN_4O_3 + H]^+$; HPLC 98.7% (AUC), $t_R$ = 9.47 min.

Example 886

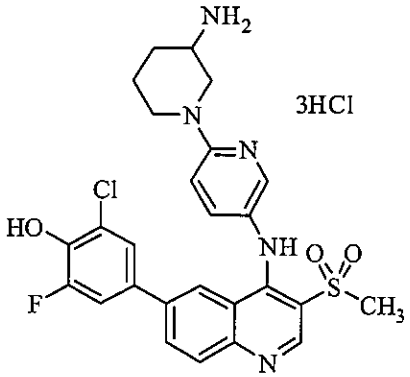
N-(1R,4R)-4-(3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino) cyclohexyl)-2-aminopropanamide

**Error! Objects cannot be created from editing field codes.**

tert-butyl 1-((1R,4R)-4-(3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino)cyclohexyl amino)-1-oxopropan-2-ylcarbamate (37 mg, 0.060 mmol) was dissolved in dichloromethane (5 mL). To this solution was added a 2.0 M HCl solution in diethyl ether (2 mL) the mixture was stirred for 16 h at room temperature where a precipitate formed. The precipitate was filtered off, washed with dichloromethane (10 mL), dried under vacuum to obtain the desired product as the HCl salt (18 mg, 58%) as a white solid: $^1$H NMR (300 MHz, MeOD) $\delta$ 9.09 (s, 1H), 8.48 (s, 1H), 8.27 (dd, $J$ = 8.8, 1.7 Hz, 1H), 7.97 (d, $J$ = 8.8 Hz, 1H), 7.72 (s, 2H), 4.52 (s, 1H), 3.87 (m, 2H), 2.73 (s, 3H), 2.43 (d, $J$ = 12.3 Hz, 2H), 2.15 (d, $J$ = 12.3 Hz, 2H), 1.84 (q, $J$ = 11.9 Hz, 2H), 1.51 (m, 5H); ESI MS *m/z* 515, $[C_{26}H_{28}Cl_2N_4O_3 + H]^+$; HPLC 97.8% (AUC), $t_R$ = 9.75 min.

Example 909

4-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-3-(methylsulfonyl) quinolin-6-yl)-2-chloro-6-fluorophenol

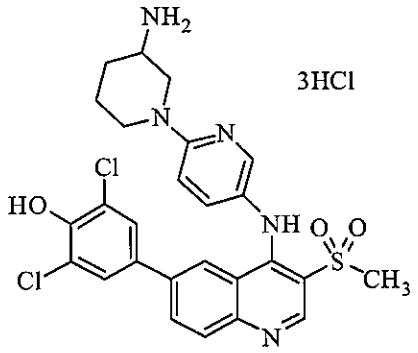



To a suspension of tert-butyl 1-(5-(6-bromo-3-(methylsulfonyl)quinolin-4-ylamino)pyridin-2-yl) piperidin-3-ylcarbamate (70 mg, 0.121 mmol), 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (40 mg, 0.145 mmol) and Pd(dppf)$Cl_2$ (9 mg, 0.012 mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (182 µL, 2.0 M solution in $H_2O$). The reaction mixture was degassed

using $N_2$ and heated at 140 °C for 30 min. The reaction mixture was cooled to rt and to purification by preperatory HPLC. The crude mixture was then treated with TFA to deprotect the pendant amine and reduced to a red-orange residue. This residue was then dissolved in MeOH (2 mL) and treated with a 2.0 M HCl solution in diethyl ether to afford the product (15 mg, 19%) as a brown-yellow solid: $^1$H NMR (300 MHz, MeOD) δ 9.07 (s, 1H), 8.32 (d, $J$ = 2.7 Hz, 1H), 8.27 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.05 (d, $J$ = 8.8 Hz, 1H), 7.93 (d, $J$ = 1.8 Hz, 1H), 7.88 (dd, $J$ = 9.3, 2.7 Hz, 1H), 7.28 (m, 1H), 7.09 (m, 2H), 4.56 (q, $J$ = 10.4, 9.4 Hz, 1H), 4.09 (d, $J$ = 13.3 Hz, 1H), 3.47 (s, 3H), 3.39 (d, $J$ = 8.1 Hz, 2H), 2.21 (s, 1H), 2.01 (m, 1H), 1.75 (m, 2H); ESI MS *m/z* 542, $[C_{26}H_{25}ClFN_5O_3S + H]^+$; HPLC 99.6% (AUC), $t_R$ = 9.90 min.

Example 913

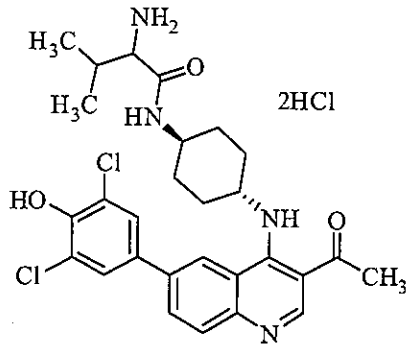
4-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-3-(methylsulfonyl) quinolin-6-yl)-2,6-dichlorophenol




To a suspension of tert-butyl 1-(5-(6-bromo-3-(methylsulfonyl)quinolin-4-ylamino)pyridin-2-yl) piperidin-3-ylcarbamate (70 mg, 0.121 mmol), 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (40 mg, 0.142 mmol) and Pd(dppf)$Cl_2$ (9 mg, 0.012 mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (182 μL, 2.0 M solution in $H_2O$). $N_2$ gas was bubbled through the reaction mixture, the vessel was sealed and the mixture was then heated imicrowave irradiation conditions to 140 °C for 30 min. The solution was allowed to cool to rt, then directly subjected to purification by preperatory HPLC. The crude mixture was then treated with TFA to deprotect the pendant amine and reduced to a red-orange residue. This residue was then dissolved in MeOH (2 mL) and treated with a 2.0 M HCl solution in diethyl ether to afford the product (8.2 mg, 10%) as an orange solid: $^1$H NMR (500 MHz, MeOD) δ 9.03 (s, 1H), 8.27 (d, $J$ = 2.7 Hz, 1H), 8.24 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.01 (d, $J$ = 8.8 Hz, 1H), 7.93 (d, $J$ = 1.9 Hz, 1H), 7.74 (dd, $J$ = 9.2, 2.7 Hz, 1H), 7.22 (s, 2H), 7.11 (d, $J$ = 9.2 Hz, 1H), 4.60(s, 1H), 4.05 (d, $J$ = 13.5 Hz, 1H), 3.45 (s, 3H), 3.26 (m, 3H), 2.19 (d, $J$ = 11.1 Hz, 1H), 1.94 (d, $J$ = 11.0 Hz, 1H), 1.71 (m, 2H); ESI MS *m/z* 558, $[C_{26}H_{25}Cl_2N_5O_3S + H]^+$; HPLC 98.9% (AUC), $t_R$ = 10.14 min.

Example 915

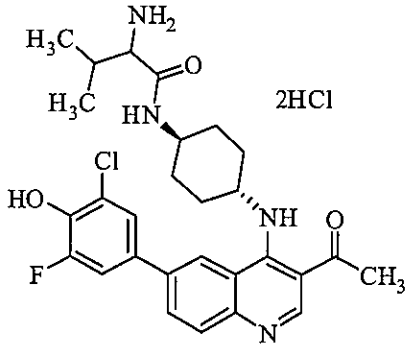
N-(1R,4R)-4-(3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino)cyclohexyl)-2-amino-3-methylbutanamide



To a solution of tert-butyl 1-(1R,4R)-4-(3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinoline -4-ylamino)cyclohexyl amino)-3-methyl-1-oxobutan-2-ylcarbamate (30 mg, 0.046 mmol) in dichloromethane (5 mL) was added a 2.0 M HCl solution in diethyl ether (2 mL) the mixture was stirred for 16 h at room temperature. The resulting precipitate was filtered off, washed with dichloromethane (10 mL) and dried under vacuum to obtain the desired product as the HCl salt (12 mg, 54%) as an orange-brown solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.12 – 9.07 (s, 1H), 8.53 – 8.47 (s, 1H), 8.29 – 8.26 (dd, $J$ = 8.8, 1.7 Hz, 1H), 8.01 – 7.94 (d, $J$ = 8.7 Hz, 1H), 7.76 – 7.69 (s, 2H), 4.58 – 4.48 (s, 1H), 3.95 – 3.87 (m, 1H), 3.62 – 3.57 (d, $J$ = 6.0 Hz, 1H), 2.76 – 2.68 (m, 2H), 2.50 – 2.38 (t, $J$ = 13.9 Hz, 2H), 2.22 – 2.12 (td, $J$ = 13.8, 6.7 Hz, 3H), 1.90 – 1.78 (m, 1H), 1.65 – 1.51 (m, 2H), 1.11 – 0.98 (t, $J$ = 6.3 Hz, 6H); ESI MS *m/z* 545, $[C_{28}H_{32}Cl_2N_4O_3+H]^+$; HPLC 95.6% (AUC), $t_R$ = 10.13 min.

Example 907

N-(1R,4R)-4-(3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-ylamino) cyclohexyl)-2-amino-3-methylbutanamide

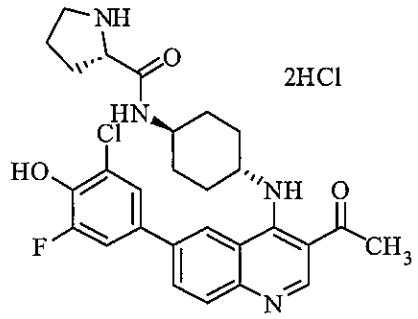


To a solution of tert-butyl 1-(1R,4R)-4-(3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin -4-ylamino) cyclohexylamino)-3-methyl-1-oxobutan-2-ylcarbamate (24 mg, 0.038 mmol) in dichloromethane (5 mL) was added a 2.0 M HCl solution in diethyl ether (2 mL) and the mixture

was stirred for 16 h at room temperature. The resulting precipitate was filtered, washed with dichloromethane (10 mL) and dried under vacuum to obtain the desired product as the HCl salt (9 mg, 40%) as an off-white solid: $^1$H NMR (300 MHz, MeOD) $\delta$ 9.10 (s, 1H), 8.50 (s, 1H), 8.28 (dd, $J$ = 8.8, 1.7 Hz, 1H), 7.98 (d, $J$ = 8.8 Hz, 1H), 7.59 (s, 1H), 7.53 (dd, $J$ = 11.4, 2.2 Hz, 1H), 4.55 (s, 1H), 3.88 (m, 1H), 3.59 (d, $J$ = 6.1 Hz, 1H), 2.74 (s, 3H), 2.45 (d, $J$ = 12.2 Hz, 2H), 2.17 (q, $J$ = 6.8 Hz, 3H), 1.85 (q, $J$ = 12.5 Hz, 2H), 1.57 (p, $J$ = 12.9 Hz, 2H), 1.06 (dd, $J$ = 6.9, 3.5 Hz, 6H); ESI MS *m/z* 527, $[C_{28}H_{32}ClFN_4O_3 + H]^+$; HPLC 99.0% (AUC), $t_R$ = 9.97 min.

Example 921

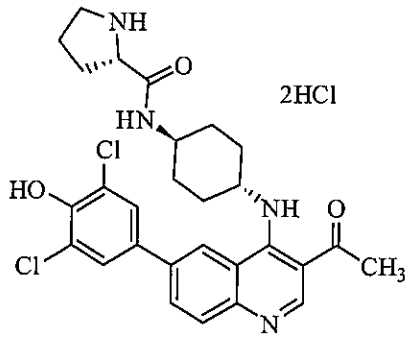
(S)-N-((1R,4S)-4-(3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-ylamino) cyclohexyl)pyrrolidine-2-carboxamide




To a suspension of (S)-tert-butyl 2-((1r,4S)-4-(3-acetyl-6-bromoquinolin-4-ylamino) cyclo hexylcarbamoyl)pyrrolidine-1-carboxylate (130 mg, 0.232 mmol), 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan -2-yl)phenol (76 mg, 0.279 mmol) and Pd(dppf)$Cl_2$ (16 mg, 0.023 mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (348 µL, 2.0 M solution in $H_2O$). The crude mixture was then treated with TFA to deprotect the pendant amine and reduced to a red-orange residue. This residue was then dissolved in MeOH (2 mL) and treated with a 2.0 M HCl solution in diethyl ether to afford the product (14 mg, 11%) as a yellow solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.10 (s, 1H), 8.50 (s, 1H), 8.27 (dd, $J$ = 8.8, 1.9 Hz, 1H), 7.98 (d, $J$ = 8.8 Hz, 1H), 7.59 (s, 1H), 7.52 (dd, $J$ = 11.4, 2.4 Hz, 1H), 4.55 (s, 1H), 4.21 (dd, $J$ = 8.5, 6.8 Hz, 1H), 3.88 (t, $J$ = 11.3 Hz, 1H), 3.42 (dt, $J$ = 11.4, 7.1 Hz, 1H), 2.74 (s, 3H), 2.44 (m, 3H), 2.17 (s, 2H), 2.03 (m, 3H), 1.84 (q, $J$ = 15.4, 14.6 Hz, 2H), 1.56 (dt, $J$ = 20.1, 9.9 Hz, 2H); ESI MS *m/z* 525, $[C_{28}H_{30}ClFN_4O_3 + H]^+$; HPLC 98.5% (AUC), $t_R$ = 9.70 min.

Example 920

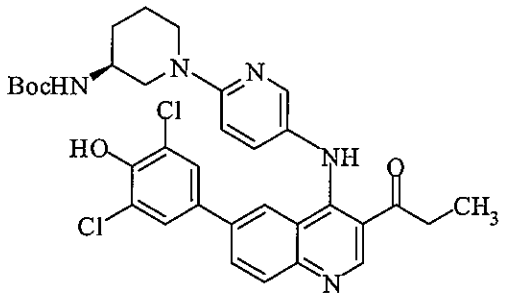
(S)-N-((1R,4S)-4-(3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino) cyclohexyl)pyrrolidine-2-carboxamide




To a suspension of (S)-tert-butyl 2-((1r,4S)-4-(3-acetyl-6-bromoquinolin-4-ylamino)cyclohexyl carbamoyl)pyrrolidine-1-carboxylate (70 mg, 0.125 mmol), 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (42 mg, 0.150 mmol) and Pd(dppf)$Cl_2$ (9 mg, 0.013 mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (187 μL, 2.0 M solution in $H_2O$). $N_2$ gas was bubbled through the reaction mixture and the vessel was sealed. The mixture was then heated under microwave irradiation conditions to 140 °C for 30 min. The solution was allowed to cool to rt, then directly subjected to purification by preperatory HPLC. The crude mixture was then treated with TFA to deprotect the pendant amine and reduced to a red-orange residue. This residue was then dissolved in MeOH (2 mL) and treated with a 2.0 M HCl solution in diethyl ether to afford the product (40 mg, 52%) as a yellow solid: $^1$H NMR (500 MHz, MeOD) δ 9.12 (s, 1H), 8.51 (s, 1H), 8.30 (dd, $J$ = 8.8, 1.8 Hz, 1H), 8.00 (d, $J$ = 8.8 Hz, 1H), 7.75 (s, 2H), 4.57 (s, 1H), 4.24 (m, 1H), 3.90 (t, $J$ = 11.8 Hz, 1H), 3.44 (dt, $J$ = 11.5, 6.9 Hz, 1H), 3.36 (m, 1H), 2.76 (s, 3H), 2.46 (m, 3H), 2.19 (d, $J$ = 12.2 Hz, 2H), 2.05 (m, 3H), 1.87 (q, $J$ = 13.5 Hz, 2H), 1.58 (p, $J$ = 13.7, 13.2 Hz, 2H); ESI MS $m/z$ 541, $[C_{28}H_{30}Cl_2N_4O_3 + H]^+$; HPLC 97.7% (AUC), $t_R$ = 9.94 min.

Example 1185

(S)-tert-butyl 1-(5-(6-(3,5-dichloro-4-hydroxyphenyl)-3-propionylquinolin-4-ylamino) pyridin-2-yl)piperidin-3-ylcarbamate

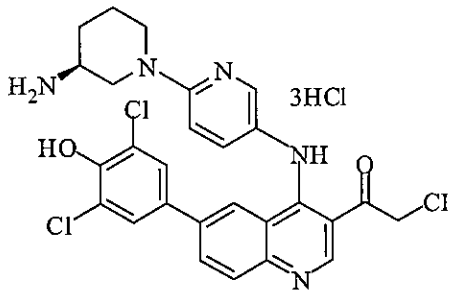



Following general procedure F, (S)-tert-butyl 1-(5-(6-bromo-3-propionylquinolin-4-ylamino) pyridin-2-yl)piperidin-3-ylcarbamate (80 mg, 0.14 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (49 mg, 0.17 mmol) to afford the desired product (50 mg, 54%) as an orange solid: ESI MS $m/z$ 636 $[C_{33}H_{35}Cl_2N_5O_4 +$

H]$^+$

Example 934

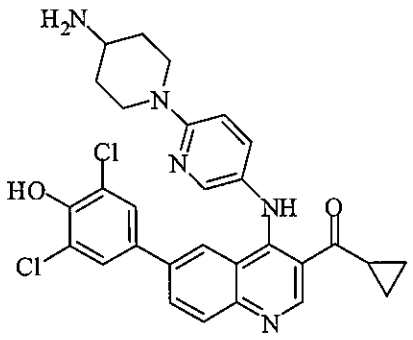
(S)-1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxy phenyl)quinolin-3-yl)propan-1-one




Following general procedure A, (S)-tert-butyl 1-(5-(6-(3,5-dichloro-4-hydroxyphenyl)-3-propionylquinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (50 g, 0.078 mmol) was treated with a solution of 3N HCl to afford desired product (36.2 mg, 72%) as a yellow-orange solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.29 (s, 1H), 8.25 (m, 2H), 8.05 (m, 2H), 7.85 (d, $J$ = 8.8 Hz, 1H), 7.31 (m, 3H), 4.52 (s, 1H), 4.06 (d, J = 12.6 Hz, 1H), 3.81 (m, 3H), 2.16 (q, $J$ = 7.0 Hz, 2H), 2.22 (s, 1H), 1.98 (s, 1H), 1.24 (t, $J$ = 7.0 Hz, 3H); APCI MS *m/z* 536 [$C_{28}H_{27}Cl_2N_5O_2$ + H]$^+$; HPLC 98.7% (AUC), $t_R$ = 10.30 min.

Example 548

(4-(6-(4-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone

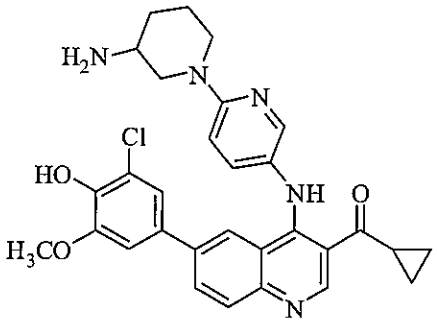



Following general procedure D, tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl) quinoline -4-ylamino)pyridin-2-yl)piperidin-4-ylcarbamate (100 mg, 0.18mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (78 mg, 0.27 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (52 mg, 53% over 2 steps) as a red solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*)

$\delta$ 9.37 (s, 1H), 8.21 (m, 3H), 8.02 (d, $J$ = 8.8 Hz, 1H), 7.72 (dd, $J$ = 9.3, 2.9 Hz, 1H), 7.36 (s, 2H), 7.18 (d, $J$ = 9.2 Hz, 1H), 4.52 (d, $J$ = 13.2 Hz, 2H), 3.44 (m, 1H), 3.14 (t, $J$ = 11.8 Hz, 2H), 2.83 (m, 1H), 2.15 (d, $J$ = 11.5 Hz, 2H), 1.69 (dd, $J$ = 24.5, 7.9 Hz, 2H), 1.21 (m, 4H); ESI MS *m/z* 548 $[C_{29}H_{27}Cl_2N_5O_2 + H]^+$; HPLC 99.0% (AUC), $t_R$ = 10.73 min.

Example 554

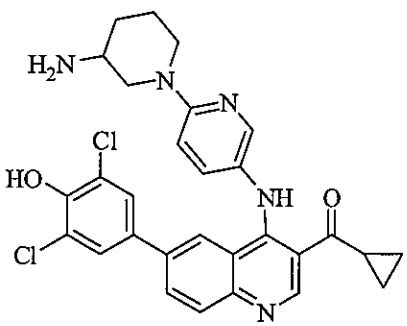
(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl) quinoline-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (100 mg, 0.18mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (77 mg, 0.27 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (39 mg, 40% over 2 steps) as a yellow-orange solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.39 (s, 1H), 8.25 (s, 1H), 8.14 (s, 1H), 8.05 (s, 1H), 7.77 (s, 1H), 7.21 (s, 1H), 7.02 (s, 1H), 6.87 (s, 1H), 4.49 (s, 1H), 4.02 (s, 1H), 3.93 (s, 3H), 2.84 (s, 1H), 2.22 (s, 1H), 1.97 (s, 1H), 1.75 (s, 2H), 1.23(s, 4H); ESI MS *m/z* 544 $[C_{30}H_{30}ClN_5O_3 + H]^+$; HPLC 99.7% (AUC), $t_R$ = 10.68 min.

Example 556

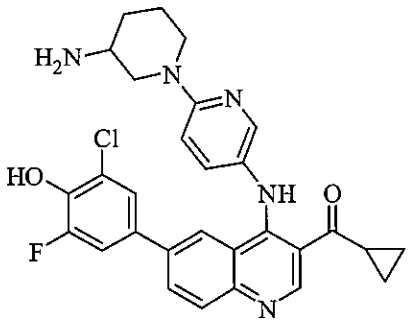
(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl) quinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (100 mg, 0.18mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (78 mg, 0.27 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (49 mg, 50% over 2 steps) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.40 (s, 1H), 8.22 (m, 2H), 8.12 (s, 1H), 8.02 (d, $J$ = 8.8 Hz, 1H), 7.70 (dd, $J$ = 9.2, 2.7 Hz, 1H), 7.34 (s, 2H), 7.13 (d, $J$ = 9.3 Hz, 1H), 4.52 (s, 1H), 4.02 (dt, $J$ = 13.0, 4.1 Hz, 1H), 3.35 (m, 2H), 2.85 (tt, $J$ = 7.8, 4.5 Hz, 1H), 2.20 (m, 1H), 1.95 (m, 1H), 1.73 (q, $J$ = 9.8 Hz, 2H), 1.22(m, 4H); ESI MS *m/z* 548 $[C_{29}H_{27}Cl_2N_5O_2 + H]^+$; HPLC 99.6% (AUC), $t_R$ = 10.95 min.

Example 561

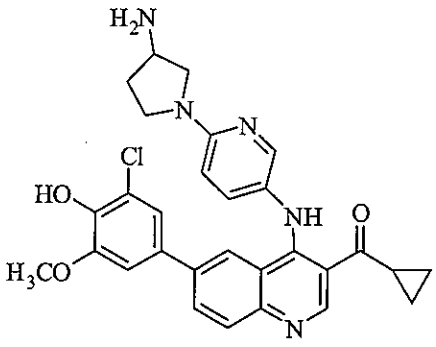
(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone




Following general procedure D, tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl) quinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (100 mg, 0.18mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (74 mg, 0.27 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (39 mg, 41% over 2 steps) as a orange-red solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.40 (s, 1H), 8.22 (m, 2H), 8.09 (s, 1H), 8.02 (d, $J$ = 8.8 Hz, 1H), 7.71 (dd, $J$ = 9.2, 2.8 Hz, 1H), 7.15 (m, 3H), 4.51 (d, $J$ = 10.3 Hz, 1H), 4.02 (m, 1H), 3.37 (m, 1H), 2.85 (tt, $J$ = 7.7, 4.6 Hz, 1H), 2.20 (m, 1H), 1.97(m, 1H), 1.75 (m, 2H), 1.22(m, 4H); ESI MS *m/z* 532 $[C_{29}H_{27}ClFN_5O_2 + H]^+$; HPLC 99.0% (AUC), $t_R$ = 10.81 min.

Exapmle 568

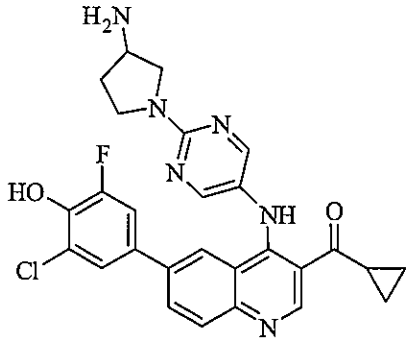
(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl) quinolin-4-ylamino)pyridin-2-yl)pyrrolidin-3-ylcarbamate (100 mg, 0.18mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (77 mg, 0.27 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (17 mg, 18% over 2 steps) as a orange-yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.38 (s, 1H), 8.31 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.25 (m, 2H), 8.05 (d, $J$ = 8.8 Hz, 1H), 7.89 (dd, $J$ = 9.3, 2.6 Hz, 1H), 7.13 (d, $J$ = 2.1 Hz, 1H), 7.06 (dd, $J$ = 9.3, 0.8 Hz, 1H), 6.90 (s, 1H), 4.15 (dt, $J$ = 11.2, 5.7 Hz, 1H), 4.04 (dd, $J$ = 11.9, 6.5 Hz, 1H), 3.94 (s, 3H), 3.86 (m, 1H), 3.76 (m, 2H), 2.83 (dt, $J$ = 12.1, 6.3 Hz, 1H), 2.60 (dt, $J$ = 21.4, 6.6 Hz, 1H), 2.31 (td, $J$ = 13.4, 5.7 Hz, 1H), 1.21 (m, 4H); ESI MS *m/z* 529 $[C_{29}H_{28}ClN_5O_3 + H]^+$; HPLC 99.6% (AUC), $t_R$ = 9.97 min.

Exapmle 572

(4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone

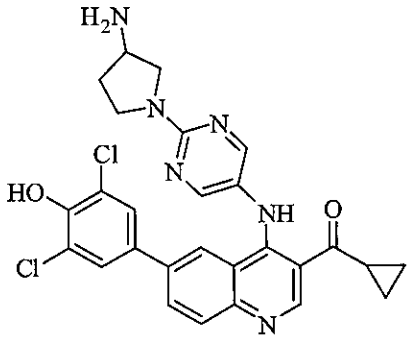


Following general procedure D, tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl) quinolin-4-ylamino)pyrimidin-2-yl)pyrrolidin-3-ylcarbamate (100 mg, 0.18mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (74 mg, 0.27 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (42 mg, 45% over 2 steps) as a yellow-orange solid: $^1$H NMR (500

MHz, $CD_3OD$ + TFA-*d*) δ 9.35 (s, 1H), 8.48 (s, 2H), 8.25 (dd, *J* = 8.8, 1.9 Hz, 1H), 8.19 (s, 1H), 8.04 (d, *J* = 8.8 Hz, 1H), 7.22 (s, 2H), 4.06 (m, 2H), 3.91 (dt, *J* = 11.7, 7.4 Hz, 1H), 3.82 (m, 2H), 2.82 (s, 1H), 2.54 (td, *J* = 13.1, 6.8 Hz, 1H), 2.24 (td, *J* = 13.2, 5.7 Hz, 1H), 1.21 (s, 4H); ESI MS *m/z* 519 $[C_{27}H_{24}ClFN_6O_2 + H]^+$; HPLC 99.7% (AUC), $t_R$ = 10.05 min.

Exapmle 574

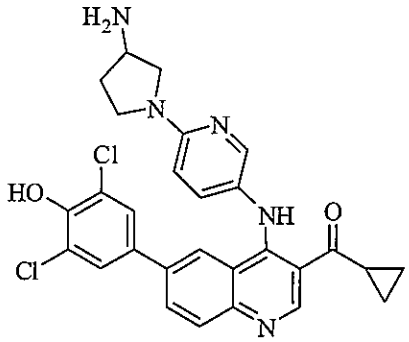
(4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinoline -4-ylamino)pyrimidin-2-yl)pyrrolidin-3-ylcarbamate (100 mg, 0.18mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (78 mg, 0.27 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (35 mg, 36% over 2 steps) as a yellow-orange solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) δ 9.34 (s, 1H), 8.47 (s, 2H), 8.26 (m, 2H), 8.04 (d, *J* = 8.8 Hz, 1H), 7.41 (s, 2H), 4.07 (m, 2H), 3.91 (m, 1H), 3.81 (m, 2H), 2.81 (s, 1H), 2.52 (m, 1H), 2.23 (tt, *J* = 13.0, 5.7 Hz, 1H), 1.20 (s, 4H); ESI MS *m/z* 535 $[C_{27}H_{24}Cl_2N_6O_2 + H]^+$; HPLC 100.0% (AUC), $t_R$ = 10.30 min.

Exapmle 575

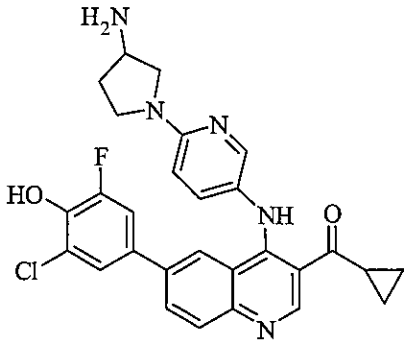
(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinoline -4-ylamino)pyridin-2-yl)pyrrolidin-3-ylcarbamate (100 mg, 0.18mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (78 mg, 0.27 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (23 mg, 24% over 2 steps) as a orange solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.35 (s, 1H), 8.33 (s, 1H), 8.30 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.28 (d, $J$ = 2.5 Hz, 1H), 8.11 (d, $J$ = 8.8 Hz, 1H), 8.04 (dd, $J$ = 9.6, 2.5 Hz, 1H), 7.49 (s, 2H), 7.26 (d, $J$ = 9.5 Hz, 1H), 4.22 (p, $J$ = 6.3 Hz, 1H), 4.12 (dd, $J$ = 12.0, 6.5 Hz, 1H), 3.96 (dt, $J$ = 10.9, 7.5 Hz, 1H), 3.86 (m, 2H), 2.78 (p, $J$ = 7.2 Hz, 1H), 2.65 (td, $J$ = 15.3, 14.8, 6.8 Hz, 1H), 2.40 (td, $J$ = 13.3, 5.3 Hz, 1H), 1.20 (m, 4H);ESI MS *m/z* 534 $[C_{28}H_{25}Cl_2N_5O_2 + H]^+$; HPLC 99.6% (AUC), $t_R$ = 10.29 min.

Example 576

(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone

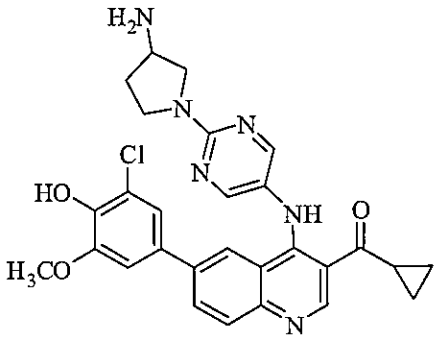


Following general procedure D, tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinoline -4-ylamino)pyridin-2-yl)pyrrolidin-3-ylcarbamate (100 mg, 0.18mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (74 mg, 0.27 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (21 mg, 23% over 2 steps) as a yellow-brown solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.36 (s, 1H), 8.27 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.24 (d, $J$ = 2.7 Hz, 2H), 8.06 (d,

$J$ = 8.8 Hz, 1H), 7.90 (dd, $J$ = 9.4, 2.6 Hz, 1H), 7.27 (m, 2H), 7.08 (d, $J$ = 9.4 Hz, 1H), 4.16 (p, $J$ = 6.2 Hz, 1H), 4.05 (dd, $J$ = 11.9, 6.5 Hz, 1H), 3.88 (dt, $J$ = 10.8, 7.5 Hz, 1H), 3.79 (dt, $J$ = 10.5, 3.3 Hz, 2H), 2.81 (p, $J$ = 6.0 Hz, 1H), 2.61 (dq, $J$ = 13.3, 6.6 Hz, 1H), 2.33 (td, $J$ = 13.4, 5.3 Hz, 1H), 1.20 (m, 4H); ESI MS *m/z* 518 $[C_{28}H_{25}ClFN_5O_2 + H]^+$; HPLC 99.4% (AUC), $t_R$ = 10.02 min.

Example 582

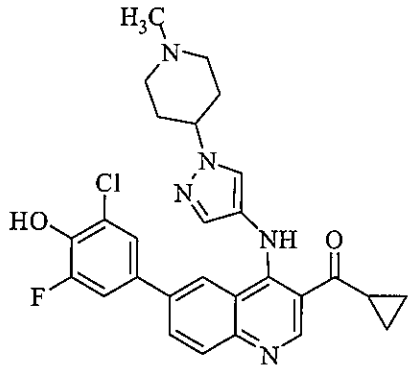
(4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl) quinolin-4-ylamino)pyrimidin-2-yl)pyrrolidin-3-ylcarbamate (100 mg, 0.18mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (77 mg, 0.27 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (20 mg, 21% over 2 steps) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.35 (s, 1H), 8.48 (s, 2H), 8.29 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.21 (s, 1H), 8.04 (d, $J$ = 8.8 Hz, 1H), 7.09 (s, 1H), 6.89 (s, 1H), 4.04 (m, 2H), 3.94 (s, 3H), 3.89 (m, 1H), 3.79 (m, 2H), 2.82 (s, 1H), 2.52 (ddd, $J$ = 14.8, 12.7, 6.4 Hz, 1H), 2.23 (dt, $J$ = 11.6, 6.2 Hz, 1H), 1.21 (s, 4H); ESI MS *m/z* 531 $[C_{28}H_{27}ClN_6O_3 + H]^+$; HPLC 99.9% (AUC), $t_R$ = 10.11 min.

Example 592

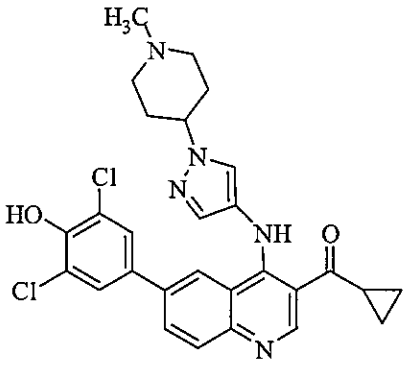
(6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-ylamino) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, (6-bromo-4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-ylamino) quinolin-3-yl)(cyclopropyl)methanone (50 mg, 0.11mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (47 mg, 0.17 mmol) to afford the desired product (35 mg, 59%)as a yellow-green solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.94 (s, 1H), 8.24 (m, 1H), 8.02 (m, 2H), 7.68 (s, 1H), 7.22 (s, 2H), 4.62 (t, $J$ = 5.3 Hz, 1H), 3.69 (d, $J$ = 12.7 Hz, 2H), 3.50 (s, 1H), 3.25 (m, 2H), 2.95 (s, 3H), 2.39 (m, 4H), 1.24 (m, 4H); ESI MS *m/z* 520 $[C_{28}H_{27}ClFN_5O_2 + H]^+$; HPLC 99.5% (AUC), $t_R$ = 10.37 min.

Example 593

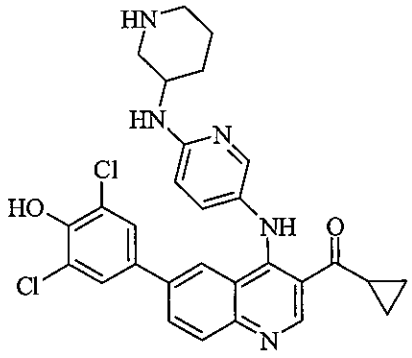
Cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)methanone



Following general procedure D, (6-bromo-4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-ylamino) quinoline-3-yl)(cyclopropyl)methanone (50 mg, 0.11mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (49 mg, 0.17 mmol) to afford the desired product (36 mg, 63%)as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.45 (s, 1H), 8.23 (d, $J$ = 9.0 Hz, 1H), 8.01 (d, $J$ = 9.2 Hz, 2H), 7.68 (s, 1H), 7.40 (s, 1H), 4.62 (m, 1H), 3.68 (d, $J$ = 12.8 Hz, 2H), 3.41 (m, 1H), 3.25 (m, 2H), 2.94 (s, 3H), 2.37 (m, 3H), 1.22 (m, 3H); ESI MS *m/z* 536 $[C_{28}H_{27}Cl_2N_5O_2 + H]^+$; HPLC 98.4% (AUC), $t_R$ = 10.57 min.

Exapmle 610

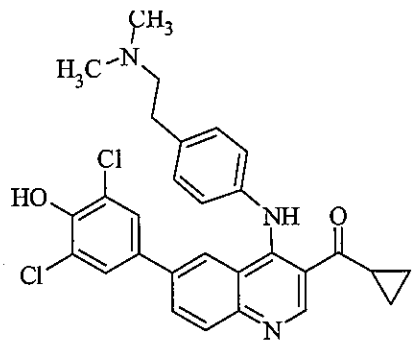
cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(piperidin-3-ylamino)pyridine-3-ylamino)quinolin-3-yl)methanone



Following general procedure D, tert-butyl 3-(5-(6-bromo-3-(cyclopropanecarbonyl) quinolin-4-ylamino)pyridin-2-ylamino)piperidine-1-carboxylate (100 mg, 0.18 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2- dioxaborolan-2-yl)phenol (78 mg, 0.27 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (11 mg, 11% over 2 steps) as a yellow-brown solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.40 (s, 1H), 8.23 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.15 (s, 1H), 8.12 (d, $J$ = 2.6 Hz, 1H), 8.00 (d, $J$ = 8.7 Hz, 1H), 7.58 (dd, $J$ = 9.0, 2.7 Hz, 1H), 7.36 (s, 2H), 6.82 (d, $J$ = 9.2 Hz, 1H), 4.22 (ddd, $J$ = 14.0, 10.0, 3.8 Hz, 1H), 3.63 (dd, $J$ = 12.1, 3.5 Hz, 1H), 3.02 (td, $J$ = 11.9, 3.4 Hz, 1H), 2.89 (m, 2H), 2.12 (m, 1H), 1.86 (dtt, $J$ = 14.9, 11.2, 3.7 Hz, 1H), 1.71 (q, $J$ = 10.1 Hz, 1H), 1.21 (m, 4H); ESI MS *m/z* 548 $[C_{29}H_{27}Cl_2N_5O_2 + H]^+$; HPLC 99.5% (AUC), $t_R$ = 10.58 min.

Exapmle 613

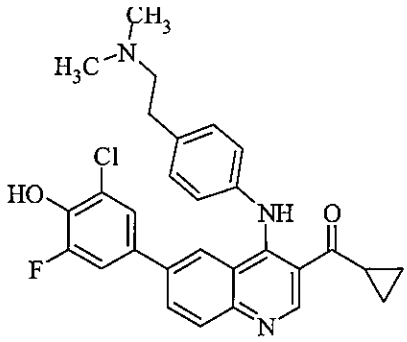
Cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl) phenylamino)quinolin-3-yl)methanone



Following general procedure D, (6-bromo-4-(4-(2-(dimethylamino)ethyl)phenyl amino)quinolin-3-yl)(cyclopropyl)methanone (100 mg, 0.23 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (98 mg, 0.34 mmol) to afford the desired product (66 mg, 55%)as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.46 (s, 1H), 8.21 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.01 (d, $J$ = 8.8 Hz, 1H), 7.89 (s, 1H), 7.56 (d, $J$ = 8.4 Hz, 2H), 7.46 (d, $J$ = 8.4 Hz, 2H), 7.23 (s, 2H), 3.40 (m, 2H), 3.22 (m, 2H), 2.98 (s, 6H), 2.90 (m, 1H), 1.22 (m, 4H); ESI MS *m/z* 520 $[C_{29}H_{27}Cl_2N_3O_2 + H]^+$; HPLC 97.6% (AUC), $t_R$ = 11.15 min.

Exapmle 615

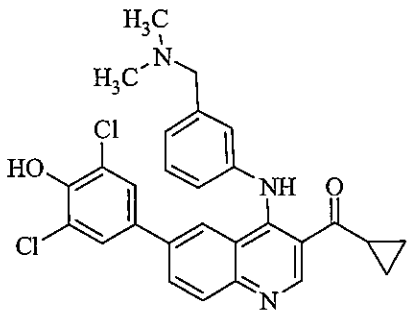
(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino) quinolin-3-yl)(cyclopropyl)methanone




Following general procedure D, (6-bromo-4-(4-(2-(dimethylamino)ethyl)phenylamino) quinolin-3-yl)(cyclopropyl)methanone (100 mg, 0.23 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (93 mg, 0.34 mmol) to afford the desired product (83 mg, 72%)as a yellow-brown solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.46 (s, 1H), 8.21 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.01 (d, $J$ = 8.8 Hz, 1H), 7.89 (s, 1H), 7.57 (d, $J$ = 8.4 Hz, 2H), 7.47 (d, $J$ = 8.4 Hz, 2H), 7.04 (m, 2H), 3.41 (m, 2H), 3.21 (m, 2H), 2.99 (s, 7H), 2.90 (m, 1H), 1.23 (m, 4H); ESI MS *m/z* 504 $[C_{29}H_{27}ClFN_3O_2 + H]^+$; HPLC 97.0% (AUC), $t_R$ = 10.95 min.

Example 624

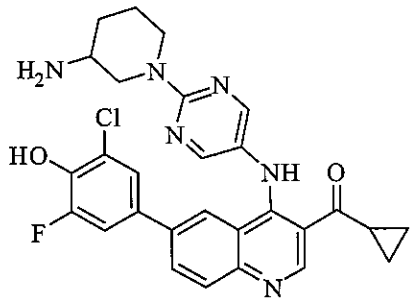
cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-((dimethylamino)methyl)phenylamino)quin olin-3-yl)methanone



Following general procedure D, (6-bromo-4-(3-((dimethylamino)methyl)phenylamino)quinoline -3-yl)(cyclopropyl)methanone (100 mg, 0.23mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (98 mg, 0.34 mmol) to afford the desired product (87 mg, 75%)as a yellow-green solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) δ 9.45 (s, 1H), 8.25 (dd, *J* = 8.8, 1.9 Hz, 1H), 8.05 (d, *J* = 8.8 Hz, 1H), 7.97 (s, 1H), 7.74 (m, 1H), 7.63 (m, 3H), 7.28 (s, 2H), 4.39 (s, 2H), 2.84 (m, 7H), 1.19(m, 4H); ESI MS *m/z* 506 $[C_{28}H_{25}Cl_2N_3O_2 + H]^+$; HPLC 98.0% (AUC), $t_R$ = 11.15 min.

Exapmle 626

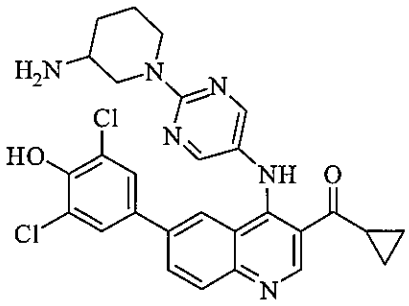
(4-(2-(3-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinoline -4-ylamino)pyrimidin-2-yl)piperidin-3-ylcarbamate (150 mg, 0.26 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (106 mg, 0.39 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (28 mg, 23% over 2 steps) as a yellow solid. $^1$H NMR (500 MHz, MeOD + TFA-*d*) δ 9.34 (br s, 1H), 8.45 (s, 2H), 8.25 (dd, *J* = 8.8, 1.9 Hz, 1H), 8.21 (br s, 1 H), 8.04 (d, *J* = 8.8 Hz, 1H), 7.25 (br s, 1H), 4.81 – 4.74 (m, 1H), 4.47 (d, *J* = 12.8 Hz, 1H), 3.48 – 3.31 (m, 3H), 2.80 (br s, 1H), 2.24 – 2.16 (m, 1H), 1.97 – 1.87 (m, 1H), 1.81 – 1.62 (m, 2H), 1.21 – 1.16 (m, *J* = 7.3 Hz, 4H); ESI MS *m/z* 533 $[C_{28}H_{26}ClFN_6O_2 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 10.89 min.

Example 628

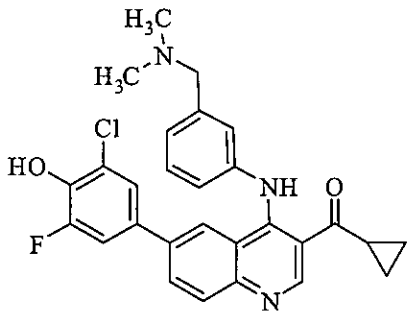
(4-(2-(3-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinoline -4-ylamino)pyrimidin-2-yl)piperidin-3-ylcarbamate (150 mg, 0.26 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (112 mg, 0.39 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (8.0 mg, 8% over 2 steps) as a yellow solid. $^1$H NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.33 (br s, 1H), 8.44 (s, 2H), 8.27 (dd, $J$ = 8.9, 1.8 Hz, 1H), 8.29 – 8.19 (m, 1H), 8.04 (d, $J$ = 8.9 Hz, 1H), 7.44 (br s, 2H), 4.81 – 4.71 (m, 1H), 4.48 – 4.44 (m, 1H), 3.46 – 3.31 (m, 3H), 2.84 – 2.77 (m, 1H), 2.23 – 2.16 (m, 1H), 1.96 – 1.87 (m, 1H), 1.80 – 1.60 (m, 2H), 1.21 – 1.15 (m, 4H); ESI MS *m/z* 549 $[C_{28}H_{26}Cl_2N_6O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.00 min.

Example 629

(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-((dimethylamino)methyl)phenylamino) quinolin-3-yl)(cyclopropyl)methanone

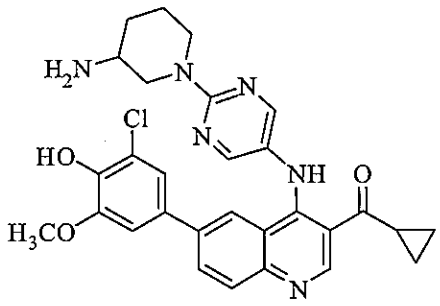


Following general procedure D, (6-bromo-4-(3-((dimethylamino)methyl)phenylamino)quinoline -3-yl)(cyclopropyl)methanone (100 mg, 0.23 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (93 mg, 0.34 mmol) to afford the desired product (81 mg, 72%) as a yellow-green solid. $^1$H NMR (300 MHz, MeOD + TFA-*d*) $\delta$ 9.44 (s,

1H), 8.25 (dd, $J$ = 8.9, 1.9 Hz, 1H), 8.09 – 7.95 (m, 2H), 7.79 – 7.54 (m, 4H), 7.19 (dd, $J$ = 11.5, 2.3 Hz, 1H), 7.06 (s, 1H), 4.38 (s, 2H), 2.91 – 2.82 (m, 1H), 2.83 (s, 6H), 1.23 – 1.14 (m, 4H); ESI MS $m/z$ 490 $[C_{29}H_{25}ClFN_3O_2 + H]^+$; HPLC 97.3% (AUC), $t_R$ = 11.07 min.

Example 644

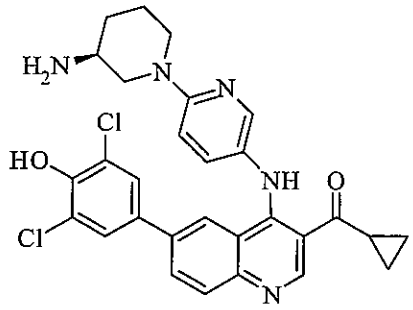
(4-(2-(3-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyrimidin-2-yl)piperidin-3-ylcarbamate (150 mg, 0.26mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (111 mg, 0.39 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (16 mg, 11% over 2 steps) as an orange-yellow solid: $^1$H NMR (500 MHz, MeOD + TFA-$d$) $\delta$ 9.35 (br s, 1H), 8.45 (s, 2H), 8.29 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.26 – 8.15 (br s, 1H), 8.03 (d, $J$ = 8.8 Hz, 1H), 7.07 (br s, 1H), 6.96 (br s, 1H), 4.76 (d, $J$ = 12.9 Hz, 1H), 4.45 (br s, 1H), 3.37 – 3.31 (m, 1H), 2.82 (br s, 1H), 2.23 – 2.16 (m, 1H), 1.96 – 1.85 (m, 1H), 1.78 – 1.68 (m, 1H), 1.68 – 1.56 (m, 1H), 1.22 – 1.16 (m, 4H); ESI MS $m/z$ 545 $[C_{29}H_{29}ClN_6O_3 + H]^+$; HPLC 98.5% (AUC), $t_R$ = 10.69 min.

Exapmle 646

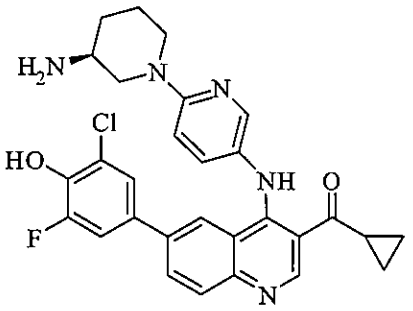
(S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, (S)-tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinoline -4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (100 mg, 0.17 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (75 mg, 0.26 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (29 mg, 31% over 2 steps) as a light orange solid: $^1$H NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.40 (br s, 1H), 8.25 – 8.19 (m, 2H), 8.11 (br s, 1H), 8.01 (d, $J$ = 8.8 Hz, 1H), 7.65 (dd, $J$ = 9.1, 2.8 Hz, 1H), 7.32 (s, 2H), 7.7 (d, $J$ = 9.1 Hz, 1H), 4.53 (br s, 1H), 4.00 (dt, $J$ = 12.8, 4.0 Hz, 1H), 3.39 – 3.23 (m, 3H), 2.86 (br s, 1H), 2.22 – 2.12 (m, 1H), 1.98 – 1.88 (m, 1H), 1.78 – 1.64 (m, 2H), 1.26 – 1.16 (m, 4H). ESI MS *m/z* 548 $[C_{29}H_{27}Cl_2N_5O_2 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 10.97 min.

Example 648

(S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone

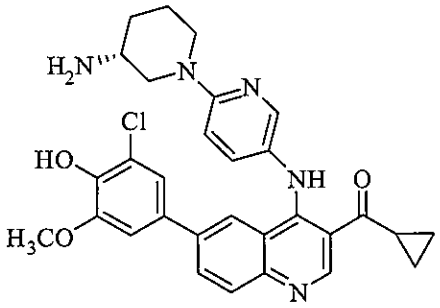


Following general procedure D, (S)-tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinoline -4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (100 mg, 0.17 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (71 mg, 0.26 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (27 mg, 30% over 2 steps) as an orange-yellow solid: $^1$H NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.40 (br s, 1H), 8.28 – 8.15 (m, 2H), 8.06 (br s, 1H), 8.00 (d, $J$ = 8.8 Hz, 1H), 7.66 (dd, $J$ = 9.1, 2.8 Hz, 1H), 7.16 – 7.05 (m, 3H), 4.53 (d, $J$ = 11.0 Hz, 1H), 4.01 (dd, $J$ = 13.4, 4.6 Hz, 1H), 3.41 – 3.23 (m, 3H), 2.86 (br s, 1H), 2.23 – 2.15 (m, 1H), 1.99 – 1.88 (m, 1H), 1.79 – 1.66 (m,

2H), 1.27 – 1.16 (m, 4H). ESI MS *m/z* 532 $[C_{29}H_{27}ClFN_5O_2 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 10.78 min.

Example 649

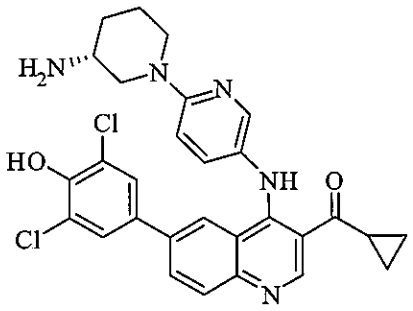
(R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, (R)-tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinoline -4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (100 mg, 0.17 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (74 mg, 0.26 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (30 mg, 32% over 2 steps) as an orange-yellow solid: $^1$H NMR (500 MHz, MeOD + TFA-*d*) δ 9.40 (br s, 1H), 8.28 – 8.20 (m, 2H), 8.10 (br s, 1H), 8.00 (d, *J* = 8.8 Hz, 1H), 7.65 (dd, *J* = 9.1, 2.8 Hz, 1H), 7.05 (d, *J* = 9.1 Hz, 1H), 6.99 (s, 1H), 6.83 (br s, 1H), 4.55 – 4.49 (d, *J* = 11.6 Hz, 1H), 4.04 – 3.95 (m, 1H), 3.91 (s, 3H), 3.28 – 3.18 (m, 3H), 2.87 (br s, 1H), 2.22 – 2.14 (m, 1H), 1.96 – 1.87 (m, 1H), 1.76 – 1.62 (m, 2H), 1.28 – 1.16 (m, 4H).; ESI MS *m/z* 544 $[C_{30}H_{30}ClN_5O_3 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 10.74 min.

Example 650

(R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone

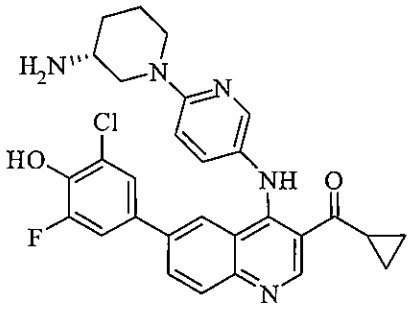


Following general procedure D, (R)-tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (100 mg, 0.17 mmol) was reacted with

2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (75 mg, 0.26 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (18 mg, 19% over 2 steps) as a yellow-orange solid. NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.40 (br s, 1H), 8.25 – 8.19 (m, 2H), 8.10 (br s, 1H), 8.01 (d, $J$ = 8.8 Hz, 1H), 7.65 (dd, $J$ = 9.1, 2.8 Hz, 1H), 7.32 (s, 2H), 7.07 (d, $J$ = 9.1 Hz, 1H), 4.53 (br s, 1H), 4.01 (dt, $J$ = 13.7, 4.0 Hz, 1H), 3.39 – 3.23 (m, 1H), 2.86 (br s, 1H), 2.22 – 2.12 (m, 1H), 1.97 – 1.88 (m, 1H), 1.78 – 1.64 (m, 2H), 1.26 – 1.16 (m, 4H). ESI MS *m/z* 548 $[C_{29}H_{27}Cl_2N_5O_2 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 10.96 min.

Example 651

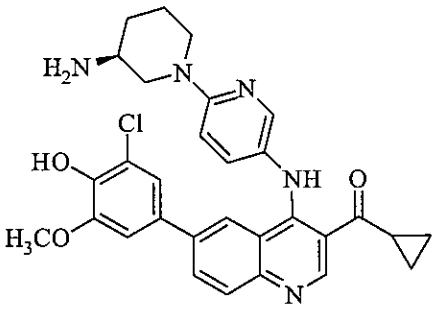
(R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, (R)-tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinoline -4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (100 mg, 0.17 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (71 mg, 0.26 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (33 mg, 37% over 2 steps) as an orange-yellow solid $^1$H NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.41 (s, 1H), 8.28 – 8.14 (m, 2H), 8.05 (br s, 1H), 8.00 (d, $J$ = 8.8 Hz, 1H), 7.65 (dd, $J$ = 9.1, 2.8 Hz, 1H), 7.16 – 7.04 (m, 3H), 4.53 (d, $J$ = 11.6 Hz, 1H), 3.99 (dt, $J$ = 13.7, 4.0 Hz, 1H), 3.40 – 3.21 (m, 3H), 2.86 (br s, 3H), 2.23 – 2.15 (m, 1H), 1.98 – 1.89 (m, 1H), 1.79 – 1.65 (m, 2H), 1.27 – 1.16 (m, 4H). ESI MS *m/z* 532 $[C_{29}H_{27}Cl_FN_5O_2 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 10.77 min.

Example 660

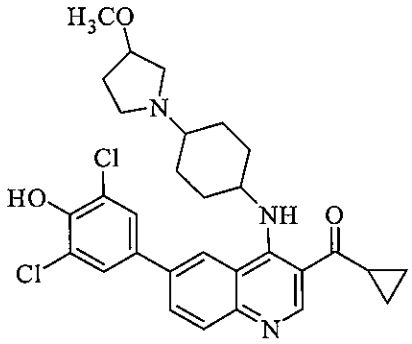
(S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, (S)-tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinoline -4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (100 mg, 0.17 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (74 mg, 0.26 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (42 mg, 45% over 2 steps) as an orange-yellow solid: $^1$H NMR (500 MHz, MeOD + TFA-*d*) δ 9.40 (br s, 1H), 8.28 – 8.20 (m, 2H), 8.10 (br s, 1H), 7.99 (d, *J* = 8.8 Hz, 1H), 7.65 (dd, *J* = 9.1, 2.8 Hz, 1H), 7.05 (d, *J* = 9.1 Hz, 1H), 6.99 (s, 1H), 6.83 (br s, 1H), 4.52 (d, *J* = 11.7 Hz, 1H), 4.04 – 3.96 (m, 1H), 3.91 (s, 3H), 3.37 – 3.18 (m, 3H), 2.87 (br s, 1H), 2.21 – 2.14 (m, 1H), 1.96 – 1.87 (m, 1H), 1.76 – 1.62 (m, 2H), 1.27 – 1.16 (m, 4H). ESI MS *m/z* 544 [$C_{30}H_{30}ClN_5O_3$ + H]$^+$; HPLC >99.0% (AUC), $t_R$ = 10.76 min.

Example 661

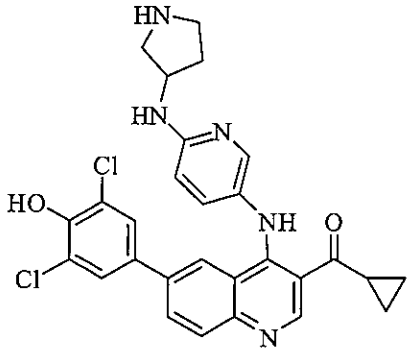
cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(3-methoxypyrrolidin-1-yl) cyclohexylamino)quinolin-3-yl)methanone



Following general procedure D, (6-bromo-4-(4-(3-methoxypyrrolidin-1-yl)cyclohexylamino) quinolin-3-yl)(cyclopropyl)methanone (60 mg, 0.13 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (55 mg, 0.19 mmol) to afford the desired product (46 mg, 64%) as a brown solid: $^1$H NMR $^1$H NMR (500 MHz, MeOD + TFA-*d*) δ 9.42 (s, 1H), 8.46 (s, 1H), 8.31 – 8.23 (m, 1H), 8.04 – 7.97 (m, 1H), 7.75 (s, 1H), 7.71 (s, 1H), 4.99 (br s, 1H), 4.23 – 4.14 (m, 1H), 3.82 – 3.61 (m, 2H), 3.43 – 3.30 (m, 6H), 3.27 – 3.19 (m, 1H), 2.93 – 2.82 (m, 1H), 2.60 – 2.03 (m, 7H), 2.02 – 1.61 (m, 3H),1.37 – 1.18 (m, 4H).; ESI MS m/z 554 [$C_{30}H_{33}Cl_2N_3O_3$ + H]$^+$; HPLC >99.0% (AUC), $t_R$ = 10.97 min.

Example 666

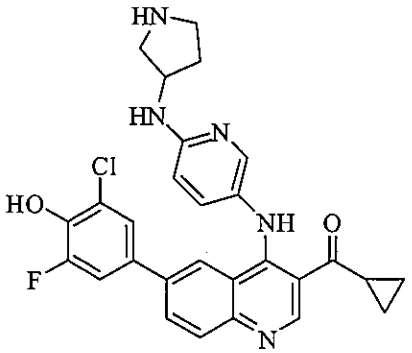
cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(pyrrolidin-3-ylamino)pyridin-3-ylamino) quinolin-3-yl)methanone



Following general procedure D, tert-butyl 3-(5-(6-bromo-3-(cyclopropanecarbonyl)quinoline -4-ylamino)pyridin-2-ylamino)pyrrolidine-1-carboxylate (100 mg, 0.18 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (78 mg, 0.27 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (43 mg, 45% over 2 steps) as a yellow-orange solid: $^1$H NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.40 (br s, 1H), 8.26 – 8.07 (m, 3H), 8.00 (d, $J$ = 8.9 Hz, 1H), 7.57 (dd, $J$ = 8.9, 2.7 Hz, 1H), 7.34 (s, 2H), 6.85 – 6.77 (m, 1H), 4.65 – 4.56 (m, 1H), 3.66 – 3.49 (m, 2H), 3.44 – 3.30 (m, 2H), 2.86 (br s, 1H), 2.47 – 2.36 (m, 1H), 2.18 – 2.07 (m, 1H), 1.27 – 1.15 (m, 4H).ESI MS *m/z* 534 $[C_{28}H_{25}Cl_2N_5O_2 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 10.64 min.

Example 667

(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(pyrrolidin-3-ylamino)pyridin- 3-ylamino) quinolin-3-yl)(cyclopropyl)methanone

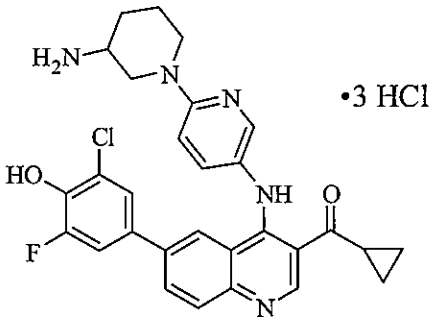


Following general procedure D, tert-butyl 3-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyridin-2-ylamino)pyrrolidine-1-carboxylate (100 mg, 0.18mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (73 mg, 0.27 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (42 mg, 45% over 2 steps) as a yellow solid: $^1$H NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.40 (br s, 1H), 8.22 (dd, $J$ = 8.8, 2.0 Hz, 1H), 8.17 – 8.06 (m, 2H), 8.00 (d, $J$ = 8.8 Hz, 1H), 7.55 (dd, $J$ = 8.9, 2.7 Hz, 1H), 7.19 – 7.13 (m, 2H), 6.83 – 6.76 (m, 1H), 4.65 – 4.56 (m,

1H), 3.66 – 3.49 (m, 2H), 3.45 – 3.30 (m, 2H), 2.87 (br s, 1H), 2.48 – 2.37 (m, 1H), 2.19 – 2.08 (m, 1H), 1.28 – 1.16 (m, 4H). ESI MS *m/z* 518 $[C_{28}H_{25}ClFN_5O_2 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 10.43 min.

Example 562

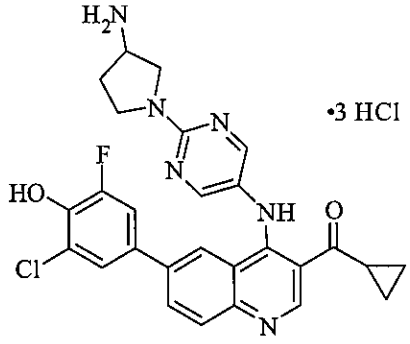
(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone hydrochloride




(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin -3-yl)(cyclopropyl)methanone (12 mg, 0.02 mmol) was suspended in methanol (1 mL) at 0° C followed by dropwise addition of HCl in diethyl ether (2 M) until complete dissolution of the solid was observed. The solvent was removed under reduced pressure to afford the desired product (10 mg, 80%) as an orange-red solid: $^1$H NMR (500 MHz, MeOD) δ 9.39 (s, 1H), 8.27 – 8.19 (m, 2H), 8.13 (br s, 1H), 8.02 (d, *J* = 8.8 Hz, 1H), 7.72 (dd, *J* = 9.2, 2.7 Hz, 1H), 7.21 – 7.07 (m, 3H), 4.52 (d, *J* = 10.8 Hz, 1H), 4.06 – 3.98 (m, 1H), 3.43 – 3.31 (m, 3H), 2.90 – 2.81 (m, 1H), 2.28 – 2.16 (m, 1H), 2.01 – 1.92 (m, 1H), 1.80 – 1.68 (m, 2H), 1.31 – 1.15 (m, 4H). ESI MS *m/z* 532 $[C_{29}H_{27}ClFN_5O_2 + H]^+$; HPLC 98.7% (AUC), $t_R$ = 10.82 min.

Example 573

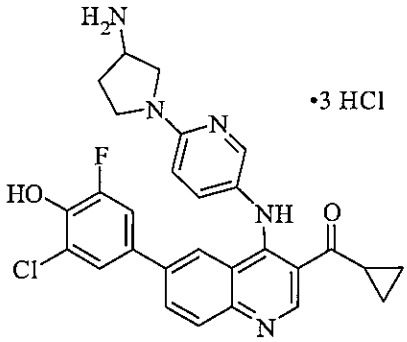
(4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone hydrochloride



(4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone (30 mg, 0.06 mmol) was suspended in methanol (1 mL) at 0° C followed by dropwise addition of HCl in diethyl ether (2 M) until complete dissolution of the solid was observed. The solvent was removed under reduced pressure to afford the desired product (33 mg, 92%) as a yellow-orange solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.31 (br s, 1H), 8.45 (s, 2H), 8.23 – 8.14 (m, 2H), 8.02 (d, $J$ = 8.8 Hz, 1H), 7.26 – 7.20 (m, 2H), 4.11 – 4.00 (m, 2H), 3.94 – 3.73 (m, 3H), 2.83 (br s, 1H), 2.58 – 2.48 (m, 1H), 2.28 – 2.17 (m, 1H), 1.22 – 1.14 (m, 4H), 0.92 – 0.88 (s, 0H).ESI MS *m/z* 519 $[C_{27}H_{24}ClFN_6O_2 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 5.18 min.

Example 577

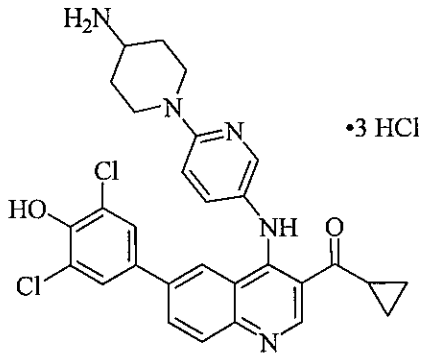
(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone hydrochloride




(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone (15 mg, 0.03 mmol) was suspended in methanol (1 mL) at 0° C followed by dropwise addition of HCl in diethyl ether (2 M) until complete dissolution of the solid was observed. The solvent was removed under reduced pressure to afford the desired product (23 mg, quant.) as a yellow-brown solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.39 (s, 1H), 8.28 – 8.19 (m, 2H), 8.16 (br s, 1H), 8.02 (d, $J$ = 8.8 Hz, 1H), 7.79 (dd, $J$ = 9.1, 2.7 Hz, 1H), 7.26 – 7.16 (m, 2H), 6.94 (d, $J$ = 9.2 Hz, 1H), 4.16 – 4.08 (m, 1H), 4.05 – 3.97 (m, 1H), 3.88 – 3.79 (m, 1H), 3.78 – 3.69 (m, 2H), 2.85 (br s, 1H), 2.64 – 2.53 (m, 1H), 2.34 – 2.21 (m, 1H), 1.25 – 1.15 (m, 4H). ESI MS *m/z* 518 $[C_{28}H_{25}ClFN_5O_2 + H]^+$; HPLC 98.1% (AUC), $t_R$ = 5.13 min.

Example 549

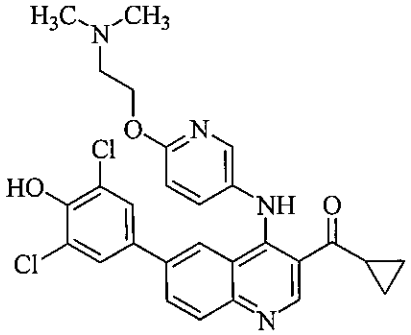
(4-(6-(4-Aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-l) (cyclopropyl)methanone hydrochloride



A suspension of{4-[6-(4-Aminopiperidin-1-yl)pyridin-3-ylamino]-6-(3,5-dichloro-4-hydroxy phenyl)quinolin-3-yl}(cyclopropyl)methanone (19 mg, 0.02 mmol) was suspended in methanol (1 mL) at 0° C followed by dropwise addition of HCl in diethyl ether (2 M) until the suspension was clear. The solvent was removed under reduced pressure to afford the desired product (19 mg, 83%) as a red solid: $^1$H NMR (500 MHz, $CD_3OD$) δ 9.33 (s, 1H), 8.16–8.08 (m, 2H), 8.05 (s, 1H), 7.97 (d, $J$ = 8.8 Hz, 1H), 7.57 (dd, $J$ = 8.8, 2.9 Hz, 1H), 7.29 (s, 2H), 7.04 (d, $J$ = 9.1 Hz, 1H), 4.52 (d, $J$ = 13.4 Hz, 2H), 3.44–3.32 (m, 1H), 3.08–2.99 (m, 2H), 2.88 (s, 1H), 2.11 (d, $J$ = 12.2 Hz, 2H), 1.71–1.59 (m, 2H), 1.24–1.13 (m, 4H); ESI MS *m/z* 548 $[C_{29}H_{27}Cl_2N_5O_2 + H]^+$; HPLC >99% (AUC), $t_R$ =11.52 min.

Example 711

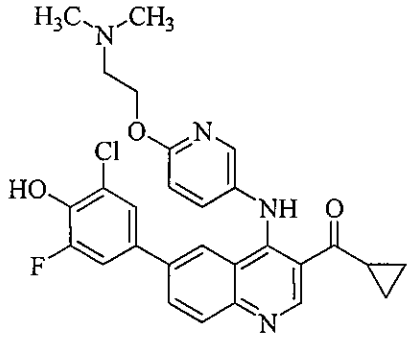
Cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethoxy) pyridin-3-ylamino)quinolin-3-yl)methanone



Following general procedure D, (6-bromo-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino) quinolin-3-yl)(cyclopropyl)methanone (100 mg, 0.22 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2- dioxaborolan-2-yl)phenol (95 mg, 0.33 mmol) to afford the desired product (24 mg, 20%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) δ 9.25 (s, 1H), 8.07 (d, $J$ = 2.8 Hz, 1H), 7.94 (s, 2H), 7.80 (s, 1H), 7.56 (dd, $J$ = 8.5, 2.8 Hz, 1H), 7.18 (s, 2H), 6.93 (d, $J$ = 8.5 Hz, 1H), 4.54 (t, $J$ = 5.5 Hz, 2H), 3.04 (t, $J$ = 5.5 Hz, 2H), 2.95–2.86 (m, 1H), 2.54 (s, 6H), 1.23–1.14 (m, 2H), 1.17 – 1.08 (m, 2H); ESI MS *m/z* 537 $[C_{28}H_{26}Cl_2N_4O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.42 min.

Example 710

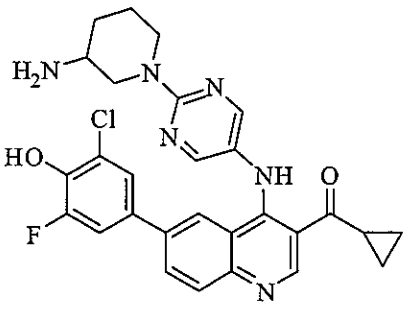
(6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, (6-bromo-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone (100 mg, 0.22 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (90 mg, 0.33 mmol) to afford the desired product (21 mg, 18%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.25 (s, 1H), 8.08 (d, $J$ = 2.7 Hz, 1H), 7.94 (m, 2H), 7.82 (s, 1H), 7.56 (dd, $J$ = 8.8, 2.7 Hz, 1H), 7.06–6.96 (m, 2H), 6.92 (d, $J$ = 8.8 Hz, 1H), 4.53 (t, $J$ = 5.5 Hz, 2H), 3.00 (t, $J$ = 5.5 Hz, 2H), 2.95–2.86 (m, 1H), 2.51 (s, 6H), 1.23 – 1.14 (m, 2H), 1.17 – 1.07 (m, 2H); ESI MS *m/z* 521 $[C_{28}H_{26}ClFN_4O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.15 min.

Example 626

(4-(2-(3-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone

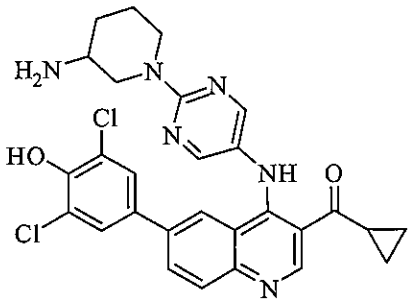


Following general procedure D, tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyrimidin-2-yl)piperidin-3-ylcarbamate (150 mg, 0.26 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (106 mg, 0.39 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (28 mg, 23% over 2 steps) as a yellow solid. $^1$H NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.34 (br s, 1H), 8.45 (s, 2H), 8.25 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.21 (br s, 1 H), 8.04 (d, $J$ =

8.8 Hz, 1H), 7.25 (br s, 1H), 4.81 – 4.74 (m, 1H), 4.47 (d, $J$ = 12.8 Hz, 1H), 3.48 – 3.31 (m, 3H), 2.80 (br s, 1H), 2.24 – 2.16 (m, 1H), 1.97 – 1.87 (m, 1H), 1.81 – 1.62 (m, 2H), 1.21 – 1.16 (m, $J$ = 7.3 Hz, 4H); ESI MS *m/z* 533 $[C_{28}H_{26}ClFN_6O_2 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 10.89 min.

Example 628

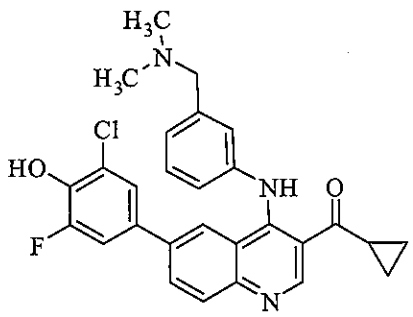
(4-(2-(3-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinoline -4-ylamino)pyrimidin-2-yl)piperidin-3-ylcarbamate (150 mg, 0.26 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (112 mg, 0.39 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (8.0 mg, 8% over 2 steps) as a yellow solid. $^1$H NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.33 (br s, 1H), 8.44 (s, 2H), 8.27 (dd, $J$ = 8.9, 1.8 Hz, 1H), 8.29 – 8.19 (m, 1H), 8.04 (d, $J$ = 8.9 Hz, 1H), 7.44 (br s, 2H), 4.81 – 4.71 (m, 1H), 4.48 – 4.44 (m, 1H), 3.46 – 3.31 (m, 3H), 2.84 – 2.77 (m, 1H), 2.23 – 2.16 (m, 1H), 1.96 – 1.87 (m, 1H), 1.80 – 1.60 (m, 2H), 1.21 – 1.15 (m, 4H); ESI MS *m/z* 549 $[C_{28}H_{26}Cl_2N_6O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.00 min.

Example 629

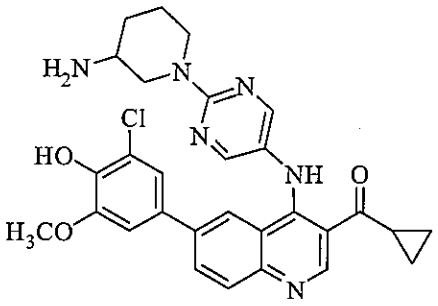
(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-((dimethylamino)methyl)phenylamino) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, (6-bromo-4-(3-((dimethylamino)methyl)phenylamino)quinoline -3-yl)(cyclopropyl)methanone (100 mg, 0.23 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (93 mg, 0.34 mmol) to afford the desired product (81 mg, 72%) as a yellow-green solid. $^1$H NMR (300 MHz, MeOD + TFA-*d*) $\delta$ 9.44 (s, 1H), 8.25 (dd, $J$ = 8.9, 1.9 Hz, 1H), 8.09 – 7.95 (m, 2H), 7.79 – 7.54 (m, 4H), 7.19 (dd, $J$ = 11.5, 2.3 Hz, 1H), 7.06 (s, 1H), 4.38 (s, 2H), 2.91 – 2.82 (m, 1H), 2.83 (s, 6H), 1.23 – 1.14 (m, 4H); ESI MS *m/z* 490 $[C_{29}H_{25}ClFN_3O_2 + H]^+$; HPLC 97.3% (AUC), $t_R$ = 11.07 min.

Example 644

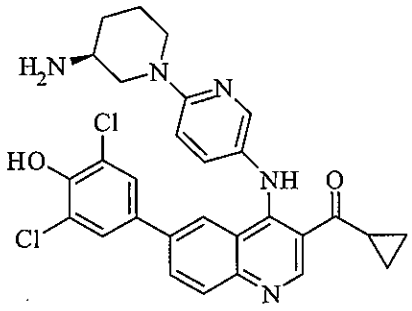
(4-(2-(3-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyrimidin-2-yl)piperidin-3-ylcarbamate (150 mg, 0.26mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (111 mg, 0.39 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (16 mg, 11% over 2 steps) as an orange-yellow solid: $^1$H NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.35 (br s, 1H), 8.45 (s, 2H), 8.29 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.26 – 8.15 (br s, 1H), 8.03 (d, $J$ = 8.8 Hz, 1H), 7.07 (br s, 1H), 6.96 (br s, 1H), 4.76 (d, $J$ = 12.9 Hz, 1H), 4.45 (br s, 1H), 3.37 – 3.31 (m, 1H), 2.82 (br s, 1H), 2.23 – 2.16 (m, 1H), 1.96 – 1.85 (m, 1H), 1.78 – 1.68 (m, 1H), 1.68 – 1.56 (m, 1H), 1.22 – 1.16 (m, 4H); ESI MS *m/z* 545 $[C_{29}H_{29}ClN_6O_3 + H]^+$; HPLC 98.5% (AUC), $t_R$ = 10.69 min.

Example 646

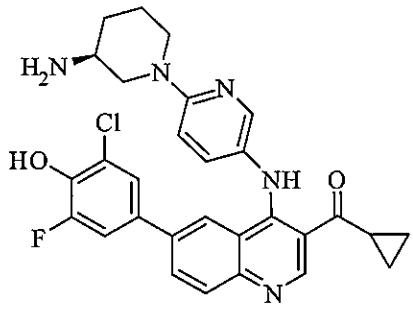
(S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, (S)-tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (100 mg, 0.17 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (75 mg, 0.26 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (29 mg, 31% over 2 steps) as a light orange solid: $^1$H NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.40 (br s, 1H), 8.25 – 8.19 (m, 2H), 8.11 (br s, 1H), 8.01 (d, $J$ = 8.8 Hz, 1H), 7.65 (dd, $J$ = 9.1, 2.8 Hz, 1H), 7.32 (s, 2H), 7.7 (d, $J$ = 9.1 Hz, 1H), 4.53 (br s, 1H), 4.00 (dt, $J$ = 12.8, 4.0 Hz, 1H), 3.39 – 3.23 (m, 3H), 2.86 (br s, 1H), 2.22 – 2.12 (m, 1H), 1.98 – 1.88 (m, 1H), 1.78 – 1.64 (m, 2H), 1.26 – 1.16 (m, 4H). ESI MS *m/z* 548 $[C_{29}H_{27}Cl_2N_5O_2 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 10.97 min.

Example 648

(S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

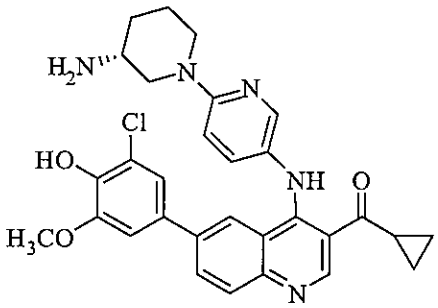


Following general procedure D, (S)-tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (100 mg, 0.17 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (71 mg, 0.26 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (27 mg, 30% over 2 steps) as an orange-yellow solid: $^1$H NMR (500 MHz, MeOD

+ TFA-*d*) δ 9.40 (br s, 1H), 8.28 – 8.15 (m, 2H), 8.06 (br s, 1H), 8.00 (d, *J* = 8.8 Hz, 1H), 7.66 (dd, *J* = 9.1, 2.8 Hz, 1H), 7.16 – 7.05 (m, 3H), 4.53 (d, *J* = 11.0 Hz, 1H), 4.01 (dd, *J* = 13.4, 4.6 Hz, 1H), 3.41 – 3.23 (m, 3H), 2.86 (br s, 1H), 2.23 – 2.15 (m, 1H), 1.99 – 1.88 (m, 1H), 1.79 – 1.66 (m, 2H), 1.27 – 1.16 (m, 4H). ESI MS *m/z* 532 [$C_{29}H_{27}ClFN_5O_2$ + H]$^+$; HPLC >99.0% (AUC), $t_R$ = 10.78 min.

Example 649

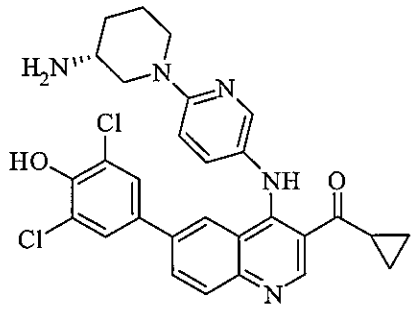
(R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, (R)-tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (100 mg, 0.17 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (74 mg, 0.26 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (30 mg, 32% over 2 steps) as an orange-yellow solid: $^1$H NMR (500 MHz, MeOD + TFA-*d*) δ 9.40 (br s, 1H), 8.28 – 8.20 (m, 2H), 8.10 (br s, 1H), 8.00 (d, *J* = 8.8 Hz, 1H), 7.65 (dd, *J* = 9.1, 2.8 Hz, 1H), 7.05 (d, *J* = 9.1 Hz, 1H), 6.99 (s, 1H), 6.83 (br s, 1H), 4.55 – 4.49 (d, *J* = 11.6 Hz, 1H), 4.04 – 3.95 (m, 1H), 3.91 (s, 3H), 3.28 – 3.18 (m, 3H), 2.87 (br s, 1H), 2.22 – 2.14 (m, 1H), 1.96 – 1.87 (m, 1H), 1.76 – 1.62 (m, 2H), 1.28 – 1.16 (m, 4H).; ESI MS *m/z* 544 [$C_{30}H_{30}ClN_5O_3$ + H]$^+$; HPLC >99.0% (AUC), $t_R$ = 10.74 min.

Example 650

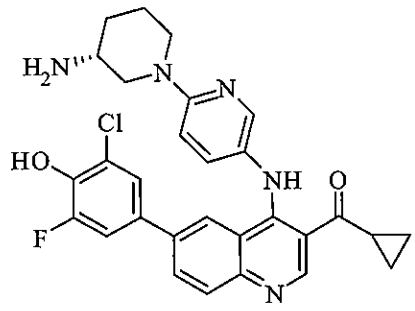
(R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, (R)-tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (100 mg, 0.17 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (75 mg, 0.26 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (18 mg, 19% over 2 steps) as a yellow-orange solid. NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.40 (br s, 1H), 8.25 – 8.19 (m, 2H), 8.10 (br s, 1H), 8.01 (d, $J$ = 8.8 Hz, 1H), 7.65 (dd, $J$ = 9.1, 2.8 Hz, 1H), 7.32 (s, 2H), 7.07 (d, $J$ = 9.1 Hz, 1H), 4.53 (br s, 1H), 4.01 (dt, $J$ = 13.7, 4.0 Hz, 1H), 3.39 – 3.23 (m, 1H), 2.86 (br s, 1H), 2.22 – 2.12 (m, 1H), 1.97 – 1.88 (m, 1H), 1.78 – 1.64 (m, 2H), 1.26 – 1.16 (m, 4H). ESI MS *m/z* 548 $[C_{29}H_{27}Cl_2N_5O_2 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 10.96 min.

Example 651

(R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

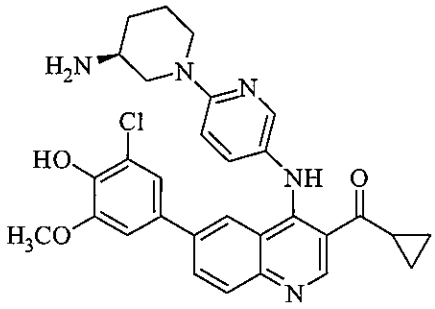


Following general procedure D, (R)-tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (100 mg, 0.17 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (71 mg, 0.26 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (33 mg, 37% over 2 steps) as an orange-yellow solid $^1$H NMR (500 MHz,

MeOD + TFA-*d*) δ 9.41 (s, 1H), 8.28 – 8.14 (m, 2H), 8.05 (br s, 1H), 8.00 (d, *J* = 8.8 Hz, 1H), 7.65 (dd, *J* = 9.1, 2.8 Hz, 1H), 7.16 – 7.04 (m, 3H), 4.53 (d, *J* = 11.6 Hz, 1H), 3.99 (dt, *J* = 13.7, 4.0 Hz, 1H), 3.40 – 3.21 (m, 3H), 2.86 (br s, 3H), 2.23 – 2.15 (m, 1H), 1.98 – 1.89 (m, 1H), 1.79 – 1.65 (m, 2H), 1.27 – 1.16 (m, 4H). ESI MS *m/z* 532 $[C_{29}H_{27}Cl_FN_5O_2 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 10.77 min.

Example 660

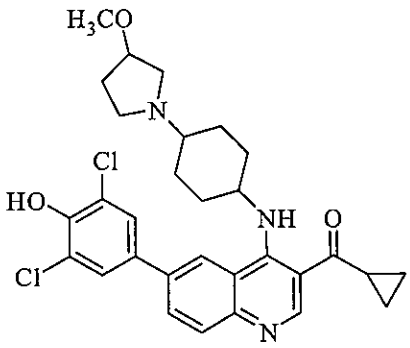
(S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone




Following general procedure D, (S)-tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (100 mg, 0.17 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (74 mg, 0.26 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (42 mg, 45% over 2 steps) as an orange-yellow solid: $^1$H NMR (500 MHz, MeOD + TFA-*d*) δ 9.40 (br s, 1H), 8.28 – 8.20 (m, 2H), 8.10 (br s, 1H), 7.99 (d, *J* = 8.8 Hz, 1H), 7.65 (dd, *J* = 9.1, 2.8 Hz, 1H), 7.05 (d, *J* = 9.1 Hz, 1H), 6.99 (s, 1H), 6.83 (br s, 1H), 4.52 (d, *J* = 11.7 Hz, 1H), 4.04 – 3.96 (m, 1H), 3.91 (s, 3H), 3.37 – 3.18 (m, 3H), 2.87 (br s, 1H), 2.21 – 2.14 (m, 1H), 1.96 – 1.87 (m, 1H), 1.76 – 1.62 (m, 2H), 1.27 – 1.16 (m, 4H). ESI MS *m/z* 544 $[C_{30}H_{30}ClN_5O_3 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 10.76 min.

Example 661

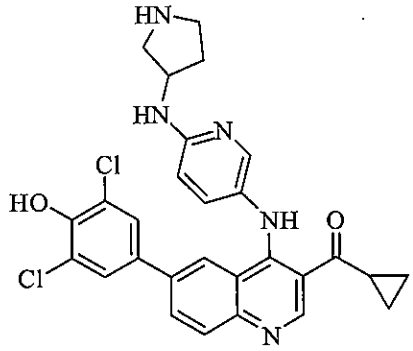
cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(3-methoxypyrrolidin-1-yl)cyclohexylamino)quinolin-3-yl)methanone



Following general procedure D, (6-bromo-4-(4-(3-methoxypyrrolidin-1-yl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone (60 mg, 0.13 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (55 mg, 0.19 mmol) to afford the desired product (46 mg, 64%) as a brown solid: $^1$H NMR $^1$H NMR (500 MHz, MeOD + TFA-*d*) δ 9.42 (s, 1H), 8.46 (s, 1H), 8.31 – 8.23 (m, 1H), 8.04 – 7.97 (m, 1H), 7.75 (s, 1H), 7.71 (s, 1H), 4.99 (br s, 1H), 4.23 – 4.14 (m, 1H), 3.82 – 3.61 (m, 2H), 3.43 – 3.30 (m, 6H), 3.27 – 3.19 (m, 1H), 2.93 – 2.82 (m, 1H), 2.60 – 2.03 (m, 7H), 2.02 – 1.61 (m, 3H),1.37 – 1.18 (m, 4H).; ESI MS m/z 554 $[C_{30}H_{33}Cl_2N_3O_3 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 10.97 min.

Example 666

cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(pyrrolidin-3-ylamino)pyridin-3-ylamino) quinolin-3-yl)methanone

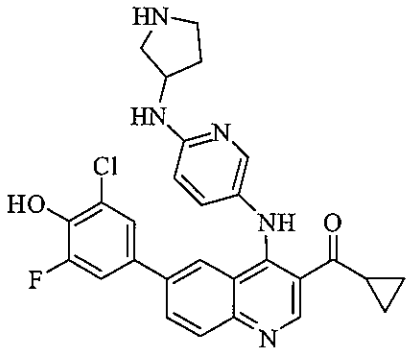


Following general procedure D, tert-butyl 3-(5-(6-bromo-3-(cyclopropanecarbonyl) quinolin-4-ylamino)pyridin-2-ylamino)pyrrolidine-1-carboxylate (100 mg, 0.18 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (78 mg, 0.27 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (43 mg, 45% over 2 steps) as a yellow-orange solid: $^1$H NMR (500 MHz, MeOD + TFA-*d*) δ 9.40 (br s, 1H), 8.26 – 8.07 (m, 3H), 8.00 (d, *J* = 8.9 Hz, 1H), 7.57 (dd, *J* = 8.9, 2.7 Hz, 1H), 7.34 (s, 2H), 6.85 – 6.77 (m, 1H), 4.65 – 4.56 (m, 1H), 3.66 – 3.49 (m, 2H),

3.44 – 3.30 (m, 2H), 2.86 (br s, 1H), 2.47 – 2.36 (m, 1H), 2.18 – 2.07 (m, 1H), 1.27 – 1.15 (m, 4H).ESI MS *m/z* 534 $[C_{28}H_{25}Cl_2N_5O_2 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 10.64 min.

Example 667

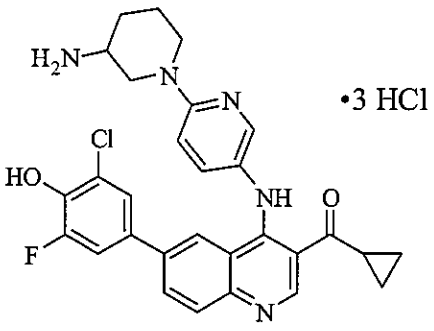
(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(pyrrolidin-3-ylamino)pyridin-3-ylamino) quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, tert-butyl 3-(5-(6-bromo-3-(cyclopropanecarbonyl) quinolin-4-ylamino)pyridin-2-ylamino)pyrrolidine-1-carboxylate (100 mg, 0.18mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (73 mg, 0.27 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (42 mg, 45% over 2 steps) as a yellow solid: $^1$H NMR (500 MHz, MeOD + TFA-*d*) $\delta$ 9.40 (br s, 1H), 8.22 (dd, *J* = 8.8, 2.0 Hz, 1H), 8.17 – 8.06 (m, 2H), 8.00 (d, *J* = 8.8 Hz, 1H), 7.55 (dd, *J* = 8.9, 2.7 Hz, 1H), 7.19 – 7.13 (m, 2H), 6.83 – 6.76 (m, 1H), 4.65 – 4.56 (m, 1H), 3.66 – 3.49 (m, 2H), 3.45 – 3.30 (m, 2H), 2.87 (br s, 1H), 2.48 – 2.37 (m, 1H), 2.19 – 2.08 (m, 1H), 1.28 – 1.16 (m, 4H). ESI MS *m/z* 518 $[C_{28}H_{25}ClFN_5O_2 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 10.43 min.

Example 562

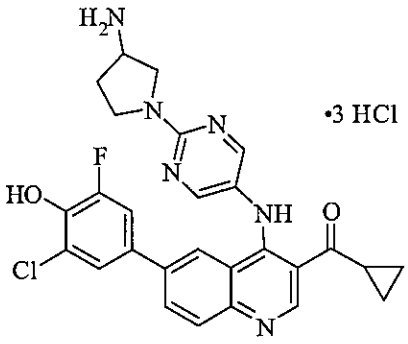
(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin -3-yl)(cyclopropyl)methanone hydrochloride



(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone (12 mg, 0.02 mmol) was suspended in methanol (1 mL) at 0° C followed by dropwise addition of HCl in diethyl ether (2 M) until complete dissolution of the solid was observed. The solvent was removed under reduced pressure to afford the desired product (10 mg, 80%) as an orange-red solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.39 (s, 1H), 8.27 – 8.19 (m, 2H), 8.13 (br s, 1H), 8.02 (d, $J$ = 8.8 Hz, 1H), 7.72 (dd, $J$ = 9.2, 2.7 Hz, 1H), 7.21 – 7.07 (m, 3H), 4.52 (d, $J$ = 10.8 Hz, 1H), 4.06 – 3.98 (m, 1H), 3.43 – 3.31 (m, 3H), 2.90 – 2.81 (m, 1H), 2.28 – 2.16 (m, 1H), 2.01 – 1.92 (m, 1H), 1.80 – 1.68 (m, 2H), 1.31 – 1.15 (m, 4H). ESI MS *m/z* 532 $[C_{29}H_{27}ClFN_5O_2 + H]^+$; HPLC 98.7% (AUC), $t_R$ = 10.82 min.

Example 573

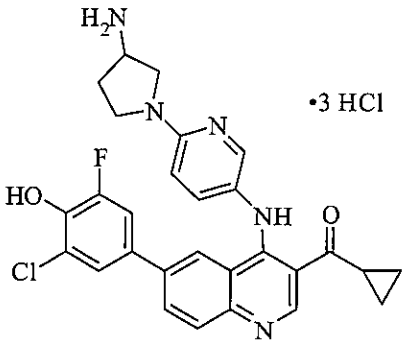
(4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride




(4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone (30 mg, 0.06 mmol) was suspended in methanol (1 mL) at 0° C followed by dropwise addition of HCl in diethyl ether (2 M) until complete dissolution of the solid was observed. The solvent was removed under reduced pressure to afford the desired product (33 mg, 92%) as a yellow-orange solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.31 (br s, 1H), 8.45 (s, 2H), 8.23 – 8.14 (m, 2H), 8.02 (d, $J$ = 8.8 Hz, 1H), 7.26 – 7.20 (m, 2H), 4.11 – 4.00 (m, 2H), 3.94 – 3.73 (m, 3H), 2.83 (br s, 1H), 2.58 – 2.48 (m, 1H), 2.28 – 2.17 (m, 1H), 1.22 – 1.14 (m, 4H), 0.92 – 0.88 (s, 0H).ESI MS *m/z* 519 $[C_{27}H_{24}ClFN_6O_2 + H]^+$; HPLC >99.0% (AUC), $t_R$ = 5.18 min.

Example 577

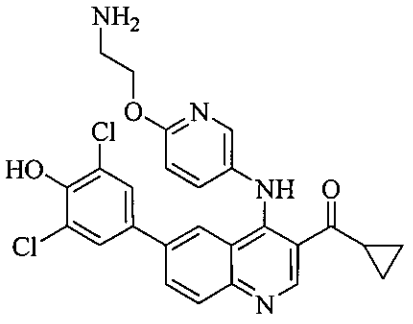
(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride



(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinoli n-3-yl)(cyclopropyl)methanone (15 mg, 0.03 mmol) was suspended in methanol (1 mL) at 0° C followed by dropwise addition of HCl in diethyl ether (2 M) until complete dissolution of the solid was observed. The solvent was removed under reduced pressure to afford the desired product (23 mg, quant.) as a yellow-brown solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.39 (s, 1H), 8.28 – 8.19 (m, 2H), 8.16 (br s, 1H), 8.02 (d, $J$ = 8.8 Hz, 1H), 7.79 (dd, $J$ = 9.1, 2.7 Hz, 1H), 7.26 – 7.16 (m, 2H), 6.94 (d, $J$ = 9.2 Hz, 1H), 4.16 – 4.08 (m, 1H), 4.05 – 3.97 (m, 1H), 3.88 – 3.79 (m, 1H), 3.78 – 3.69 (m, 2H), 2.85 (br s, 1H), 2.64 – 2.53 (m, 1H), 2.34 – 2.21 (m, 1H), 1.25 – 1.15 (m, 4H). ESI MS *m/z* 518 $[C_{28}H_{25}ClFN_5O_2 + H]^+$; HPLC 98.1% (AUC), $t_R$ = 5.13 min.

Example 723

(4-(6-(2-Aminoethoxy)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)(cyclopropyl)methanone

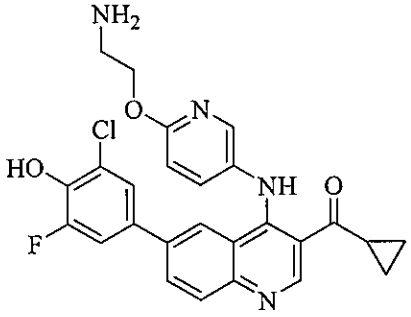


Following general procedure D, tert-butyl 2-(5-(6-bromo-3-(cyclopropanecarbonyl) quinolin-4-ylamino)pyridin-2-yloxy)ethylcarbamate (100 mg, 0.19 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (81 mg, 0.28 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (21 mg, 22% over two steps) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.40 (s, 1H), 8.33–8.24 (m, 2H), 8.13–8.04 (m, 2H), 7.83 (dd, $J$ = 8.8, 2.8 Hz, 1H), 7.37 (s, 2H),

7.14 (d, $J$ = 8.8 Hz, 1H), 4.66 (t, $J$ = 5.1 Hz, 2H), 3.43 (t, $J$ = 5.1 Hz, 2H), 2.87 – 2.80 (m, 1H), 1.22 – 1.15 (m, 4H); ESI MS *m/z* 509 $[C_{26}H_{22}Cl_2N_4O_3 + H]^+$; HPLC 99.7% (AUC), $t_R$ = 11.26 min.

Example 724

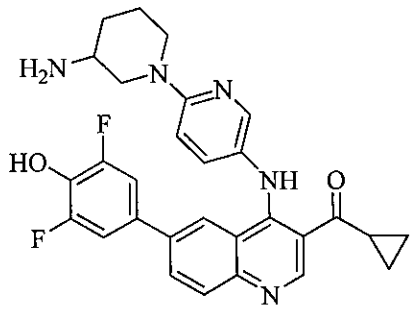
(4-(6-(2-Aminoethoxy)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone



Following general procedure D, tert-butyl 2-(5-(6-bromo-3-(cyclopropanecarbonyl) quinolin-4-ylamino)pyridin-2-yloxy)ethylcarbamate (100 mg, 0.19mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (76 mg, 0.28 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (24 mg, 26% over two steps) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.40 (s, 1H), 8.34–8.24 (m, 2H), 8.13–8.03 (m, 2H), 7.82 (dd, $J$ = 8.8, 2.8 Hz, 1H), 7.24 – 7.10 (m, 3H), 4.65 (t, $J$ 5.1 = Hz, 2H), 3.43 (t, $J$ = 5.1 Hz, 2H), 2.87 – 2.81 (m, 1H), 1.23 – 1.15 (m, 4H); ESI MS *m/z* 493 $[C_{26}H_{22}ClFN_4O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.00 min.

Example 725

(4-(6-(3-Aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-difluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone

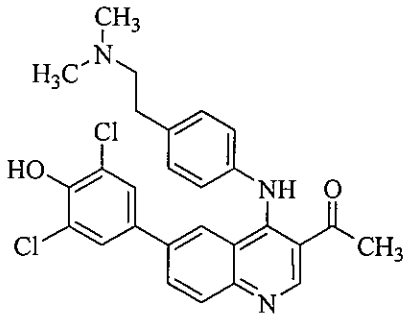


Following general procedure D, tert-butyl 1-(5-(6-bromo-3-(cyclopropanecarbonyl) quinolin-4-ylamino)pyridin-2-yl)piperidin-3-ylcarbamate (88 mg, 0.15 mmol) was reacted with 2,6-difluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (60 mg, 0.23 mmol) to obtain

the protected intermediate which was subjected to general procedure A-2 to afford the desired product (72 mg, 93% over two steps) as a yellow-orange solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.43 (s, 1H), 8.29–8.20 (m, 2H), 8.09–8.00 (m, 2H), 7.70 (dd, $J$ = 9.1, 2.7 Hz, 1H), 7.15 (d, $J$ = 9.1 Hz, 1H), 7.05–6.93 (m, 2H), 4.55 (d, $J$ = 12.5 Hz, 1H), 4.04 (d, $J$ = 12.5 Hz, 1H), 3.44–3.35 (m, 2H), 2.93–2.84 (m, 1H), 2.27–2.19 (m, 1H), 2.04–1.94 (m, 1H), 1.84–1.71 (m, 2H), 1.31–1.19 (m, 4H); ESI MS *m/z* 516 $[C_{29}H_{27}F_2N_5O_2 + H]^+$; HPLC 99.0% (AUC), $t_R$ = 11.31 min.

Example 744

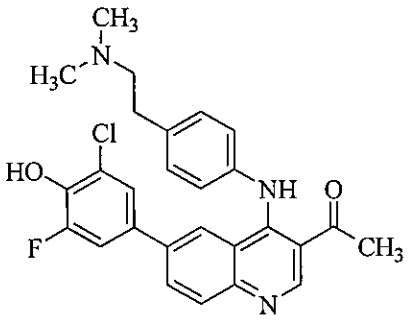
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino) quinolin-3-yl)ethanone



Following general procedure D, 1-(6-bromo-4-(4-(2-(dimethylamino)ethyl)phenylamino) quinolin-3-yl)ethanone (76 mg, 0.18 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5 -tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (81 mg, 0.28 mmol) to afford the desired product (49 mg, 55%)as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.30 (s, 1H), 8.19 (dd, $J$ = 8.8, 2.0 Hz, 1H), 8.01 (d, $J$ = 8.8 Hz, 1H), 7.76 (d, $J$ = 2.0 Hz, 1H), 7.60 (d, $J$ = 8.3 Hz, 2H), 7.49 (d, $J$ = 8.3 Hz, 2H), 7.13 (s, 2H), 3.45–3.37 (m, 2H), 3.29–3.20 (m, 2H), 3.00 (s, 6H), 2.82 (s, 3H); ESI MS *m/z* 494 $[C_{27}H_{25}Cl_2N_3O_2 + H]^+$; HPLC 96.9% (AUC), $t_R$ = 12.01 min.

Example 745

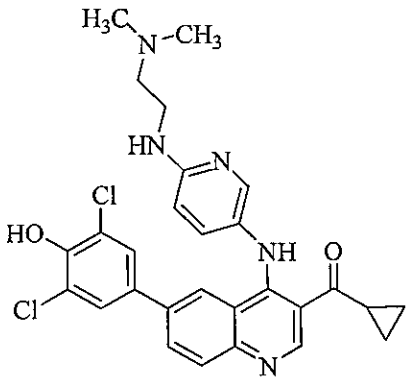
1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino) quinolin-3-yl)ethanone



Following general procedure D, 1-(6-bromo-4-(4-(2-(dimethylamino)ethyl)phenyl amino)quinolin-3-yl)ethanone (76 mg, 0.18mmol) was reacted with 2-chloro-6-fluoro-4 -(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (76 mg, 0.28 mmol) to afford the desired product (23 mg, 27%)as a yellow-green solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.30 (s, 1H), 8.19 (dd, $J$ = 8.8, 2.0 Hz, 1H), 8.00 (d, $J$ = 8.8 Hz, 1H), 7.76 (d, $J$ = 2.1 Hz, 1H), 7.60 (d, $J$ = 8.3 Hz, 2H), 7.50 (d, $J$ = 8.3 Hz, 2H), 6.99–6.92 (m, 2H), 3.46–3.39 (m, 2H), 3.27–3.19 (m, 2H), 3.00 (s, 6H), 2.82 (s, 3H); ESI MS *m/z* 478 $[C_{27}H_{25}ClFN_3O_2 + H]^+$; HPLC 98.4% (AUC), $t_R$ = 10.91 min.

Example 747

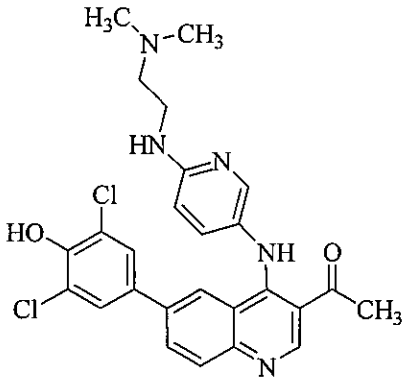
cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-yl amino)quinolin-3-yl)methanone



Following general procedure D, (6-bromo-4-(6-(2-(dimethylamino)ethylamino)pyridine -3-ylamino)quinolin-3-yl)(cyclopropyl)methanone (75 mg, 0.17mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (73 mg, 0.25 mmol) to afford the desired product (24 mg, 26%) as an orange solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.38 (s, 1H), 8.32–8.18 (m, 3H), 8.07 (d, $J$ = 9.3 Hz, 1H), 7.86 (dd, $J$ = 9.3, 2.6 Hz, 1H), 7.48 (s, 2H), 7.15 (d, $J$ = 9.3 Hz, 1H), 3.91 (t, $J$ = 6.1 Hz, 2H), 3.49 (t, $J$ = 6.1 Hz, 2H), 2.99 (s, 6H), 2.87–2.78 (m, 1H), 1.24–1.18 (m, 4H); ESI MS *m/z* 536 $[C_{28}H_{27}Cl_2N_5O_2 + H]^+$; HPLC 96.5% (AUC), $t_R$ = 11.28 min.

Example 758

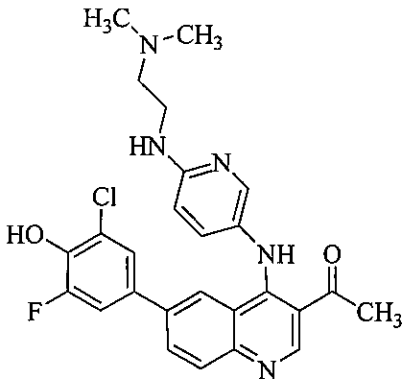
1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino) quinolin-3-yl)ethanone



Following general procedure D, 1-(6-bromo-4-(6-(2-(dimethylamino)ethylamino)pyridine -3-ylamino)quinolin-3-yl)ethanone (100 mg, 0.23mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (101 mg, 0.35 mmol) to afford the desired product (39 mg, 33%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.28 (s, 1H), 8.26–8.17 (m, 2H), 8.04–7.99 (m, 2H), 7.67 (dd, $J$ = 9.0, 2.7 Hz, 1H), 7.28 (s, 2H), 6.93 (d, $J$ = 9.0 Hz, 1H), 3.86–3.82 (m, 2H), 3.44–3.36 (m, 2H), 2.96 (s, 6H), 2.81 (s, 3H); ESI MS *m/z* 510 $[C_{26}H_{25}Cl_2N_5O_2 + H]^+$; HPLC 96.6% (AUC), $t_R$ = 10.74 min.

Example 762

1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino) pyridin-3-ylamino)quinolin-3-yl)ethanone

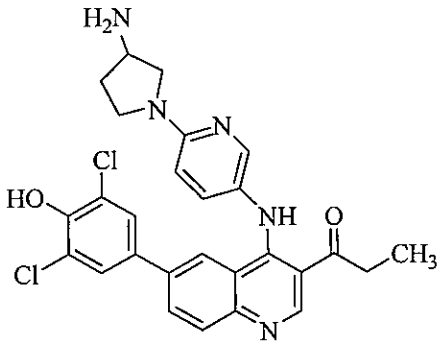


Following general procedure D, 1-(6-bromo-4-(6-(2-(dimethylamino)ethylamino)pyridine -3-ylamino)quinolin-3-yl)ethanone (100 mg, 0.23mmol) was reacted with 2-chloro-6-fluoro -4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan -2-yl)phenol (82 mg, 0.35 mmol) to afford the desired

product (18 mg, 16%)as a green-yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) δ 9.29 (s, 1H), 8.26–8.20 (m, 2H), 8.05–7.99 (m, 2H), 7.69 (dd, *J* = 9.0, 2.7 Hz, 1H), 7.18–7.07 (m, 2H), 6.96 (d, *J* = 9.0 Hz, 1H), 3.89–3.83 (m, 2H), 3.46–3.37 (m, 2H), 2.96 (s, 6H), 2.80 (s, 3H); ESI MS *m/z* 494 $[C_{26}H_{25}ClFN_5O_2 + H]^+$; HPLC 97.2% (AUC), $t_R$ = 10.46 min.

Example 761

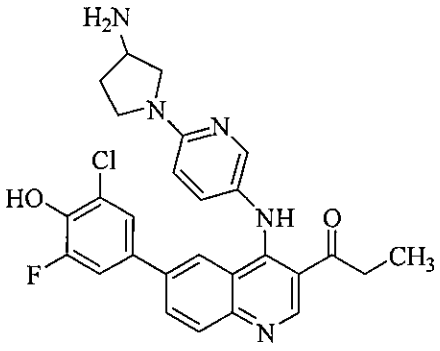
1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)propan-1-one



Following general procedure D, tert-butyl 1-(5-(6-bromo-3-propionylquinolin-4-ylamino)pyridin-2-yl)pyrrolidin-3-ylcarbamate (100 mg, 0.18 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (81 mg, 0.28 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (8 mg, 9% over two steps) as an orange-brown solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) δ 9.29 (s, 1H), 8.27–8.19 (m, 2H), 8.07–7.99 (m, 2H), 7.85–7.70 (m, 1H), 7.29 (s, 2H), 6.96 (d, *J* = 9.2 Hz, 1H), 4.15–4.05 (m, 1H), 4.07–3.99 (m, 1H), 3.89–3.80 (m, 1H), 3.79–3.65 (m, 2H), 3.27–3.18 (m, 2H), 2.63–2.52 (m, 1H), 2.34–2.23 (m, 1H), 1.31–1.22 (m, 3H); ESI MS *m/z* 522 $[C_{27}H_{25}Cl_2N_5O_2 + H]^+$; HPLC 95.7% (AUC), $t_R$ = 10.98 min.

Example 760

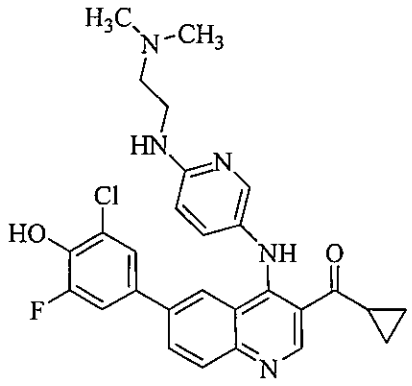
1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quin olin-3-yl)propan-1-one



Following general procedure D, tert-butyl 1-(5-(6-bromo-3-propionylquinolin-4-ylamino) pyridin-2-yl)pyrrolidin-3-ylcarbamate (100 mg, 0.18 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (76 mg, 0.28 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (34 mg, 37% over two steps) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.29 (s, 1H), 8.29–8.18 (m, 2H), 8.06–7.99 (m, 2H), 7.82 (dd, $J$ = 9.1, 2.6 Hz, 1H), 7.16–7.10 (m, 1H), 7.07 (s, 1H), 6.97 (d, $J$ = 9.1 Hz, 1H), 4.17–4.08 (m, 1H), 4.06–3.98 (m, 1H), 3.90–3.81 (m, 1H), 3.79–3.70 (m, 2H), 3.27–3.19 (m, 2H), 2.64–2.53 (m, 1H), 2.35–2.25 (m, 1H), 1.26 (t, $J$ = 7.1 Hz, 3H); ESI MS *m/z* 506 $[C_{27}H_{25}ClFN_5O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.75 min.

Example 776

(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino) quinolin-3-yl)(cyclopropyl)methanone

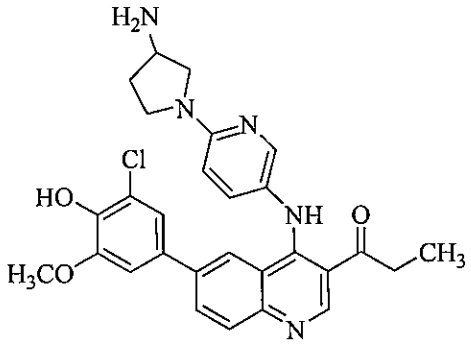


Following general procedure D, (6-bromo-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone (75 mg, 0.17 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (69 mg, 0.25 mmol) to afford the desired product (6 mg, 7%) as a yellow-orange solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.40 (s, 1H), 8.25 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.22–8.15 (m, 2H), 8.03 (d, $J$ = 8.8 Hz, 1H),

7.69 (dd, $J$ = 9.1, 2.6 Hz, 1H), 7.27–7.18 (m, 2H), 6.95 (d, $J$ = 9.1 Hz, 1H), 3.87–3.81 (m, 2H), 3.46–3.39 (m, 2H), 2.97 (s, 6H), 2.89–2.78 (m, 1H), 1.28–1.17 (m, 4H); ESI MS *m/z* 520 $[C_{28}H_{27}ClFN_5O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.34 min.

Example 775

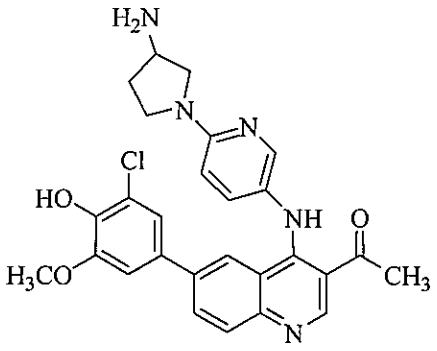
1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl) quinolin-3-yl)propan-1-one




Following general procedure D, tert-butyl 1-(5-(6-bromo-3-propionylquinolin-4-ylamino) pyridin-2-yl)pyrrolidin-3-ylcarbamate (100 mg, 0.18 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (80 mg, 0.28 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (24 mg, 27% over two steps) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.28 (s, 1H), 8.29–8.23 (m, 2H), 8.06–7.98 (m, 2H), 7.78 (dd, $J$ = 9.1, 2.7 Hz, 1H), 7.02 (d, $J$ = 2.2 Hz, 1H), 6.92 (d, $J$ = 9.1 Hz, 1H), 6.70 (d, $J$ = 2.2 Hz, 1H), 4.14–4.06 (m, 1H), 4.04–3.96 (m, 1H), 3.91 (s, 3H), 3.87–3.77 (m, 1H), 3.75–3.66 (m, 2H), 3.23 (q, $J$ = 7.1 Hz, 2H), 2.62–2.51 (m, 1H), 2.32–2.22 (m, 1H), 1.27 (t, $J$ = 7.1 Hz, 3H); ESI MS *m/z* 518 $[C_{28}H_{28}ClN_5O_3 + H]^+$; HPLC 98.5% (AUC), $t_R$ = 9.79 min.

Example 774

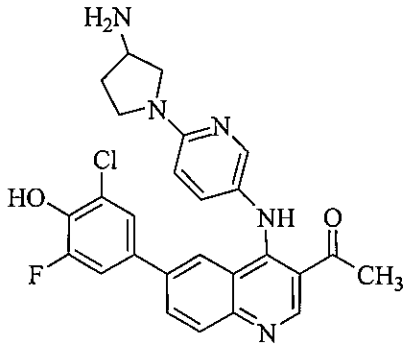
1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl) quinolin-3-yl)ethanone



Following general procedure D, tert-butyl 1-(5-(3-acetyl-6-bromoquinolin-4-ylamino) pyridin-2-yl)pyrrolidin-3-ylcarbamate (80 mg, 0.15 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (65 mg, 0.23 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (11 mg, 15% over two steps) as a yellow-brown: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.28 (s, 1H), 8.31–8.25 (m, 2H), 8.06–7.99 (m, 2H), 7.83 (dd, $J$ = 9.2, 2.7 Hz, 1H), 7.04 (d, $J$ = 2.2 Hz, 1H), 7.98 (d, $J$ = 9.2 Hz, 1H), 6.71 (d, $J$ = 2.2 Hz, 1H), 4.16–4.07 (m, 1H), 4.07–3.96 (m, 2H), 3.91 (s, 3H), 3.88–3.79 (m, 1H), 3.79–3.69 (m, 2H), 2.80 (s, 3H), 2.63–2.53 (m, 1H), 2.34–2.23 (m, 1H); ESI MS *m/z* 504 $[C_{27}H_{26}ClN_5O_3 + H]^+$; HPLC 95.4% (AUC), $t_R$ = 9.37 min.

Example 773

1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl) quinolin-3-yl)ethanone

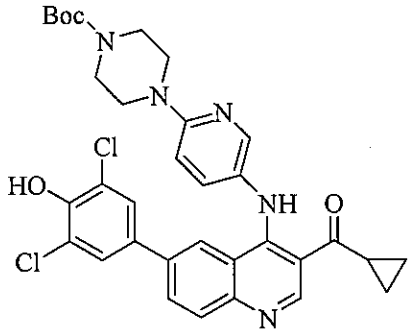


Following general procedure D, tert-butyl 1-(5-(3-acetyl-6-bromoquinolin-4-ylamino) pyridin-2-yl)pyrrolidin-3-ylcarbamate (100 mg, 0.19 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (76 mg, 0.28 mmol) to obtain the protected intermediate which was subjected to general procedure A-2 to afford the desired product (13 mg, 16% over two steps) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.29 (s, 1H), 8.29–8.20 (m, 2H), 8.05–7.99 (m, 2H), 7.84 (dd, $J$ = 9.2, 2.6 Hz, 1H),

7.15 (d, $J$ = 11.6 Hz, 1H), 7.07 (s, 1H), 7.00 (d, $J$ = 9.2 Hz, 1H), 4.17–4.09 (m, 1H), 4.07–4.00 (m, 1H), 3.90–3.81 (m, 1H), 3.80–3.71 (m, 2H), 2.79 (s, 3H), 2.65–2.52 (m, 1H), 2.36–2.25 (m, 1H); ESI MS *m/z* 492 $[C_{26}H_{23}ClFN_5O_2 + H]^+$; HPLC 97.6% (AUC), $t_R$ = 9.73 min.

Example 1186

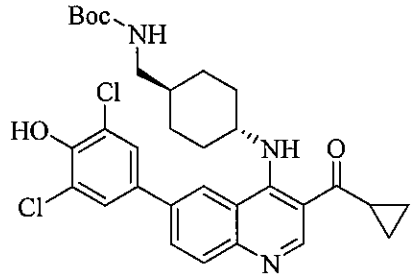
*tert*-Butyl 4-{5-[3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl) quinolin-4-ylamino] pyridin-2-yl}piperazine-1-carboxylate




Following general procedure F, *tert*-butyl 4-{5-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]pyridin-2-yl}piperazine-1-carboxylate (65 mg, 0.118 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (51 mg, 0.177 mmol) to afford the crude product (75 mg) as an orange solid: ESI MS *m/z* 634 $[C_{33}H_{33}Cl_2N_5O_4 + H]^+$.

Example 1187

*tert*-Butyl {trans-4-[3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino]cyclo hexyl}methylcarbamate



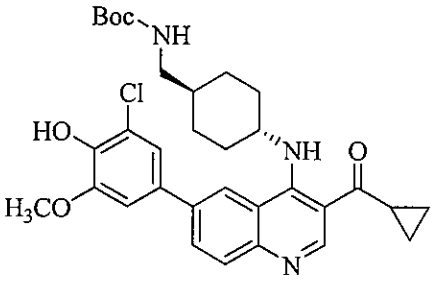

Following general procedure F, *tert*-butyl {trans-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexyl}methylcarbamate (62 mg, 0.123 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (53 mg, 0.185 mmol) to

afford the crude product (58 mg) as a yellow solid: ESI MS *m/z* 584 $[C_{31}H_{35}Cl_2N_3O4 + H]^+$.

Example 1188

*tert*-Butyl

{trans-4-[6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexyl}methylcarbamate

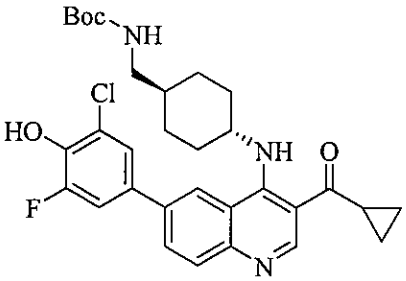



Following general procedure F, *tert*-butyl {trans-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexyl}methylcarbamate (65 mg, 0.123 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (55 mg, 0.185 mmol) to afford the crude product (90 mg) as a yellow-green solid: ESI MS *m/z* 580 $[C_{32}H_{38}ClN_3O_5 + H]^+$.

Example 1189

*tert*-Butyl

{trans-4-[6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexyl}methylcarbamate



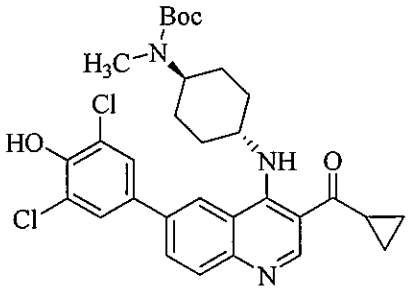

Following general procedure F, *tert*-butyl {trans-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexyl}methylcarbamate (62 mg, 0.123 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (50 mg, 0.185 mmol) to

afford the crude product (69 mg) as a yellow-green solid.

Example 1190

*tert*-Butyl

trans-4-[3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino]cyclohexyl(methyl)carbamate

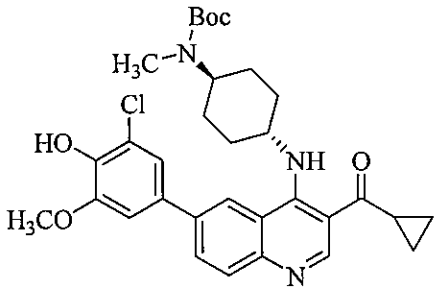



Following general procedure F, *tert*-butyl {trans-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexyl}(methyl)carbamate (61 mg, 0.120 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (52 mg, 0.180 mmol) to afford the crude product (65 mg) as a brown oil: ESI MS *m/z* 584 $[C_{31}H_{35}Cl_2N_3O_4 + H]^+$.

Example 1191

*tert*-Butyl

trans-4-[6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexyl(methyl)carbamate

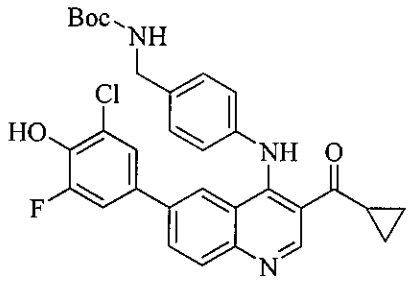



Following general procedure F, *tert*-butyl {trans-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexyl}(methyl)carbamate (68 mg, 0.135 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (58 mg, 0.203 mmol) to afford the crude product (90 mg) as a brown oil: ESI MS *m/z* 580 $[C_{32}H_{38}ClN_3O_5 + H]^+$.

Example 1192

*tert*-Butyl

4-[6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino]benzylcarbamate

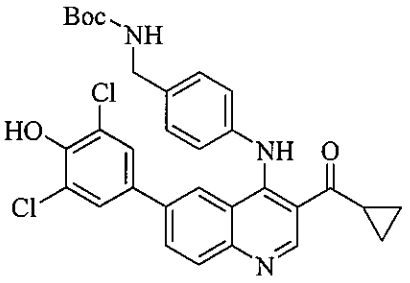



Following general procedure F, *tert-b*utyl 4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]benzylcarbamate (63 mg, 0.127 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (52 mg, 0.191 mmol) to afford the crude product (70 mg) as a yellow solid: ESI MS *m/z* 562 $[C_{31}H_{29}ClFN_3O_4 + H]^+$.

Example 1193

*tert*-Butyl

4-[3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino]benzylcarbamate

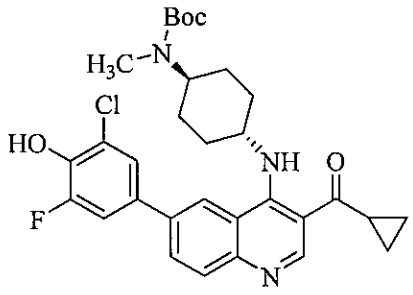



Following general procedure F, *tert-b*utyl 4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]benzylcarbamate (58 mg, 0.117 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (50 mg, 0.176 mmol) to afford the crude product (67 mg) as a yellow solid.

Example 1194

*tert*-Butyl

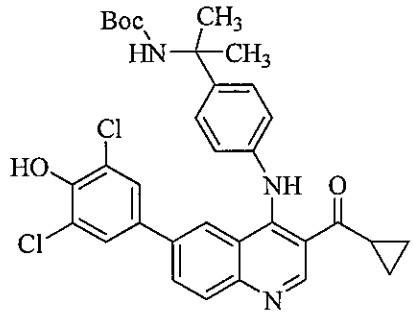
trans-4-[6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexyl(methyl)carbamate



Following general procedure F, *tert*-butyl {trans-4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexyl}(methyl)carbamate (63 mg, 0.125 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (51 mg, 0.188 mmol) to afford the crude product (75 mg) as a yellow-green solid: ESI MS *m/z* 568 $[C_{31}H_{35}ClFN_3O_4 + H]^+$.

Example 1195

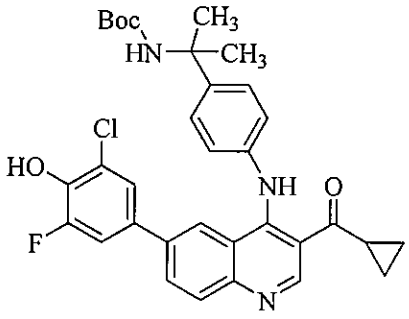
*tert*-Butyl 2-{4-[3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino]phenyl}propan-2-ylcarbamate



Following general procedure F, *tert*-butyl 2-{4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]phenyl}propan-2-ylcarbamate (76 mg, 0.145 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (63 mg, 0.212 mmol) to afford the crude product (75 mg) as a yellow solid: ESI MS *m/z* 606 $[C_{33}H_{33}Cl_2N_3O_4 + H]^+$.

Example 1196

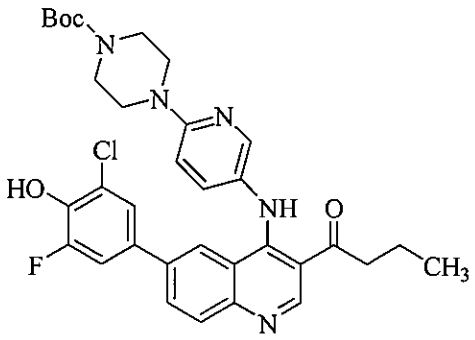
*tert*-Butyl
2-{4-[6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino]phenyl}propan-2-ylcarbamate



Following general procedure F, *tert*-butyl
2-{4-[6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino]phenyl}propan-2-ylcarbamate (74 mg, 0.140 mmol) was reacted with
2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (57 mg, 0.210 mmol) to afford the crude product (68 mg) as a yellow solid: ESI MS *m/z* 590 $[C_{33}H_{33}ClFN_3O_4 + H]^+$.

Example 1197

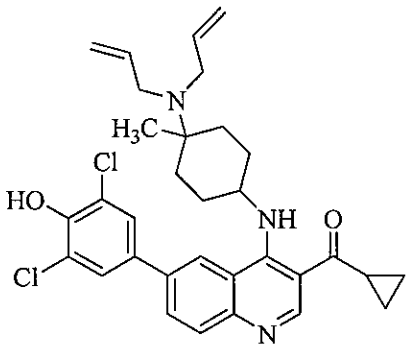
*tert*-Butyl
4-{5-[3-butyryl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-ylamino]pyridin-2-yl}piperazine-1-carboxylate



Following general procedure F, *tert*-butyl
4-[5-(6-bromo-3-butyrylquinolin-4-ylamino)pyridin-2-yl]piperazine-1-carboxylate (80 mg, 0.144 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (59 mg, 0.216 mmol) to afford the crude product (66 mg) as an orange solid: ESI MS *m/z* 620 $[C_{33}H_{35}ClFN_5O_4 + H]^+$.

Example 583

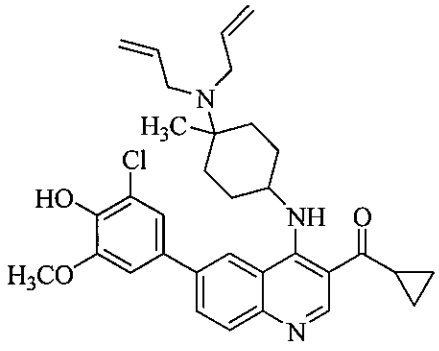
Cyclopropyl{4-[4-(diallylamino)-4-methylcyclohexylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}methanone



Following general procedure F, {6-Bromo-4-[4-(diallylamino)-4-methylcyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone (96 mg, 0.198 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (86 mg, 0.297 mmol) to afford the desired product (23 mg, 27%) as a yellow solid: ESI MS *m/z* 564 $[C_{32}H_{35}Cl_2N_3O_2 + H]^+$.

Example 1198

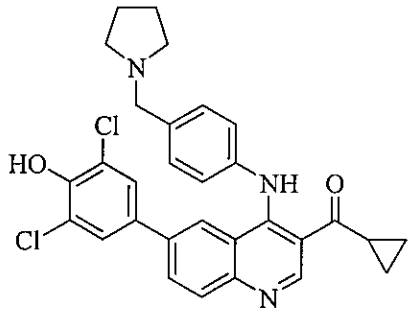
{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(diallylamino)-4-methylcyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure F, {6-Bromo-4-[4-(diallylamino)-4-methylcyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone (120 mg, 0.248 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (105 mg, 0.372 mmol) to afford the crude product (49 mg) as a brown-green solid: ESI MS *m/z* 560 $[C_{33}H_{38}ClN_3O_3 + H]^+$.

Example 366

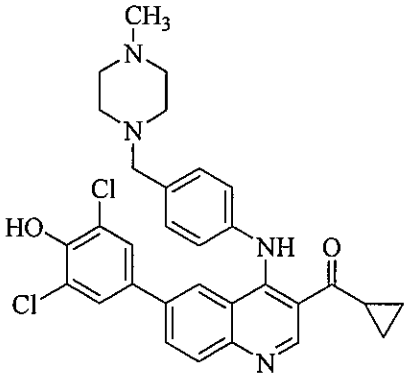
Cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl)phenylamino]quinolin-3-yl}methanone



Following general procedure F, {6-bromo-4-[4-(pyrrolidin-1-ylmethyl)phenylamino]quinolin-3-yl}(cyclopropyl)methanone (49 mg, 0.108 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (46 mg, 0.162 mmol) to afford the desired product (31 mg, 54%) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$ + acetic acid-$d_4$) $\delta$ 9.31 (s, 1H), 8.06–7.99 (m, 2H), 7.91 (s, 1H), 7.55 (d, $J$ = 8.4 Hz, 2H), 7.35–7.26 (m, 4H), 4.41 (s, 2H), 2.93–2.86 (m, 1H), 2.13–2.03 (m, 4H), 1.23–1.06 (m, 4H); ESI MS *m/z* 532 $[C_{30}H_{27}Cl_2N_3O_2 + H]^+$; HPLC 94.9% (AUC), $t_R$ = 11.43 min.

Example 397

Cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[4-((4-methylpiperazin-1-yl)methyl)phenylamino]quinolin-3-yl}methanone

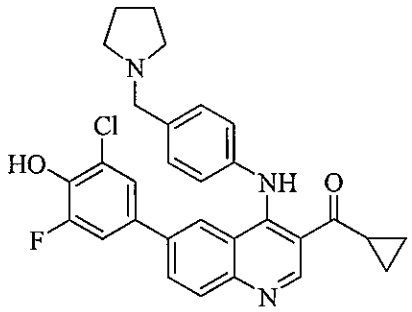


Following general procedure D, {6-bromo-4-[4-((4-methylpiperazin-1-yl)methyl)phenylamino]quinolin-3-yl}(cyclopropyl)metha

none (42 mg, 0.088 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (38 mg, 0.132 mmol) to afford the desired product (41 mg, 83%) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$) $\delta$ 9.27 (s, 1H), 7.93–7.85 (m, 2H), 7.74 (s, 1H), 7.37 (d, $J$ = 8.1 Hz, 2H), 7.19–7.10 (m, 4H), 3.61 (s, 2H), 2.95–2.88 (m, 1H), 2.74–2.68 (m, 4H), 2.57–2.46 (m, 7H), 1.23–1.10 (m, 4H); ESI MS *m/z* 561 $[C_{31}H_{30}Cl_2N_4O_2 + H]^+$; HPLC 94.4% (AUC), $t_R$ = 8.57 min.

Example 396

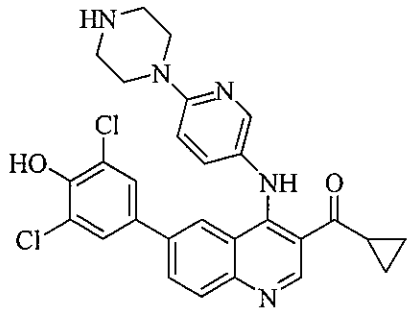
{6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl)phenylamino]quinolin-3-yl }(cyclopropyl)methanone




Following general procedure F,{6-bromo-4-[4-(pyrrolidin-1-ylmethyl)phenyl amino]quinolin-3-yl}(cyclopropyl)methanone (45 mg, 0.100 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (41 mg, 0.150 mmol) to afford the desired product (37 mg, 72%) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$ + acetic acid-$d_4$) $\delta$ 9.28 (s, 1H), 8.04–7.97 (m, 2H), 7.92 (s, 1H), 7.53 (d, $J$ = 8.4, 2H), 7.27 (d, $J$ = 8.4 Hz, 2H), 7.19–7.06 (m, 2H), 4.39 (s, 2H), 2.95–2.84 (m, 1H), 2.14–2.03 (m, 4H), 1.21–1.04 (m, 4H); ESI MS *m/z* 516 $[C_{30}H_{27}ClFN_3O_2 + H]^+$; HPLC 95.7% (AUC), $t_R$ = 8.70 min.

Example 409

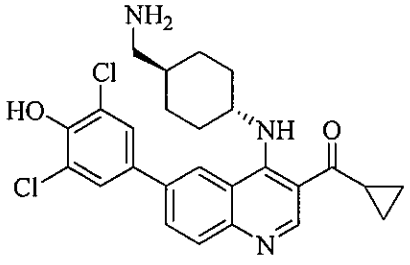
Cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[6-(piperazin-1-yl)pyridin-3-ylamino]quinolin -3-yl}methanone



Following general procedure A-2, *tert*-butyl 4-{5-[3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino]pyridin-2-yl}piperazine-1-carboxylate (0.118 mmol) was reacted with TFA (2 mL) to afford the desired product (26 mg, 41% over two steps) as an orange solid: $^1$H NMR (300 MHz, $CDCl_3$) $\delta$ 11.92 (s, 1H), 9.35 (s, 1H), 8.07–7.94 (m, 2H), 7.75–7.68 (m, 2H), 7.08–7.02 (m, 2H), 6.72–6.65 (m, 1H), 3.71–3.64 (m, 4H), 3.17–3.10 (m, 4H), 2.84–2.77 (m, 1H), 1.34–1.10 (m, 4H); ESI MS *m/z* 534 $[C_{28}H_{25}Cl_2N_5O_2 + H]^+$; HPLC 97.3% (AUC), $t_R$ = 8.65 min.

Example 495

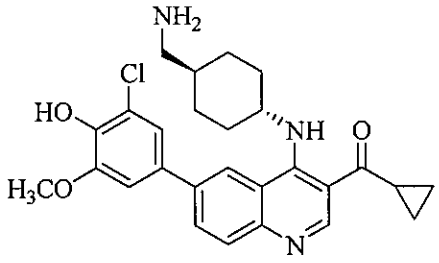
{4-[trans-4-(Aminomethyl)cyclohexylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl)methanone



Following general procedure A-2, *tert*-butyl {trans-4-[3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino]cyclohexyl}methylcarbamate (0.123 mmol) was reacted with TFA (2 mL) to afford the desired product (24 mg, 40% over two steps) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.36 (s, 1H), 8.47 (s, 1H), 8.27 (d, $J$ = 8.4 Hz, 1H), 7.98 (d, $J$ = 8.4 Hz, 1H), 7.74 (s, 2H), 4.54–4.48 (m, 1H), 2.92–2.76 (m, 3H), 2.50–2.37 (m, 2H), 2.08–2.02 (m, 2H), 1.83–1.64 (m, 3H), 1.41–1.15 (m, 6H); ESI MS *m/z* 484 $[C_{26}H_{27}Cl_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.38 min.

Example 493

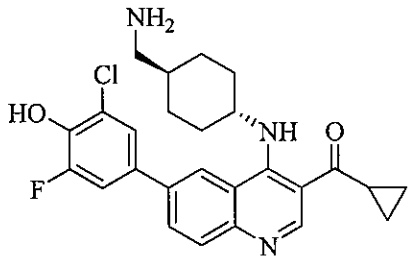
{4-[trans-4-(Aminomethyl)cyclohexylamino]-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl}(cyclopropyl)methanone



Following general procedure A-2, *tert*-butyl {trans-4-[6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexyl}methylcarbamate (0.123 mmol) was reacted with TFA (2 mL) to afford the desired product (28 mg, 47% over two steps) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$ + TFA-*d*) δ 9.35 (s, 1H), 8.49 (s, 1H), 8.30 (d, $J$ = 8.7 Hz, 1H), 7.97 (d, $J$ = 8.7 Hz, 1H), 7.33 (s, 1H), 7.26 (s, 1H), 4.0 (s, 1H), 3.99 (s, 3H), 2.90–2.81 (m, 3H), 2.47–2.41 (m, 2H), 2.10–1.98 (m, 2H), 1.83–1.64 (m, 3H), 1.37–1.17 (m, 6H); ESI MS *m/z* 480 $[C_{27}H_{30}ClN_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.15 min.

Example 501

{4-[trans-4-(Aminomethyl)cyclohexylamino]-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl)methanone

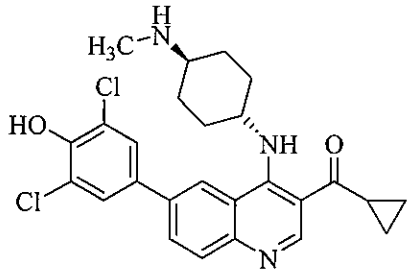


Following general procedure A-2, *tert*-butyl {trans-4-[6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexyl}methylcarbamate (0.123 mmol) was reacted with TFA (2 mL) to afford the desired product (23 mg, 40% over two steps) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$ + TFA-*d*) δ 9.37 (s, 1H), 8.45 (s, 1H), 8.26 (d, $J$ = 8.7 Hz, 1H), 7.98 (d, $J$ = 8.7 Hz, 1H), 7.63–7.47 (m, 2H), 4.51 (s, 1H), 2.92–2.83 (m, 3H), 2.46–2.40 (m, 2H), 2.11–1.98 (m, 2H), 1.83–1.63 (m, 3H), 1.32–1.14 (m, 6H); ESI MS *m/z* 468 $[C_{26}H_{27}ClFN_3O_2 + H]^+$; HPLC 98.6% (AUC), $t_R$ = 11.33

min.

Example 510

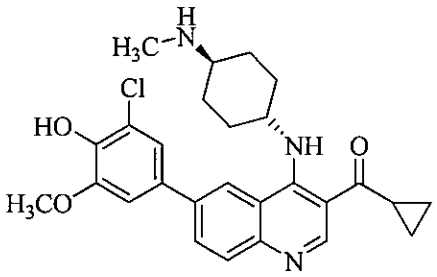
Cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[trans-4-(methylamino)cyclohexylamino]quinolin-3-yl}methanone



Following general procedure A-2, *tert*-butyl trans-4-[3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino]cyclohexyl(methyl)carbamate (0.120 mmol) was reacted with TFA (2 mL) to afford the desired product (30 mg, 51% over two steps) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.35 (s, 1H), 8.48 (s, 1H), 8.28 (d, $J$ = 8.7 Hz, 1H), 8.00 (d, $J$ = 8.7 Hz, 1H), 7.75 (s, 2H), 4.52 (s, 1H), 2.84 (s, 1H), 2.73 (s, 2H), 2.53–2.46 (m, 2H), 2.38–2.28 (m, 2H), 1.88–1.77 (m, 2H), 1.65–1.58 (m, 2H), 1.33–1.20 (m, 4H); ESI MS *m/z* 484 $[C_{26}H_{27}Cl_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 9.66 min.

Example 517

{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[trans-4-(methylamino)cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone

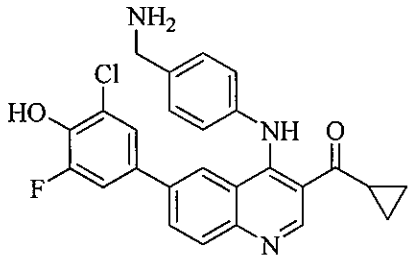


Following general procedure A-2, *tert*-butyl trans-4-[6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexyl(methyl)carbamate (0.135 mmol) was reacted with TFA (2 mL) to afford the desired product (41 mg, 63% over two steps) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$ + TFA-*d*)

δ 9.34 (s, 1H), 8.48 (s, 1H), 8.31 (d, *J* = 8.7 Hz, 1H), 7.99 (d, J = 8.7 Hz, 1H), 7.35 (s, 1H), 7.27 (s, 1H), 4.50 (s, 1H), 4.00 (s, 3H), 2.88–2.81 (m, 1H), 2.74 (s, 3H), 2.54–2.47 (m, 2H), 2.38–2.27 (m, 2H), 1.88–1.77 (m, 2H), 1.62–1.56 (m, 2H), 1.34–1.16 (m, 4H); ESI MS *m/z* 480 $[C_{27}H_{30}ClN_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 9.45 min.

Example 504

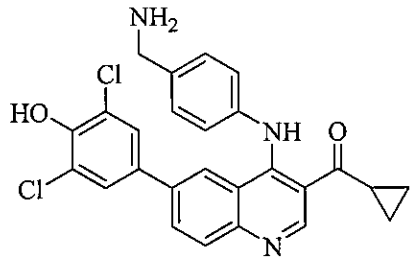
{4-[4-(Aminomethyl)phenylamino]-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl)methanone




Following general procedure A-2, *tert*-butyl 4-[6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino]benzylcarbamate (0.127 mmol) was reacted with TFA (2 mL) to afford the desired product (31 mg, 53% over two steps) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$ + TFA-*d*) δ 9.44 (s, 1H), 8.24 (dd, *J* = 8.9, 1.9 Hz, 1H), 8.08–7.96 (m, 2H), 7.69 (d, *J* = 8.4 Hz, 2H), 7.55 (d, *J* = 8.4 Hz, 2H), 7.17–7.06 (m, 1H), 7.06–6.98 (m, 1H), 4.27 (s, 2H), 2.93–2.80 (m, 1H), 1.25–1.11 (m, 4H); ESI MS *m/z* 462 $[C_{26}H_{21}ClFN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 12.22 min.

Example 507

{4-[4-(Aminomethyl)phenylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl)methanone

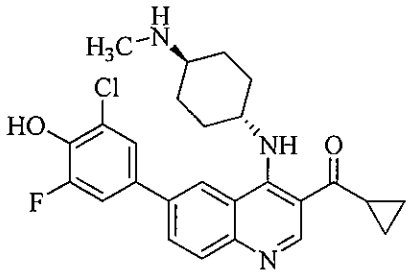



Following general procedure A-2, *tert*-butyl 4-[3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino]benzylcarba

mate (0.117 mmol) was reacted with TFA (2 mL) to afford the desired product (26 mg, 46% over two steps) a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.44 (s, 1H), 8.25 (d, $J$ = 8.7 Hz, 1H), 8.09–7.95 (m, 2H), 7.70 (d, $J$ = 8.4 Hz, 2H), 7.55 (d, $J$ = 8.4 Hz, 2H), 7.24 (s, 2H), 4.28 (s, 2H), 2.88–2.83 (m, 1H), 1.26–1.13 (m, 4H); ESI MS *m/z* 478 $[C_{26}H_{21}Cl_2N_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.99 min.

Example 523

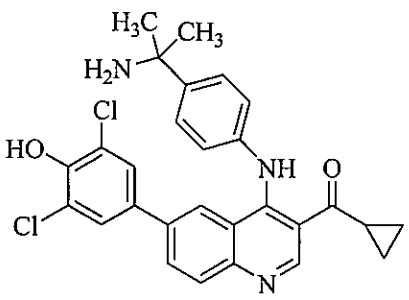
{6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[trans-4-(methylamino)cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure A-2, *tert*-butyl trans-4-[6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino]cyclohexyl(methyl)carbamate (0.125 mmol) was reacted with TFA (2 mL) to afford the desired product (32 mg, 55% over two steps) as a yellow solid: $^1$H NMR (300 MHz, DMSO-$d_6$) $\delta$ 9.80 (s, 1H), 9.8 (s, 1H), 8.25 (s, 1H), 7.99 (d, $J$ = 8.7 Hz, 1H), 7.83 (d, $J$ = 8.7 Hz, 1H), 7.49–7.34 (m, 2H), 4.00–3.94 (s, 1H), 3.00–2.85 (m, 1H), 2.85–2.74 (m, 1H), 2.44 (s, 3H), 2.25–2.04 (m, 4H), 1.60–1.30 (m, 4H), 1.15--0.98 (m, 4H); ESI MS *m/z* 468 $[C_{26}H_{27}ClFN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.03 min.

Example 602

{4-[4-(2-Aminopropan-2-yl)phenylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl)methanone



Following general procedure A-2, tert-butyl

2-{4-[3-(cyclopropanecarbonyl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-ylamino]phenyl}propan-2-ylcarbamate (0.145 mmol) was TFA (2 mL) to afford the desired product (21 mg, 28% over two steps) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.33 (s, 1H), 8.26 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.19 (s, 1H), 8.05 (d, $J$ = 8.8 Hz, 1H), 7.67 (d, $J$ = 8.6 Hz, 2H), 7.53 (d, $J$ = 8.6 Hz, 2H), 7.43 (s, 2H), 2.82–2.73 (m, 1H), 1.78 (s, 6H), 1.18–1.10 (m, 4H); ESI MS *m/z* 506 $[C_{28}H_{25}Cl_2N_3O_2 + H]^+$; HPLC 98.7% (AUC), $t_R$ = 11.00 min.

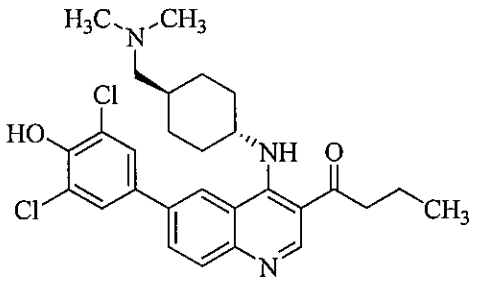
Example 604

{4-[4-(2-Aminopropan-2-yl)phenylamino]-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl)methanone

Following general procedure A-2, *tert*-butyl 2-{4-[6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino]phenyl}propan-2-ylcarbamate (0.140 mmol) was reacted with TFA (2 mL) to afford the desired product (22 mg, 32% over two steps) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-I) $\delta$ 9.38 (s, 1H), 8.26 (dd, $J$ = 8.9, 1.9 Hz, 1H), 8.12 (s, 1H), 8.05 (d, $J$ = 8.8 Hz, 1H), 7.69 (d, $J$ = 8.0, 2H), 7.54 (d, $J$ = 8.0 Hz, 2H), 7.30 (t, $J$ = 1.9 Hz, 1H), 7.10–7.03 (m, 1H), 2.84–2.76 (m, 1H), 1.79 (s, 6H), 1.19–1.12 (m, 4H).; ESI MS *m/z* 490 $[C_{28}H_{25}ClFN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.80 min.

Example 605

1-{6-(3,5-Dichloro-4-hydroxyphenyl)-4-[trans-4-((dimethylamino)methyl)cyclohexylamino]quinolin-3-yl}butan-1-one

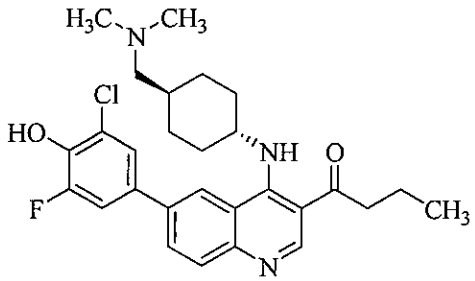



Following general procedure A-1, 1-{6-bromo-4-[trans-4-((dimethylamino)methyl)cyclohexylamino]quinolin-3-yl}butan-1-one (48 mg, 0.110 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (47 mg, 0.165 mmol) to afford the desired product (20 mg, 35%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ +

TFA-*d*) δ 9.14 (s, 1H), 8.47 (s, 1H), 8.27 (dd, *J* = 8.7, 1.8 Hz, 1H), 8.98 (d, *J* = 8.7 Hz, 1H), 7.72 (s, 2H), 4.53 (s, 1H), 3.16–3.06 (m, 4H), 2.94 (s, 6H), 2.50–2.43 (m, 2H), 2.08–2.02 (m, 3H), 1.88–1.74 (m, 4H), 1.39–1.32 (m, 1H), 1.06 (t, *J* = 7.4 Hz, 3H); ESI MS *m/z* 514 $[C_{28}H_{33}Cl_2N_3O_2 + H]^+$; HPLC 98.7% (AUC), $t_R$ = 11.27 min.

Example 597

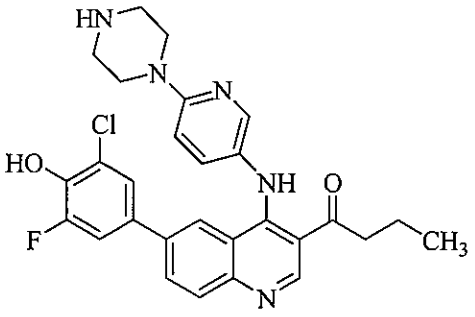
1-{6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[trans-4-((dimethylamino)methyl)cyclohexylamino ]quinolin-3-yl}butan-1-one



Following general procedure A-1, 1-{6-bromo-4-[trans-4-((dimethylamino)methyl)cyclohexylamino]quinolin-3-yl}butan-1-one (48 mg, 0.110 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (45 mg, 0.165 mmol) to afford the desired product (36 mg, 67%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) δ 9.14 (s, 1H), 8.47 (s, 1H), 8.26 (dd, *J* = 8.7, 1.8 Hz, 1H), 7.98 (d, *J* = 8.7 Hz, 1H), 7.58 (s, 1H), 7.50 (d, *J* = 11.3 Hz, 1H), 4.52 (s, 1H), 3.16–3.05 (m, 4H), 2.95 (s, 6H), 2.49–2.43 (m, 2H), 2.08–2.01 (m, 2H), 1.85–1.74 (m, 4H), 1.41–1.32 (m, 1H), 1.09–1.02 (t, *J* = 7.4 Hz, 3H); ESI MS *m/z* 498 $[C_{28}H_{33}ClFN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 11.08 min.

Example 623

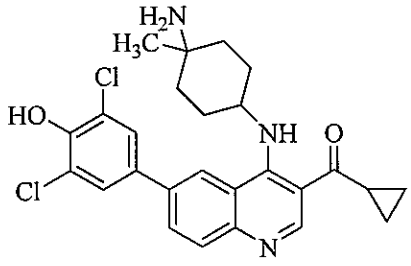
1-{6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[6-(piperazin-1-yl)pyridin-3-ylamino]quinolin-3-yl }butan-1-one



Following general procedure A-2, *tert*-butyl 4-{5-[3-butyryl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-ylamino]pyridin-2-yl}piperazine-1-carboxylate (0.144 mmol) was reacted with TFA (2 mL) to afford the desired product (39 mg, 51% over two steps) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) δ 9.29 (s, 1H), 8.29 (d, *J* = 2.7 Hz, 1H), 8.20 (dd, *J* = 8.8, 2.0 Hz, 1H), 8.03–7.95 (m, 2H), 7.74 (dd, *J* = 8.8, 2.7 Hz, 1H), 7.16 (d, *J* = 9.0 Hz, 1H), 7.11–7.02 (m, 2H), 3.94 (t, *J* = 5.3 Hz, 4H), 3.37 (t, *J* = 5.3 Hz, 4H), 3.19 (t, *J* = 7.2 Hz, 2H), 1.87–1.76 (m, 2H), 1.11–1.04 (t, I = 7.2 Hz, 3H); ESI MS *m/z* 520 $[C_{28}H_{27}ClFN_5O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.99 min.

Example 638

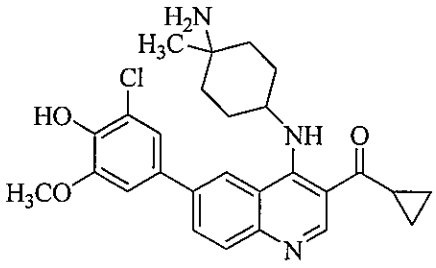
[4-(4-Amino-4-methylcyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl](cyclopropyl)methanone




To a solution of cyclopropyl{4-[4-(diallylamino)-4-methylcyclohexylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}methanone (23 mg, 0.041 mmol) in dioxane (3 mL) was added $Pd(PPh_3)_4$ (5 mg, 0.004 mmol) and *N*,*N*-dimethylbartituric acid (32 mg, 0.205 mmol). The resultant mixture purged with $N_2$ and heated to 80 °C for 16 h. The solution was allowed to cool to rt, diluted with ethyl acetate, filtered and concentrated. The resultant residue was purified by preparative HPLC (C18 silica, 10–90% acetonitrile/water with 0.05% TFA). The purified product was concentrated, diluted with a saturated $NaHCO_3$ solution, extracted with a mixture of $CHCl_3$/isopropanol (3:1), and dried with $Na_2SO_4$ to obtain the desired product as the free base (5 mg, 25%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) δ 9.39 (s, 1H), 8.45 (s, 1H), 8.28 (dd, *J* = 8.7, 1.9 Hz, 1H), 8.01 (d, *J* = 8.7 Hz, 1H), 7.73 (s, 2H), 4.76–4.72 (m, 1H), 2.89–2.85 (m, 1H), 2.33–2.25 (m, 2H), 2.09–1.97 (m, 4H), 1.96–1.89 (m, 2H), 1.45 (s, 3H), 1.41–1.18 (m, 4H); ESI MS *m/z* 484 $[C_{26}H_{27}Cl_2N_3O_2 + H]^+$; HPLC 98.6% (AUC), $t_R$ = 11.05 min.

Example 639

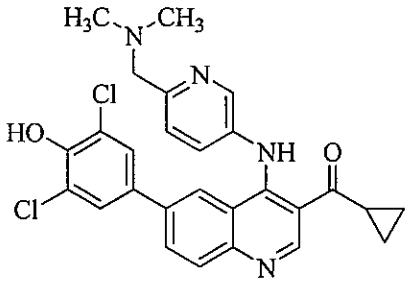
[4-(4-Amino-4-methylcyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl ](cyclopropyl)methanone



To a solution of {6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(diallylamino)-4-methylcyclohexylamino]quino lin-3-yl}(cyclopropyl)methanone (49 mg, 0.088 mmol) in dioxane (3 mL) was added $Pd(PPh_3)_4$ (10 mg, 0.008 mmol) and *N,N*-dimethylbartituric acid (68 mg, 0.438 mmol). The resultant mixture purged with $N_2$ and heated to 80 °C for 16 h. The solution was allowed to cool to rt, diluted with ethyl acetate, filtered and concentrated. The resultant residue was purified by preparative HPLC (C18 silica, 10–90% acetonitrile/water with 0.05% TFA). The purified product was concentrated, diluted with a saturated $NaHCO_3$ solution, extracted with a mixture of $CHCl_3$/isopropanol (3:1), and dried with $Na_2SO_4$ to obtain the desired product as the free base (5 mg, 4%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.14 (s, 1H), 8.34 (s, 1H), 8.00 (dd, $J$ = 8.7, 2.0 Hz, 1H), 7.89 (d, $J$ = 8.7 Hz, 1H), 7.26 (d, $J$ = 2.2 Hz, 1H), 7.20 (d, $J$ = 2.2 Hz, 1H), 4.29–4.21 (m, 1H), 3.97 (s, 3H), 2.89–2.80 (m, 1H), 2.14–2.07 (m, 2H), 1.92–1.71 (m, 4H), 1.70–1.61 (m, 2H), 1.28 (s, 3H), 1.25–1.06 (m, 4H); ESI MS *m/z* 480 $[C_{27}H_{30}ClN_3O_3 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.46 min.

Example 657

Cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[6-((dimethylamino)methyl)pyridin-3-ylamino ]quinolin-3-yl}methanone

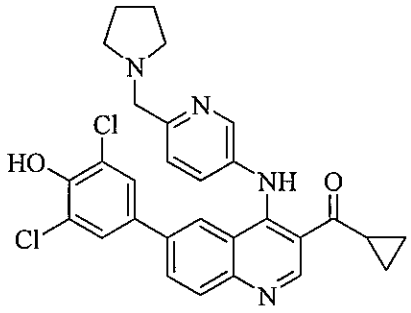


Following general procedure F, {6-bromo-4-[6-((dimethylamino)methyl)pyridin-3-ylamino]quinolin-3-yl}(cyclopropyl)methano

ne (37 mg, 0.087 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (38 mg, 0.131 mmol) to afford the desired product (25 mg, 57%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.37 (s, 1H), 8.75 (s, 1H), 8.32 (dd, $J$ = 8.8, 2.1 Hz, 1H), 8.22 (d, $J$ = 2.1 Hz, 1H), 8.10 (d, $J$ = 8.8 Hz, 1H), 7.96 (dd, $J$ = 8.4, 2.6 Hz, 1H), 7.65 (d, $J$ = 8.4 Hz, 1H), 7.47 (s, 2H), 4.58 (s, 2H), 2.95 (s, 6H), 2.83–2.74 (m, 1H), 1.19–1.07 (m, 4H); ESI MS *m/z* 507 $[C_{27}H_{24}Cl_2N_4O_2 + H]^+$; HPLC 98.9% (AUC), $t_R$ = 10.66 min.

Example 658

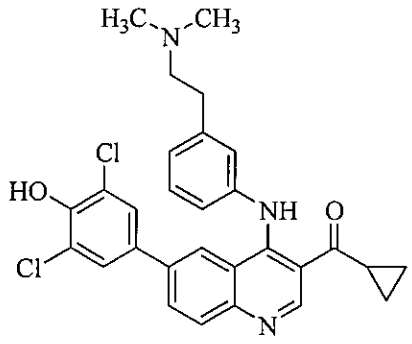
Cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[6-(pyrrolidin-1-ylmethyl)pyridin-3-ylamino]quinolin-3-yl}methanone




Following general procedure F, {6-Bromo-4-[6-(pyrrolidin-1-ylmethyl)pyridin-3-ylamino]quinolin-3-yl}(cyclopropyl)methanone (45 mg, 0.100 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (43 mg, 0.150 mmol) to afford the desired product (34 mg, 64%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.40 (s, 1H), 8.72 (d, $J$ = 2.5 Hz, 1H), 8.30 (dd, $J$ = 8.8, 2.0 Hz, 1H), 8.16–8.06 (m, 2H), 7.96 (dd, $J$ = 8.3, 2.5 Hz, 1H), 7.65 (d, $J$ = 8.3 Hz, 1H), 7.46 (s, 2H), 4.65 (s, 2H), 3.63–3.59 (m, 2H), 3.21–3.12 (m, 2H), 2.85–2.76 (m, 1H), 2.20–2.16 (m, 2H), 2.09–2.01 (m, 2H), 1.20–1.10 (m, 4H); ESI MS *m/z* 533 $[C_{29}H_{26}Cl_2N_4O_2 + H]^+$; HPLC 98.8% (AUC), $t_R$ = 10.76 min.

Example 698

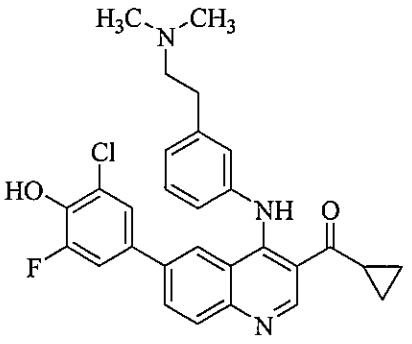
Cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[3-(2-(dimethylamino)ethyl)phenylamino]quinolin-3-yl}methanone



Following general procedure F, {6-Bromo-4-[3-(2-(dimethylamino)ethyl)phenylamino]quinolin-3-yl}(cyclopropyl)methanone (58 mg, 0.132 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (57 mg, 0.198 mmol) to afford the desired product (49 mg, 71%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.46 (s, 1H), 8.22 (dd, $J$ = 8.7, 2.0 Hz, 1H), 8.02 (d, $J$ = 8.7 Hz, 1H), 7.89 (s, 1H), 7.67–7.59 (m, 1H), 7.56 (d, $J$ = 7.7 Hz, 1H), 7.8 (s, 1H), 7.39 (d, $J$ = 7.7 Hz, 1H), 7.20 (s, 2H), 3.40–3.34 (m, 2H), 3.19–3.12 (m, 2H), 2.98–2.85 (s, 8H), 1.27–1.16 (m, 4H); ESI MS *m/z* 520 $[C_{29}H_{27}Cl_2N_3O_2 + H]^+$; HPLC 95.9% (AUC), $t_R$ = 11.40 min.

Example 693

{6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[3-(2-(dimethylamino)ethyl)phenylamino]quinolin-3-yl}(cyclopropyl)methanone

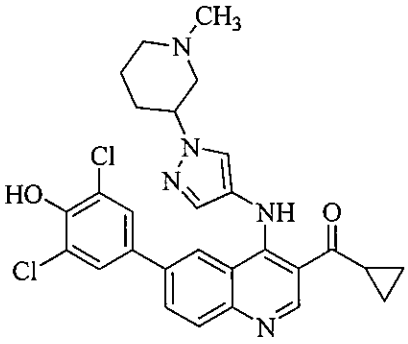


Following general procedure F, {6-Bromo-4-[3-(2-(dimethylamino)ethyl)phenylamino]quinolin-3-yl}(cyclopropyl)methanone (54 mg, 0.123 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (50 mg, 0.185 mmol) to afford the desired product (57 mg, 92%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.44 (s, 1H), 8.21 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.02 (d, $J$ = 8.8 Hz, 1H), 7.92 (s, 1H), 7.66–7.57 (m, 1H), 7.54 (d, $J$ = 7.7 Hz, 1H), 7.50 (s, 1H), 7.39 (dd, $J$ = 7.8, 2.2 Hz, 1H), 7.12 (d,

$J$ = 11.5 Hz, 1H), 6.96 (s, 1H), 3.40–3.32 (m, 2H), 3.18–3.11 (m, 2H), 2.97–2.86 (m, 8H), 1.26–1.15 (m, 4H); ESI MS $m/z$ 504 $[C_{29}H_{27}ClFN_3O_2 + H]^+$; HPLC 96.4% (AUC), $t_R$ = 11.15 min.

Example 703

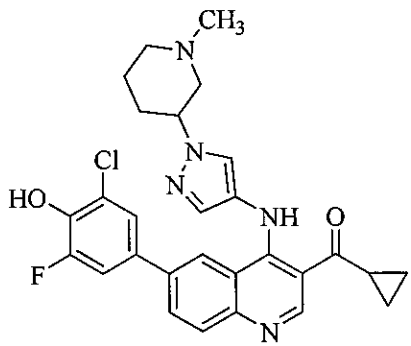
Cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[1-(1-methylpiperidin-3-yl)-1*H*-pyrazol-4-ylamino]quinolin-3-yl}methanone



Following general procedure F, {6-Bromo-4-[1-(1-methylpiperidin-3-yl)-1H-pyrazol-4-ylamino]quinolin-3-yl}(cyclopropyl)methanone (53 mg, 0.110 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (47 mg, 0.165 mmol) to afford the desired product (50 mg, 84%) as a green-yellow solid: $^1$H NMR (500 MHz, DMSO-$d_6$) $\delta$ 10.83 (s, 1H), 9.06 (s, 1H), 8.23 (d, $J$ = 2.1 Hz, 1H), 8.04 (dd, $J$ = 8.7, 2.1 Hz, 1H), 7.93–7.85 (m, 2H), 7.50 (s, 2H), 7.43 (s, 1H), 4.22–4.12 (m, 1H), 2.94 (d, $J$ = 11.4 Hz, 2H), 2.88–2.79 (m, 1H), 2.39 (s, 3H), 2.27–2.20 (m, 2H), 2.02–1.89 (m, 4H), 1.02–0.91 (m, 4H); ESI MS $m/z$ 536 $[C_{28}H_{27}Cl_2N_5O_2 + H]^+$; HPLC 98.6% (AUC), $t_R$ = 10.40 min.

Example 699

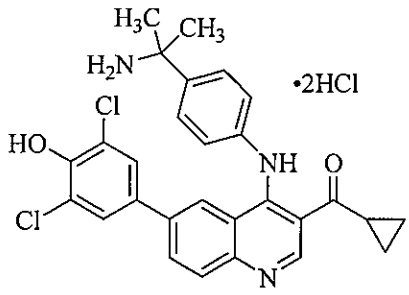
{6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[1-(1-methylpiperidin-3-yl)-1*H*-pyrazol-4-ylamino]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure F, {6-Bromo-4-[1-(1-methylpiperidin-3-yl)-1H-pyrazol-4-ylamino]quinolin-3-yl}(cyclopropyl)methanone (58 mg, 0.120 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (49 mg, 0.180 mmol) to afford the desired product (46 mg, 74%) as a yellow-green solid: $^1$H NMR (500 MHz, DMSO-$d_6$) $\delta$ 10.86 (s, 1H), 9.08 (s, 1H), 8.24 (d, $J$ = 2.1 Hz, 1H), 8.04 (dd, $J$ = 8.8, 2.1 Hz, 1H), 7.93–7.83 (m, 2H), 7.43 (s, 1H), 7.39–7.30 (m, 2H), 4.19–4.12 (m, 1H), 2.95–2.81 (m, 3H), 2.29–2.15 (s, 5H), 2.01–1.89 (m, 4H), 1.02–0.92 (m, 4H).; ESI MS *m/z* 520 [$C_{28}H_{27}ClFN_5O_2$ + H]$^+$; HPLC 98.6% (AUC), $t_R$ = 10.16 min.

Example 601

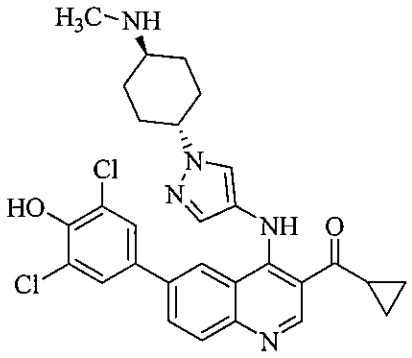
{4-[4-(2-Aminopropan-2-yl)phenylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl)methanone hydrochloride




To a suspension of {4-[4-(2-aminopropan-2-yl)phenylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl)methanone (14 mg, 0.028 mmol) in methanol (5 mL) was added HCl in ether (3 drops, 2 M). The resultant solution was concentrated to obtain the desired product as the hydrochloride salt (13 mg) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.31 (s, 1H), 8.24–8.22 (m, 1H), 8.18 (s, 1H), 8.04 (d, $J$ = 8.8 Hz, 1H), 7.65 (d, $J$ = 9.0 Hz, 2H), 7.49 (d, $J$ = 9.0 Hz, 2H), 7.42 (s, 2H), 2.84–2.75 (m, 1H), 1.78 (s, 6H), 1.18–1.09 (m, 4H); ESI MS *m/z* 506 [$C_{28}H_{25}Cl_2N_3O_2$ + H]$^+$; HPLC 98.5% (AUC), $t_R$ = 10.80 min.

Example 705

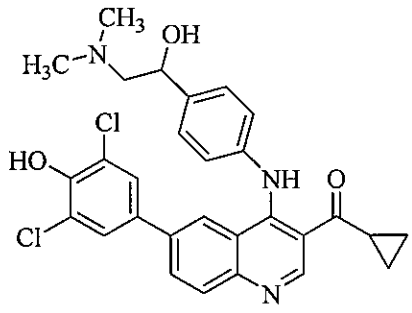
Cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[1-(trans-4-(methylamino)cyclohexyl)-1*H*-pyrazol-4-ylamino]quinolin-3-yl}methanone



Following general procedure F, {6-bromo-4-[1-(trans-4-(methylamino)cyclohexyl)-1H-pyrazol-4-ylamino]quinolin-3-yl}(cyclopropyl)methanone (60 mg, 0.128 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (55 mg, 0.192 mmol) to afford the desired product (17 mg, 24%) as a light yellow solid: $^1$H NMR (500 MHz, DMSO-$d_6$ + TFA-$d$) $\delta$ 8.95–8.65 (br s, 1H), 8.63–8.51 (m, 1H), 8.40 (d, $J$ = 8.8 Hz, 1H), 8.06 (d, $J$ = 8.8 Hz, 1H), 8.02–7.97 (m, 1H), 7.54 (s, 1H), 4.26 (m, 1H), 3.11–3.02 (m, 1H), 2.60 (s, 3H), 2.20–2.08 (m, 4H), 1.88–1.76 (m, 2H), 1.58–1.46 (m, 2H), 1.00–0.76 (m, 4H); ESI MS $m/z$ 550 $[C_{29}H_{29}Cl_2N_5O_2 + H]^+$; HPLC 98.4% (AUC), $t_R$ = 11.56 min.

Example 709

Cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[4-(2-(dimethylamino)-1-hydroxyethyl)phenylamino]quinolin-3-yl}methanone

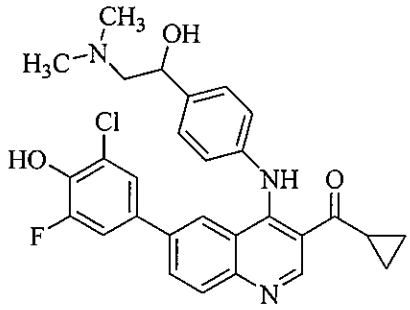


Following general procedure F, {6-bromo-4-[4-(2-(dimethylamino)-1-hydroxyethyl)phenylamino]quinolin-3-yl}(cyclopropyl)methanone (50 mg, 0.110 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (48 mg, 0.165 mmol) to afford the desired product (41 mg, 69%) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$ + TFA-$d$) $\delta$ 9.38 (s, 1H), 8.22 (dd, $J$ = 8.8, 2.0 Hz, 1H), 8.07–7.98 (m, 2H), 7.65 (d, $J$ = 8.4 Hz,

2H), 7.48 (d, $J$ = 8.4 Hz, 2H), 7.38 (s, 2H), 5.18 (dd, $J$ = 9.8, 4.3 Hz, 1H), 3.25–3.14 (m, 2H), 3.02 (s, 3H), 2.95 (s, 3H), 2.86–2.79 (m, 1H), 1.22–1.11 (m, 4H); ESI MS *m/z* 536 $[C_{29}H_{27}Cl_2N_3O_3 + H]^+$; HPLC 95.1% (AUC), $t_R$ = 11.42 min.

Example 707

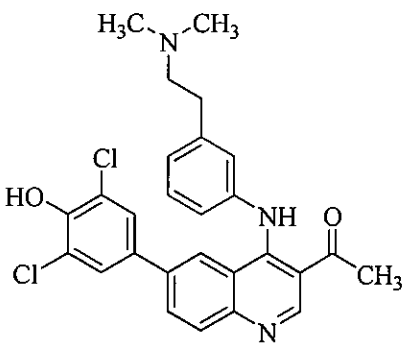
{6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[4-(2-(dimethylamino)-1-hydroxyethyl)phenylamino ]quinolin-3-yl}(cyclopropyl)methanone



Following general procedure A-1, {6-bromo-4-[4-(2-(dimethylamino)-1-hydroxyethyl)phenylamino]quinolin-3-yl}(cyclopropyl)methanone (50 mg, 0.110 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (30 mg, 0.165 mmol) to afford the desired product (23 mg, 40%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) 9.41 (s, 1H), 8.22 (dd, $J$ = 8.8, 2.0 Hz, 1H), 8.02 (d, J = 8.8 Hz, 2H), 7.66 (d, $J$ = 8.0 Hz, 2H), 7.49 (d, $J$ = 8.0 Hz, 2H), 7.23 (s, 1H), 7.09–7.02 (m, 1H), 5.20 (dd, $J$ = 10.6, 3.8 Hz, 1H), 3.31–3.20 (m, 2H), 3.03 (s, 3H), 2.97 (s, 3H), 2.89–2.80 (m, 1H), 1.25–1.14 (m, 4H); ESI MS *m/z* 520 $[C_{29}H_{27}ClFN_3O_3 + H]^+$; HPLC 94.8% (AUC), $t_R$ = 11.31 min.

Example 729

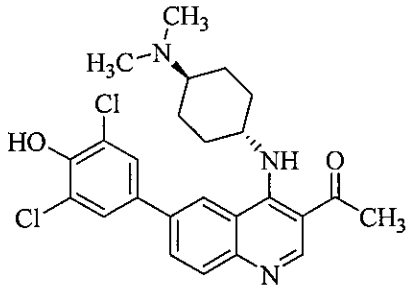
1-{6-(3,5-Dichloro-4-hydroxyphenyl)-4-[3-(2-(dimethylamino)ethyl)phenylamino]quinolin-3-yl }ethanone



Following general procedure F, 1-{6-bromo-4-[3-(2-(dimethylamino)ethyl)phenylamino]quinolin-3-yl}ethanone (50 mg, 0.120 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (52 mg, 0.180 mmol) to afford the desired product (46 mg, 77%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.31 (s, 1H), 8.20 (dd, $J$ = 8.8, 2.0 Hz, 1H), 8.00 (d, $J$ = 8.8 Hz, 1H), 7.72 (s, 1H), 7.70–7.56 (m, 2H), 7.51 (s, 1H), 7.40 (d, $J$ = 7.8 Hz, 1H), 7.10 (s, 2H), 3.40–3.30 (m, 2H), 3.21–3.11 (m, 2H), 2.94 (s, 6H), 2.82 (s, 3H); ESI MS *m/z* 494 $[C_{27}H_{25}Cl_2N_3O_2 + H]^+$; HPLC 96.8% (AUC), $t_R$ = 8.94 min.

Example 765

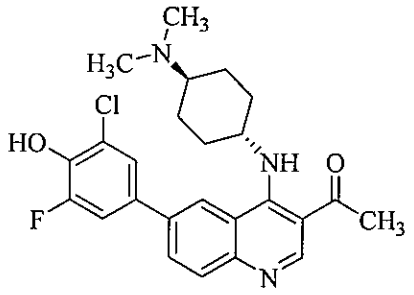
1-{6-(3,5-Dichloro-4-hydroxyphenyl)-4-[trans-4-(dimethylamino)cyclohexylamino]quinolin-3-yl}ethanone



Following general procedure F, 1-{6-bromo-4-[trans-4-(dimethylamino)cyclohexylamino]quinolin-3-yl}ethanone (30 mg, 0.0.77 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (44 mg, 0.154 mmol) to afford the desired product (29 mg, 80%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.13 (s, 1H), 8.48 (s, 1H), 8.30 (dd, $J$ = 8.7, 1.8 Hz, 1H), 8.00 (d, $J$ = 8.7 Hz, 1H), 7.77 (s, 2H), 4.66–4.62 (m, 1H), 3.50–3.46 (m, 1H), 2.91 (s, 6H), 2.75 (s, 3H), 2.59–2.55 (m, 2H), 2.34–2.30 (m, 2H), 1.92–1.84 (m, 4H); ESI MS *m/z* 472 $[C_{25}H_{27}Cl_2N_3O_2 + H]^+$; HPLC 98.0% (AUC), $t_R$ = 9.78 min.

Example 763

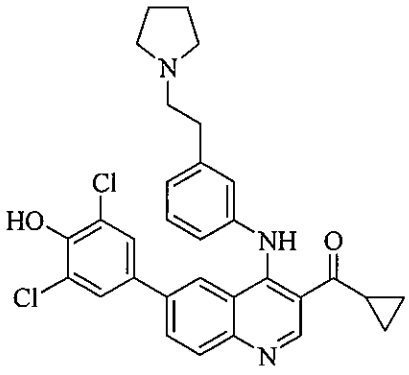
1-{6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[trans-4-(dimethylamino)cyclohexylamino]quinolin-3-yl}ethanone



Following general procedure F, 1-{6-bromo-4-[trans-4-(dimethylamino)cyclohexylamino]quinolin-3-yl}ethanone (30 mg, 0.077 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (42 mg, 0.154 mmol) to afford the desired product (24 mg, 68%) as a yellow-orange solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.13 (s, 1H), 8.48 (s, 1H), 8.29 (dd, $J$ = 8.8, 1.8 Hz, 1H), 8.00 (d, $J$ = 8.8 Hz, 1H), 7.63 (s, 1H), 7.56 (dd, J = 11.4, 2.3 Hz, 1H), 4.65–4.61 (m, 1H), 3.50–3.46 (m, 1H), 2.91 (s, 6H), 2.75 (s, 3H), 2.58–2.54 (m, 2H), 2.34–2.28 (m, 2H), 1.91–1.81 (m, 4H); ESI MS *m/z* 456 $[C_{25}H_{27}ClFN_3O_2 + H]^+$; HPLC 97.1% (AUC), $t_R$ = 9.52 min.

Example 797

Cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[3-(2-(pyrrolidin-1-yl)ethyl)phenylamino]quinolin-3-yl}methanone

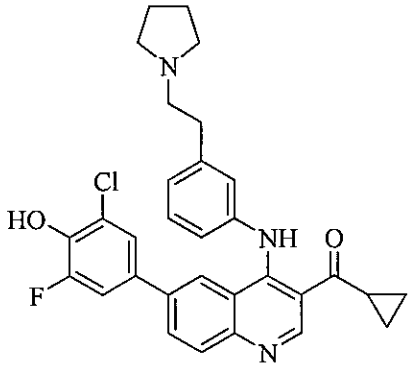


Following general procedure A-1, {6-bromo-4-[3-(2-(pyrrolidin-1-yl)ethyl)phenylamino]quinolin-3-yl}(cyclopropyl)methanone (56 mg, 0.120 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (52 mg, 0.180 mmol) to afford the desired product (10 mg, 15%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.46 (s, 1H), 8.22 (dd, $J$ = 8.8, 1.9 Hz, 2H), 8.02 (d, $J$ = 8.8 Hz, 2H), 7.90–7.85 (m, 1H), 7.66–7.59 (m, 1H), 7.58–7.53 (m, 1H), 7.47 (s, 1H), 7.42–7.36 (m, 1H), 7.19 (s, 2H), 3.72–3.63 (m, 2H), 3.45–3.37 (m, 2H), 3.18–3.04 (m, 4H), 2.92–2.84 (m, 1H), 2.20–2.08 (m,

2H), 2.08–1.97 (m, 2H), 1.31–1.13 (m, 4H); ESI MS *m/z* 546 $[C_{31}H_{29}Cl_2N_3O_2 + H]^+$; HPLC 97.3% (AUC), $t_R$ = 11.04 min.

Example 799

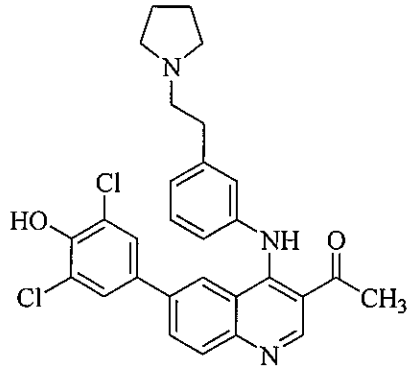
{6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[3-(2-(pyrrolidin-1-yl)ethyl)phenylamino]quinolin-3-yl}(cyclopropyl)methanone




Following general procedure A-1, {6-bromo-4-[3-(2-(pyrrolidin-1-yl)ethyl)phenylamino]quinolin-3-yl}(cyclopropyl)methanone (56 mg, 0.120 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (49 mg, 0.180 mmol) to afford the desired product (20 mg, 32%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.45 (s, 1H), 8.22 (dd, *J* = 8.8, 1.9 Hz, 1H), 8.02 (d, *J* = 8.8 Hz, 1H), 7.91 (s, 1H), 7.65–7.58 (m, 1H), 7.54 (d, *J* = 7.8, 1H), 7.46 (s, 1H), 7.38 (d, *J* = 7.8 Hz, 1H), 7.12 (dd, *J* = 11.5, 2.3 Hz, 1H), 6.95 (s, 1H), 3.72–3.64 (m, 2H), 3.45–3.36 (m, 2H), 3.17–3.05 (m, 4H), 2.92–2.83 (m, 1H), 2.20–2.09 (m, 2H), 2.08–1.99 (m, 2H), 1.31–1.16 (m, 4H); ESI MS *m/z* 530 $[C_{31}H_{29}ClFN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.82 min.

Example 801

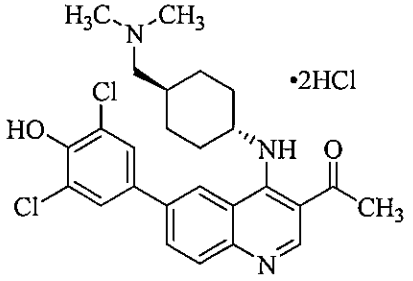
1-{6-(3,5-Dichloro-4-hydroxyphenyl)-4-[3-(2-(pyrrolidin-1-yl)ethyl)phenylamino]quinolin-3-yl}ethanone



Following general procedure F, {6-bromo-4-[3-(2-(pyrrolidin-1-yl)ethyl)phenylamino]quinolin-3-yl}ethanone (53 mg, 0.120 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (52 mg, 0.180 mmol) to afford the desired product (31 mg, 50%) as a yellow solid: $^1$H NMR (300 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.31 (s, 1H), 8.21 (dd, $J$ = 8.8, 2.0 Hz, 1H), 8.00 (d, $J$ = 8.8 Hz, 1H), 7.73 (s, 1H), 7.69–7.58 (m, 2H), 7.53 (s, 1H), 7.44–7.38 (m, 1H), 7.10 (s, 2H), 3.72–3.63 (m, 2H), 3.46–3.39 (m, 2H), 3.25–3.14 (m, 2H), 3.14–3.04 (m, 2H), 2.82 (s, 3H), 2.19–2.08 (m, 2H), 2.08–1.97 (m, 2H); ESI MS *m/z* 520[$C_{29}H_{27}Cl_2N_3O_2$ + H]$^+$; HPLC 97.5% (AUC), $t_R$ = 10.62 min.

Example 944

1-{6-(3,5-Dichloro-4-hydroxyphenyl)-4-[trans-4-((dimethylamino)methyl)cyclohexylamino]quinolin-3-yl}ethanone hydrochloride

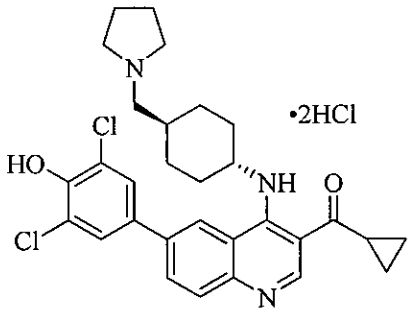


To a suspension of 1-{6-(3,5-dichloro-4-hydroxyphenyl)-4-[trans-4-((dimethylamino)methyl)cyclohexylamino]quinolin-3-yl}ethanone (200 mg, 0.410 mmol) in methanol (20 mL) was added 1M HCl in water (1.03 mL, 1.03 mmol). The resultant solution was concentrated to an approximate volume of 5 mL. The precipitate was washed with acetonitrile to obtain the desired product as the hydrochloride salt (200 mg) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.05 (s, 1H), 8.43 (d, $J$ = 1.9 Hz, 1H), 8.18 (dd, $J$ = 8.7, 1.9 Hz, 1H), 7.96 (d, $J$ = 8.7 Hz, 1H), 7.70 (s, 2H),

4.46–4.38 (m, 1H), 3.07 (d, $J$ = 6.6 Hz, 2H), 2.92 (s, 6H), 2.73 (s, 3H), 2.44 (d, $J$ = 12.2 Hz, 2H), 2.08–1.98 (m, 3H), 1.82–1.70 (m, 2H), 1.40–1.28 (m, 2H); ESI MS $m/z$ 486 [$C_{26}H_{29}Cl_2N_3O_2$ + H]$^+$; HPLC >99% (AUC), $t_R$ = 9.94 min.

Example 585

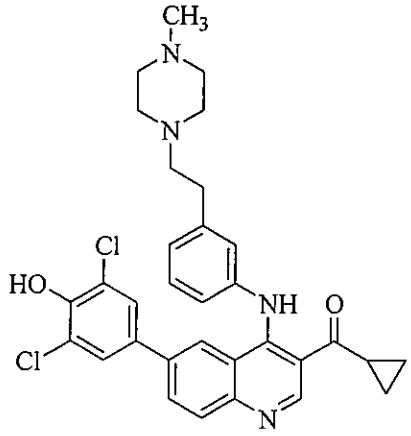
Cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[trans-4-(pyrrolidin-1-ylmethyl)cyclohexylamino]quinolin-3-yl}methanone hydrochloride




To a suspension of cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[trans-4-(pyrrolidin-1-ylmethyl)cyclohexylamino]quinolin-3-yl}methanone (3.69 g, 6.85 mmol) in methanol (70 mL) was added 1M HCl in water (17 mL, 17 mmol) at 0 °C. The resultant solution was concentrated to an approximate volume of 30 mL. The precipitate was washed with acetonitrile to obtain the desired product as the hydrochloride salt (3.58 g) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.34 (s, 1H), 8.49 (s, 1H), 8.27 (dd, $J$ = 8.8, 1.8 Hz, 1H), 7.99 (d, $J$ = 8.8 Hz, 1H), 7.74 (s, 2H), 4.51–4.47 (m, 1H), 3.73–3.69 (m, 2H), 3.18–3.09 (m, 4H), 2.84 (br s, 1H), 2.44–2.40 (br s, 2H), 2.19–1.97 (m, 7H), 1.84–1.71 (m, 2H), 1.36–1.18 (m, 6H); ESI MS $m/z$ 538 [$C_{30}H_{33}Cl_2N_3O_2$ + H]$^+$; HPLC >99% (AUC), $t_R$ = 10.65 min.

Example 829

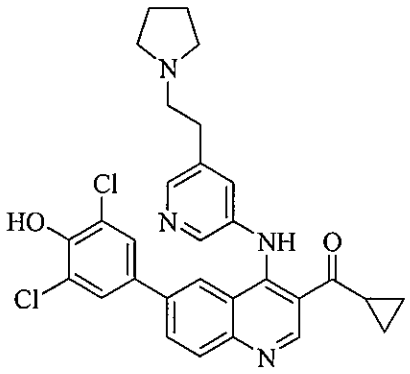
Cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[3-(2-(4-methylpiperazin-1-yl)ethyl)phenylamino]quinolin-3-yl}methanone



Following general procedure F, {6-bromo-4-[3-(2-(4-methylpiperazin-1-yl)ethyl)phenylamino]quinolin-3-yl}(cyclopropyl)metha none (56 mg, 0.110 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (48 mg, 0.165 mmol) to afford the desired product (47 mg, 74%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.25 (s, 1H), 7.89 (s, 2H), 7.69 (s, 1H), 7.41 (t, $J$ = 7.7 Hz, 1H), 7.24 (d, $J$ = 7.7 Hz, 1H), 7.13–6.94 (m, 4H), 2.97–2.84 (m, 1H), 2.82–2.72 (m, 2H), 2.66–2.51 (m, 10H), 2.43 (s, 3H), 1.32–1.06 (m, 4H).ESI MS *m/z* 575 $[C_{32}H_{32}Cl_2N_4O_2 + H]^+$; HPLC 95.1% (AUC), $t_R$ = 10.37 min.

Example 881

Cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[5-(2-(pyrrolidin-1-yl)ethyl)pyridin-3-ylamino ]quinolin-3-yl}methanone

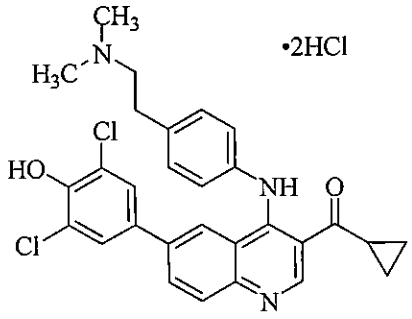


Following general procedure A-1, {6-bromo-4-[5-(2-(pyrrolidin-1-yl)ethyl)pyridin-3-ylamino]quinolin-3-yl}(cyclopropyl)methano ne (54 mg, 0.116 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (50 mg, 0.174 mmol) to

afford the desired product (29 mg, 46%) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$ + TFA-*d*) $\delta$ 9.36 (s, 1H), 8.64 (dd, $J$ = 16.9, 2.1 Hz, 2H), 8.32 (dd, $J$ = 8.8, 2.0 Hz, 1H), 8.17 (d, $J$ = 2.0 Hz, 1H), 8.11 (d, $J$ = 8.8 Hz, 1H), 7.99 (t, $J$ = 2.0 Hz, 1H), 7.43 (s, 2H), 3.74–3.70 (m, 2H), 3.50–3.43 (m, 2H), 3.24–3.17 (m, 2H), 3.16–3.12 (m, 2H), 2.79–2.76 (m, 1H), 2.19–2.15 (m, 2H), 2.07–2.03 (m, 2H), 1.18–1.07 (m, 4H); ESI MS *m/z* 547 $[C_{30}H_{28}Cl_2N_4O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 9.93 min.

Example 614

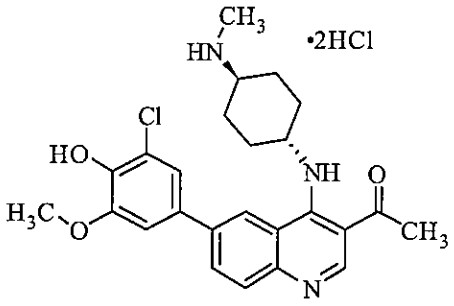
Cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)methanone dihydrochloride




Following general procedure D, (6-bromo-4-(4-(2-(dimethylamino)ethyl)phenylamino) quinolin-3-yl)(cyclopropyl)methanone (7.3 g, 16.7 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (5.6 g, 20mol) to obtain the desired product which was dissolved methanol and treated with excess 1 N aq. HCl. During removal of the methanol via rotary evaporation a precipitate appeared which was filtered to obtain the desired product (5.6 g, 64% over 2 steps) as a yellow solid: $^1$H NMR (300 MHz, MeOD) $\delta$ 9.46 (s, 1H), 8.21 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.01 (d, $J$ = 8.8 Hz, 1H), 7.89 (s, 1H), 7.57 (d, $J$ = 9 Hz, 2H), 7.46 (d, $J$ = 9 Hz, 2H), 7.23 (s, 2H), 3.40 (m, 2H), 3.22 (m, 2H), 2.98 (s, 7H), 2.90 (t, $J$ = 4.8 Hz, 1H), 1.22 (m, 4H); ESI MS *m/z* 520 $[C_{29}H_{27}Cl_2N_3O_2 + H]^+$; HPLC 99.1% (AUC), $t_R$ = 10.54 min.

Example 543

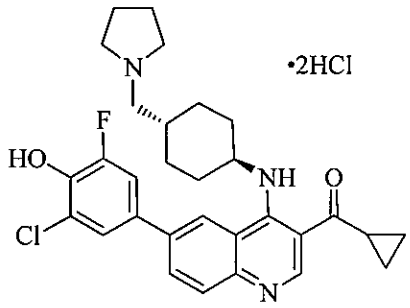
1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride



To a solution of tert-butyl(1r,4r)-4-(3-acetyl-6-(3-chloro-4-hydroxy-5-methoxyphenyl) quinolin-4-ylamino)cyclohexyl(methyl)carbamate (100 mg, 0.180 mmol) in dichloromethane (5 mL) was added HCl (2 mL, 2 M in diethylether) and the mixture was stirred for 16 h at room temperature. The resulting precipitate was filtered, washed with dichloromethane (10 mL), and dried under vaccuum to obtain the desired product (40 mg, 42%) as a yellow solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.12 (s, 1H), 8.47 (s, 1H), 8.31 (dd, $J$ = 8.7, 1.8 Hz, 1H), 8.00 (d, $J$ = 8.7 Hz, 1H), 7.33 (s, 1H), 7.27 (s, 1H), 4.56 (s, 1H), 4.00 (s, 3H), 3.26 (t, $J$ = 12.6 Hz, 1H), 2.75 (s, 3H), 2.73 (s, 3H), 2.54 (d, $J$ = 12.6 Hz, 2H), 2.35 (d, $J$ = 11.7 Hz, 2H), 1.86 (q, $J$ = 12.6 Hz, 2H), 1.63 (q, $J$ = 12.6 Hz, 2H); ESI MS *m/z* 454, $[C_{25}H_{28}ClN_3O_3 + H]^+$; HPLC 97.6% (AUC), $t_R$ = 9.49 min.

Example 588

(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((trans-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone dihydrochloride

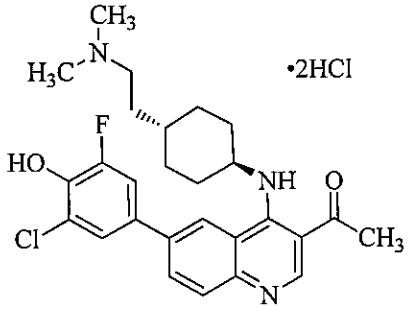


To a suspension of (6-bromo-4-((trans-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino) quinoline-3-yl)(cyclopropyl)methanone (60 mg, 0.13 mmol), 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (54 mg, 0.20 mmol) and Pd(dppf)$Cl_2$ (11 mg, 0.015 mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (1.0 M in $H_2O$, 0.4 mL, 0.4 mmol). The reaction mixture was degassed with nitrogen and heated at 80 °C for 2 h. The reaction mixture was cooled to room temperature, diluted with a satd. aq. $NaHCO_3$ (20 mL) and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium

sulfate, concentrated and purified by preparative HPLC (C18 silica, 10–90% acetonitrile/water with 0.05% TFA). The desired fractions were combined and concentrated and the residue was dissolved in methanol (4 mL) and HCl (1.25 M in methanol, 1.5 mL, 1.9 mmol). The mixture was concentrated to obtain the desired product (42.9 mg, 55%) as an off-white solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.35 (br s, 1H), 8.47 (br s, 1H), 8.27 (dd, $J$ = 8.8, 1.8 Hz, 1H), 7.98 (d, $J$ = 8.8 Hz, 1H), 7.60 (br s, 1H), 7.53 (d, $J$ = 11.1 Hz, 1H), 4.51 (br s, 1H), 3.74 – 3.66 (m, 2H), 3.18 – 3.07 (m, 4H), 2.85 (br s, 1H), 2.44 (br s, 2H), 2.24 – 1.96 (m, 5H), 1.83 – 1.71 (m, 2H), 1.36 – 1.18 (m, 6H). ESI MS *m/z* 522 $[C_{30}H_{33}ClFN_3O_2 + H]^+$; HPLC 98.9% (AUC), $t_R$ = 10.35 min.

Example 742

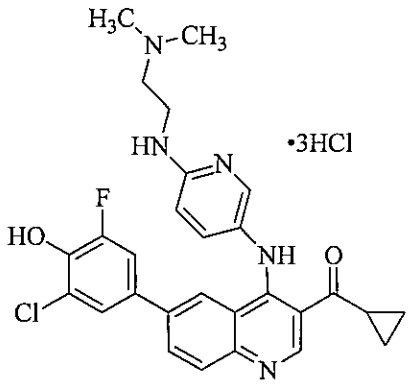
1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((trans-4-(2-(dimethylamino)ethyl)cyclohexyl)amino)quinolin-3-yl)ethanone dihydrochloride




To a suspension of 1-(6-bromo-4-((trans-4-(2-(dimethylamino)ethyl)cyclohexyl) amino)quinolin-3-yl)ethanone (63 mg, 0.15 mmol), 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (61 mg, 0.22 mmol) and Pd(dppf)$Cl_2$ (11 mg, 0.015 mmol) in dioxane (4 mL) was added $Cs_2CO_3$ (1.0 M in $H_2O$, 0.4 mL, 0.4 mmol). The reaction mixture was degassed with nitrogen and heated at 80 °C for 2 h. The reaction mixture was cooled to room temperature, diluted with a satd. aq. $NaHCO_3$ (20 mL) and extracted with ethyl acetate. The combined organic layers were dried over anhydrous sodium sulfate, concentrated and purified by preparative HPLC (C18 silica, 10–90% acetonitrile/water with a mixture of $CHCl_3$/isopropanol (3:1). The desired fractions were concentrated and dissolved in methanol and resultant residue was dissolved in methanol (4 mL) and HCl (1.25 M in methanol, 1.5 mL, 1.9 mmol) was added. The resulting solution was concentrated to give the desired product (55.9 mg, 67%) as an off-white solid $^1$H NMR (500 MHz, MeOD) $\delta$ 9.10 (s, 1H), 8.50 (s, 1H), 8.27 (dd, $J$ = 8.7, 1.7 Hz, 1H), 7.97 (d, $J$ = 8.7 Hz, 1H), 7.59 (s, 1H), 7.52 (dd, $J$ = 11.4, 2.3 Hz, 1H), 4.54 – 4.50 (m, 1H), 3.25 – 3.17 (m, 2H), 2.90 (s, 6H), 2.73 (s, 3H), 2.42 (d, $J$ = 12.2 Hz, 2H), 2.04 (d, $J$ = 12.9 Hz, 2H), 1.80 – 1.68 (m, 4H), 1.59 (br s, 1H), 1.39 – 1.27 (m, 2H). ESI MS *m/z* 484 $[C_{27}H_{31}ClFN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 10.01 min.

Example 777

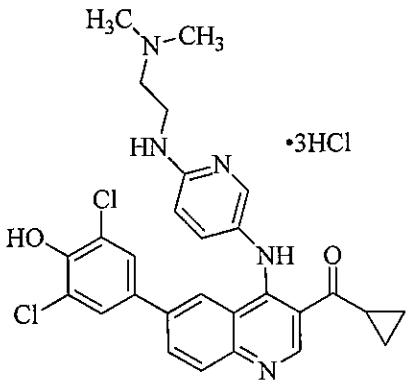
(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((6-((2-(dimethylamino)ethyl)amino)pyridin-3-yl)amino)quinolin-3-yl)(cyclopropyl)methanone trihydrochloride



To a suspension of (6-bromo-4-((6-((2-(dimethylamino)ethyl)amino)pyridin-3-yl)amino)quinolin-3-yl)(cyclopropyl)methanone (91 mg, 0.20 mmol), 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (82 mg, 0.30 mmol) and $Pd(dppf)Cl_2$ (14.6 mg, 0.02 mmol) in dioxane (6 mL) was added $Cs_2CO_3$ (1.0 M in $H_2O$, 0.6 mL, 0.6 mmol). The reaction mixture was degassed with nitrogen and heated at 80 °C for 2 h. The solution was cooled to room temperature, diluted with a satd. aq. $NaHCO_3$ solution and extracted with $CHCl_3$/isopropanol (3:1). The combined organic layers were dried over anhydrous sodium sulfate, concentrated and purified by preparative HPLC (C18 silica, 10–90% acetonitrile/water with 0.05% TFA). The desired fractions were combined and concentrated. The residue was dissolved in methanol (4 mL) and HCl (1.25 M in methanol, 1.5 mL, 1.9 mmol) and the mixture was concentrated to give the desired product (97.7 mg, 78%) as an off-white solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.38 (s, 1H), 8.32 – 8.17 (m, 3H), 8.04 (d, $J$ = 8.8 Hz, 1H), 7.73 (d, $J$ = 9.0 Hz, 1H), 7.31 – 7.23 (m, 2H), 7.01 (d, $J$ = 9.2 Hz, 1H), 3.87 (t, $J$ = 6.1 Hz, 2H), 3.44 (t, $J$ = 6.1 Hz, 2H), 2.98 (s, 6H), 2.89 – 2.80 (m, 1H), 1.24 – 1.18 (m, 4H). ESI MS *m/z* 520 $[C_{28}H_{27}ClFN_5O_2 + H]^+$; HPLC 97.9% (AUC), $t_R$ = 9.99 min.

Example 748

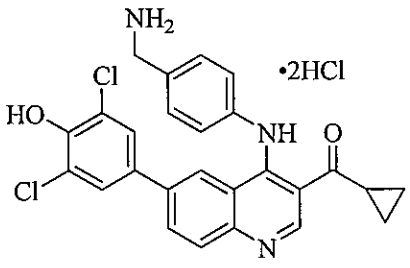
cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((6-((2-(dimethylamino)ethyl)amino)pyridin-3-yl)amino)quinolin-3-yl)methanone trihydrochloride



To a suspension of (6-bromo-4-((6-((2-(dimethylamino)ethyl)amino)pyridin-3-yl)amino)quinolin-3-yl)(cyclopropyl) methanone (91 mg, 0.20 mmol), 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (87 mg, 0.30 mmol) and $Pd(dppf)Cl_2$ (14.6 mg, 0.02 mmol) in dioxane (6 mL) was added $Cs_2CO_3$ (1.0 M in $H_2O$, 0.6 mL, 0.6 mmol). The reaction mixture was degassed with nitrogen and heated at 80 °C for 2 h. The reaction mixture was cooled to room temperature, diluted with a satd. aq. $NaHCO_3$ (20 mL) and extracted with $CHCl_3$/isopropanol (3:1). The combined organic layers were dried over anhydrous sodium sulfate, concentrated and purified by preparative HPLC (C18 silica, 10–90% acetonitrile/water with a mixture of $CHCl_3$/isopropanol (3:1). The desired fractions were concentrated and dissolved in methanol (4 mL) and HCl (1.25 M in methanol, 1.5 mL, 1.9 mmol). The resulting solution was concentrated to give the desired product (95.6 mg, 74%) as an off-white solid. $^1$H NMR (500 MHz, MeOD) $\delta$ 9.38 (s, 1H), 8.33 – 8.23 (m, 2H), 8.19 (d, $J$ = 2.5 Hz, 1H), 8.05 (d, $J$ = 8.8 Hz, 1H), 7.77 (dd, $J$ = 9.2, 2.6 Hz, 1H), 7.45 (s, 2H), 7.06 (d, $J$ = 9.2 Hz, 1H), 3.88 (t, $J$ = 6.1 Hz, 2H), 3.45 (t, $J$ = 6.1 Hz, 2H), 2.98 (s, 6H), 2.88 – 2.79 (m, 1H), 1.24 – 1.18 (m, 4H). ESI MS *m/z* 536 $[C_{28}H_{27}Cl_2N_5O_2 + H]^+$; HPLC 98.4% (AUC), $t_R$ = 10.24 min.

Example 508

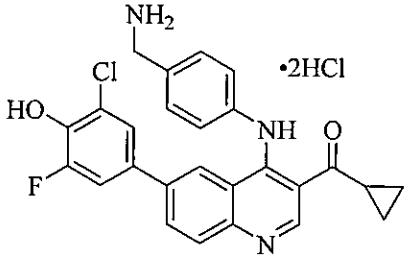
(4-(4-(aminomethyl)phenylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl) methanone hydrochloride



Following general procedure F, tert-butyl 4-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)benzylcarbamate (20 mg, 0.04 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (17 mg, 0.06 mmol) to obtain the boc-intermediate, which was deprotected using general procedure A-2. The desired fractions from the preparative HPLC were combined and concentrated. The residue was dissolved in methanol and HCl (2 mL, 1.25 M in methanol) and concentrated to obtain the desired product (15 mg, 68% over two steps) as a yellow solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.43 (s, 1H), 8.24 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.04 (d, $J$ = 8.8 Hz, 1H), 7.99 (s, 1H), 7.70 (d, $J$ = 8.2 Hz, 2H), 7.55 (d, $J$ = 8.2 Hz, 2H), 7.25 (s, 2H), 4.28 (s, 2H), 2.91–2.82 (m, 1H), 1.25–1.14 (m, 4H); ESI MS *m/z* 478 $[C_{26}H_{21}Cl_2N_3O_2 + H]^+$; HPLC 98.7% (AUC), $t_R$ = 10.00 min.

Example 505

(4-(4-(aminomethyl)phenylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride

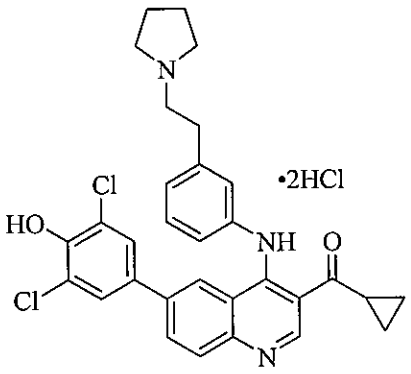



Following general procedure F, tert-butyl 4-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)benzylcarbamate (20 mg, 0.04 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (16 mg, 0.06 mmol) to obtain the Boc-intermediate, which was deprotected using general procedure A-2. The desired fractions from the preparative HPLC were combined and concentrated. The residue was dissolved in methanol and HCl (2 mL, 1.25 M in methanol) and concentrated to obtain the desired product (17 mg, 81% over two steps) as a yellow solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.43 (s, 1H), 8.24 (dd, $J$ = 8.8, 2.0 Hz, 1H), 8.04 (d, $J$ = 8.8 Hz, 1H), 8.00 (s, 1H), 7.70 (d, $J$ = 8.3 Hz, 2H), 7.55 (d, $J$ = 8.3 Hz, 2H), 7.13 (dd, $J$ = 11.5, 2.3 Hz, 1H), 7.03 (s, 1H), 4.27 (s, 2H), 2.91–2.82 (m, 1H), 1.25–1.14 (m, 4H); ESI MS *m/z* 462 $[C_{26}H_{21}ClFN_3O_2 + H]^+$; HPLC >99% (AUC), $t_R$ = 9.77 min.

Example 798

cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quin

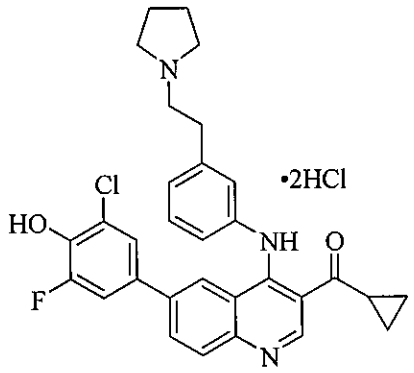
olin-3-yl)methanone hydrochloride



Following general procedure F, (6-bromo-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino) quinolin-3-yl)(cyclopropyl)methanone (41 mg, 0.088 mmol) was reacted with 2,6-dichloro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (38 mg, 0.13 mmol) and the desired compound was dissolved in methanol (4 mL) and HCl (2 mL, 1.25 M in methanol). The mixture was concentrated to obtain the desired product (47 mg, 86% over two steps) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.45 (s, 1H), 8.22 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.02 (d, $J$ = 8.8 Hz, 1H), 7.88 (s, 1H), 7.65–7.58 (m, 1H), 7.57–7.54 (m, 1H), 7.48 (s, 1H), 7.41–7.31 (m, 1H), 7.20 (s, 2H), 3.69–3.65 (m, 2H), 3.45–3.38 (m, 2H), 3.19–3.12 (m, 2H), 3.11–3.07 (m, 2H), 2.93–2.86 (m, 1H), 2.15–2.11 (s, 2H), 2.05–2.01 (s, 2H), 1.24 – 1.16 (m, 4H); ESI MS *m/z* 546 $[C_{31}H_{29}Cl_2N_3O_2 + H]^+$; HPLC 97.8% (AUC), $t_R$ = 10.83 min.

Example 800

(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone hydrochloride

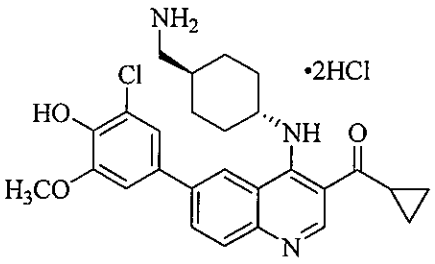


Following general procedure F, (6-bromo-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone (45

mg, 0.097 mmol) was reacted with 2-chloro-6-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (40 mg, 0.15 mmol) to obtain the desired product which was dissolved in methanol and HCl (2 mL, 1.25 M in methanol). The mixture was concentrated to obtain the desired product (46 mg, 79% over two steps) as a yellow solid: $^1$H NMR (500 MHz, $CD_3OD$) $\delta$ 9.44 (s, 1H), 8.23 (dd, $J$ = 8.8, 1.9 Hz, 1H), 8.02 (d, $J$ = 8.8 Hz, 1H), 7.92 (s, 1H), 7.65–7.57 (m, 1H), 7.56–7.47 (m, 2H), 7.41–7.35 (m, 1H), 7.16–7.10 (m, 1H), 6.97 (s, 1H), 3.71–3.65 (m, 2H), 3.46–3.39 (m, 2H), 3.19–3.06 (m, 4H), 2.91–2.87 (m, 1H), 2.19–2.09 (m, 2H), 2.06–2.00 (m, 2H), 1.26 – 1.15 (m, 4H); ESI MS *m/z* 530 $[C_{31}H_{29}ClFN_3O_2 + H]^+$; HPLC 98.4% (AUC), $t_R$ = 10.81 min.

Example 494

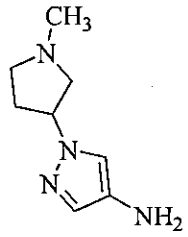
(4-(4-(aminomethyl)cyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride




Following general procedure F, tert-butyl (4-(6-bromo-3-(cyclopropanecarbonyl)quinolin-4-ylamino)cyclohexyl)methylcarbamate (25 mg, 0.05 mmol) was reacted with 2-chloro-6-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenol (21 mg, 0.08 mmol) to obtain the Boc-intermediate, which was deprotected using general procedure A-2. The desired fractions from the preparative HPLC were combined and concentrated and the residue was dissolved in methanol and HCl (2 mL, 1.25 M in methanol). The mixture was concentrated to obtain desired product (18 mg, 66% over two steps) as a yellow solid: $^1$H NMR (500 MHz, MeOD) $\delta$ 9.34 (s, 1H), 8.50 (s, 1H), 8.30 (dd, $J$ = 8.7, 1.8 Hz, 1H), 7.98 (d, $J$ = 8.7 Hz, 1H), 7.35 (s, 1H), 7.27 (s, 1H), 4.53–4.49 (m, 1H), 4.00 (s, 3H), 2.89–2.81 (m, 3H), 2.46–2.42 (m, 2H), 2.08–2.02 (m, 2H), 1.83–1.68 (m, 3H), 1.35–1.18 (m, 6H).; ESI MS *m/z* 480 $[C_{27}H_{30}ClN_3O_3 + H]^+$; HPLC 98.2% (AUC), $t_R$ = 10.03 min.

Example 1199

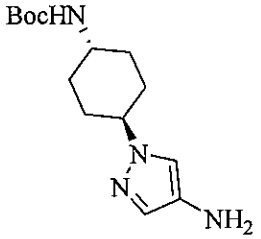
1-(1-methylpyrrolidin-3-yl)-1H-pyrazol-4-amine



A solution of tert-butyl 3-(4-nitro-1H-pyrazol-1-yl)pyrrolidine-1-carboxylate(1.0 g, 3.5 mmol) in THF and slowly added to a round bottomed flask with LAH ( 0.54 g, 14 mmol) in THF at 0 °C. Upon complete addition the reaction mixture was heated at reflux for 2 h. The reaction mixture was cooled to 0 °C and quenched by the stepwise addition of 0.5 mL ethanol, 0.5 mL water and 1.5 mL of 3 N NaOH. The resulting solids were filtered and the residue was concentrated to obtain the desired amino pyrazole as a dark foam. ESI MS *m/z* 167 $[C_8H_{14}N_4 + H]^+$

Example 1200

tert-butyl (1r,4r)-4-(4-amino-1H-pyrazol-1-yl)cyclohexylcarbamate



To a solution of nitro pyrazole (1.0 g, 8.8 mmol), tert-butyl (1r,4r)-4-hydroxycyclohexyl carbamate (1.9 g, 8.8 mmol) and triphenyl phosphine (2.1 g, 11 mmol) in THF (50 mL) was added DIAD (2.9 g, 11 mmol) and the reaction mixture was stirred for 18 h. The reaction mixture was concentrated and purified by flash chroma tography to obtain tert-butyl (1r,4r)-4-(4-nitro-1H-pyrazol-1-yl)cyclohexylcarbamate (1.1 g) as an off-white foam. The foam was dissolved in tertrahydrofuran (0.1 M), degassed with nitrogen and placed in a Parr shaker with Pd/C (10%, 0.1 equiv). The Parr shaker was charged with hydrogen (40 Psi) and the reaction was allowed to proceed at room temperature until complete, as indicated by LCMS analysis. The reaction mixture was filtered over diatomaceous earth and the filtrate was concentrated to obtain the desired amino pyrazole.

Compounds of the invention of this application not particularly described in the Examples above were also be synthesized by similar or analogous methods by referring to the above-mentioned Examples and such.

Next, the pharmacological activities of a representative example, compound (I), will be described using Test Examples.

Examples

Kinase assay

MELK activity was determined in the presence or absence of compounds using fluorescein isothiocyanate-labeled (FITC-labeled) histone H3 peptide as a substrate. The extent of FITC-labeled histone H3 peptide phosphorylation was measured by immobilized metal ion affinity-based fluorescence polarization (IMAP) technology (Sportsman JR, et al., Assay Drug Dev. Technol. 2: 205-14, 2004) using IMAP FP Progressive Binding System (Molecular Devices Corporation). Test compounds were dissolved in DMSO at 12.5 mM and then serially diluted as the DMSO concentration in the assays to be 1%. The serially diluted compounds, 0.8 ng/micro-L PBK (Carna Biosciences) and 100 nM FITC-labeled histone H3 peptide were reacted in a reaction buffer (20 mM HEPES, 0.01% Tween-20, 0.3 mM $MgCl_2$, 2 mM dithiothreitol, 50micro-M ATP, pH 7.4) at room temperature for 1 hour. The reaction was stopped by the addition of three fold assay volume of progressive binding solution. Following 0.5 hour incubation at room temperature, fluorescence polarization was measured by Wallac EnVision 2103 multilabel reader (PerkinElmer). IC50 values were calculated by nonlinear four parameter fit using SigmaPlot, version 10.0 (Systat Software, Inc.).

$IC_{50}$ values of the typical compounds of the present invention are shown in following table 2:

Table 2

| **Example** | **Compound Name** | **$IC_{50}$ ($\mu$M) (kinase assay)** |
|---|---|---|
| 55 | {4-[*trans*-4-Aminocyclohexylamino]-6-(4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl)methanone | 0.021 |
| 81 | {4-[*trans*-4-Aminocyclohexylamino]-6-(4-hydroxy-3-methoxyphenyl)quinolin-3-yl}(cyclopropyl)methanone | 0.007 |
| 96 | 5-{4-[*trans*-4-Aminocyclohexylamino]-3-(cyclopropanecarbonyl)quinolin-6-yl}pyrimidine -2-carbonitrile | 0.0024 |
| 108 | 5-{4-[*trans*-4-Aminocyclohexylamino] -3-isobutyrylquinolin-6-yl}picolinonitrile | 0.03 |
| 116 | {4-[*trans*-4-Aminocyclohexylamino]-6-(1*H*-benzo[*d*]imidazol-5-yl)quinolin-3-yl} (cyclopropyl)methanone | 0.018 |
| 119 | 5-{4-[*trans*-4-Aminocyclohexylamino]-3-(cyclopropanecarbonyl)quinolin-6-yl}thiophene -2-carbonitrile | 0.046 |
| 133 | Cyclopropyl[4-{4-[(dimethylamino)methyl] piperidin-1-yl}-6-(4-hydroxy-3-methoxyphenyl) quinolin-3-yl]methanone | 0.0036 |

| | | |
|---|---|---|
| 155 | [6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-(2,8-diazaspiro[4,5]decan-8-yl)quinolin-3-yl](cyclopropyl)methanone | 0.004 |
| 156 | {4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-difluoro-4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl)methanone | 0.023 |
| 157(a) | {4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl)methanone | 0.0076 |
| 157(b) | {4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl) methanone dihydrochloride | 0.003 |
| 160 | {4-[*trans*-4-Aminocyclohexylamino]-6-(2,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl)methanone | 0.072 |
| 165 | {4-(*cis*-4-Aminocyclohexylamino)-6-(4-hydroxy-3-methoxyphenyl)quinolin-3-yl}(cyclopropyl)methanone | 0.0019 |
| 177 | Cyclopropyl[6-(4-hydroxy-3-methoxyphenyl)-4-(1-methylpiperidin-4-ylamino)quinolin-3-yl]methanone | 0.026 |
| 179 | {4-[*trans*-4-Aminocyclohexylamino]-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl) methanone | 0.0065 |
| 180 | [4-(*cis*-4-Aminocyclohexylamino)-6-(3,5-difluoro-4-hydroxyphenyl)quinolin-3-yl](cyclopropyl)methanone | 0.0026 |
| 181 | Cyclopropyl[6-(3,5-difluoro-4-hydroxyphenyl)-4-{4-[1-(dimethylamino)ethyl]piperidin-1-yl}quinolin-3-yl] methanone | 0.011 |
| 185(a) | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(diethylamino)cyclohexylamino]quinolin-3-yl} (cyclopropyl)methanone | 0.0026 |
| 185(b) | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(diethylamino)cyclohexylamino]quinolin-3-yl} (cyclopropyl)methanone dihydrochloride | 0.0026 |
| 187 | Cyclopropyl(4-{4-[1-(dimethylamino)ethyl] piperidin-1-yl}-6-(4-hydroxy-3-methoxyphenyl) quinolin-3-yl)methanone | 0.0034 |
| 192 | {6-(3-Chloro-4-hydroxyphenyl)-4-[4-(diethylamino) cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone | 0.011 |
| 193 | Cyclopropyl{4-[4-(diethylamino)cyclohexylamino]-6-(4-hydroxy-3-methoxyphenyl)quinolin-3-yl}methanone | 0.007 |

| | | |
|---|---|---|
| 201 | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[(1-methylpiperidin-4-yl)methylamino]quinolin-3-yl}(cyclopropyl)methanone | 0.0034 |
| 205 | 1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl}-2-methylpropan-1-one | 0.01 |
| 212 | {4-[*trans*-4-Aminocyclohexylamino]-6-(pyridin-4-yl) quinolin-3-yl}(cyclopropyl)methanone | 0.054 |
| 213 | {4-[*trans*-4-Aminocyclohexylamino]-6-(1*H*-pyrazol-4-yl)quinolin-3-yl}(cyclopropyl)methanone | 0.067 |
| 214 | 1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-difluoro -4-hydroxyphenyl)quinolin-3-yl}-2-methylpropan-1-one | 0.043 |
| 215 | {6-(3-Chloro-4-hydroxyphenyl)-4-[2-(piperazin-1-yl) ethylamino]quinolin-3-yl}(cyclopropyl)methanone | 0.017 |
| 219 | 1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3-chloro-4 -hydroxyphenyl)quinolin-3-yl}-2-methylpropan-1-one | 0.023 |
| 225(a) | 1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-dichloro -4-hydroxyphenyl)quinolin-3-yl}-2-methylpropan-1-one | 0.0025 |
| 225(b) | 1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}-2-methylpropan-1-one dihydrochloride | 0.0028 |
| 240 | 2-Chloro-4-{4-[4-(diethylamino)cyclohexylamino]-3-(methylsulfonyl)quinolin-6-yl}-6-methoxyphenol dihydrochloride | 0.0053 |
| 243 | [6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-(piperidin -4-ylmethylamino)quinolin-3-yl](cyclopropyl)methanone | 0.0044 |
| 245 | 2-Chloro-4-[4-{4-[1-(dimethylamino)ethyl]piperidin-1-yl}-3-(methylsulfonyl)quinolin-6-yl]-6-methoxyphenol | 0.0016 |
| 246 | 2-Chloro-4-[4-{4-[1-(dimethylamino)ethyl]piperidin-1-yl}-3-(methylsulfonyl)quinolin-6-yl]phenol | 0.01 |
| 249 | [6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-(1-methylpiperidin-4-ylamino)quinolin-3-yl](cyclopropyl) methanone | 0.0079 |
| 250 | [6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-{4-[1-(dimethylamino)ethyl]piperidin-1-yl}quinolin-3-yl] (cyclopropyl)methanone | 0.0013 |
| 255 | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[*trans*-4- | 0.0019 |

| | | |
|---|---|---|
| | (dimethylamino)cyclohexylamino]quinolin-3-yl} (cyclopropyl)methanone | |
| 256 | 1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-dichloro -4-hydroxyphenyl)quinolin-3-yl}ethanone | 0.0041 |
| 258 | 1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-difluoro -4-hydroxyphenyl)quinolin-3-yl}ethanone | 0.04 |
| 259 | 1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl}ethanone | 0.0024 |
| 262 | 1-(4-((trans)-4-aminocyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)-3-methylbutan-1-one | 0.005 |
| 263 | Cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[*trans*-4-(dimethylamino)cyclohexylamino] quinolin-3-yl}methanone | 0.0017 |
| 266 | Cyclopropyl(4-((trans)-4-(dimethylamino) cyclohexylamino)-6-(4-hydroxy-3-methoxyphenyl) quinolin-3-yl)methanone | 0.0016 |
| 267 | 1-{4-[*trans*-4-Aminocyclohexylamino]-6-(3,5-dichloro -4-hydroxyphenyl)quinolin-3-yl}-3-methylbutan-1-one dihydrochloride | 0.0022 |
| 269 | [6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-{4-[1-(dimethylamino)ethyl]piperidin-1-yl}quinolin-3-yl] (cyclopropyl)methanone | 0.0037 |
| 270 | {6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[(1-methylpiperidin-4-yl)methylamino]quinolin-3-yl} (cyclopropyl)methanone | 0.021 |
| 276 | [6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-{4 -[(dimethylamino)methyl]piperidin-1-yl}quinolin-3-yl] (cyclopropyl)methanone | 0.0008 |
| 279 | [6-(3-Chloro-4-hydroxyphenyl)-4-{4-[(dimethylamino) methyl]piperidin-1-yl}quinolin-3-yl](cyclopropyl) methanone | 0.0046 |
| 280 | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl} (cyclopropyl)methanone | 0.0017 |
| 283 | {6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl} | 0.0029 |

| | | |
|---|---|---|
| | (cyclopropyl)methanone | |
| 284 | {4-[*trans*-4-aminocyclohexylamino]-6-(3-chloro-4-hydroxy-5-methoxyphenyl)-7-fluoroquinolin-3-yl}(cyclopropyl)methanone | 0.013 |
| 294 | Cyclopropyl{6-(3,5-difluoro-4-hydroxyphenyl)-4-[*trans*-4-(dimethylamino)cyclohexylamino]-7-fluoroquinolin-3-yl}methanone | 0.042 |
| 295 | {6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[*trans*-4-(dimethylamino)cyclohexylamino]-7-fluoroquinolin-3-yl}(cyclopropyl)methanone | 0.027 |
| 303 | 1-{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(diethylamino)cyclohexylamino]quinolin-3-yl}ethanone | 0.0061 |
| 305 | 1-[6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-{4-[(dimethylamino)methyl]piperidin-1-yl}quinolin-3-yl]ethanone | 0.0022 |
| 307 | Cyclopropyl{6-(3-fluoro-4-hydroxy-5-methoxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl}methanone | 0.0041 |
| 309 | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[(3-amino)adamantylamino]quinolin-3-yl}(cyclopropyl)methanone | 0.0087 |
| 311 | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[*cis*-4-(diethylamino)cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone | 0.0032 |
| 313 | Cyclopropyl{6-[4-hydroxy-3-(trifluoromethoxy)phenyl]-4-[4-(pyrrolidin-1-ylmethyl]piperidin-1-yl}quinolin-3-yl)methanone | 0.012 |
| 314 | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[*trans*-4-(diethylamino)cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone | 0.0031 |
| 315 | [6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-{[*trans*-4-(dimethylamino)cyclohexyl]methylamino}quinolin-3-yl](cyclopropyl)methanone | 0.0043 |
| 316 | [6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-{*trans*-4-[(dimethylamino)methyl]cyclohexylamino}quinolin-3-yl](cyclopropyl)methanone | 0.011 |
| 318 | 1-{6-(3-Chloro-4-hydroxyphenyl)-4-[4-(pyrrolidin | 0.02 |

| | | |
|---|---|---|
| | -1-ylmethyl)piperidin-1-yl]quinolin-3-yl}-2 -methylpropan-1-one | |
| 321 | 1-{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl} ethanone | 0.0027 |
| 323 | 1-{6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl)piperidin-1-yl]quinolin-3-yl} -2-methylpropan-1-one | 0.013 |
| 325 | Cyclopropyl[6-(3,5-dichloro-4-hydroxyphenyl)-4-{[*trans*-4-(dimethylamino)cyclohexyl]methylamino} quinolin-3-yl]methanone | 0.011 |
| 327 | [6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-{[*trans*-4-(dimethylamino)cyclohexyl]methylamino}quinolin-3-yl] (cyclopropyl)methanone | 0.0055 |
| 332 | {6-(3-Chloro-4-hydroxyphenyl)-4-[4-(morpholinomethyl)piperidin-1-yl]quinolin-3-yl}(cyclopropyl)methanone | 0.035 |
| 334 | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(morpholinomethyl)piperidin-1-yl]quinolin-3-yl} (cyclopropyl)methanone | 0.0081 |
| 335 | 1-{6-(3-Chloro-4-hydroxyphenyl)-4-[4-(diethylamino) cyclohexylamino]quinolin-3-yl}ethanone | 0.021 |
| 339 | [-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-{4-[(dimethylamino)methyl]phenylamino}quinolin-3-yl] cyclopropyl)methanone | 0.004 |
| 342 | {6-(3-Chloro-4-hydroxyphenyl)-4-[*trans*-4-(pyrrolidin-1-yl)cyclohexylamino]quinolin-3-yl} (cyclopropyl)methanone | 0.0046 |
| 343 | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[*trans*-4-(pyrrolidin-1-yl)cyclohexylamino]quinolin-3-yl} (cyclopropyl)methanone | 0.0021 |
| 345 | Cyclopropyl[6-(3,5-dichloro-4-hydroxyphenyl)-4-{4-[(dimethylamino)methyl]phenylamino}quinolin-3-yl] methanone | 0.0032 |
| 347 | [6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-{4-[(dimethylamino)methyl]piperidin-1-yl}quinolin-3-yl] (cyclopropyl)methanone | 0.0024 |
| 348 | 1-{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4- | 0.0043 |

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| | [*trans*-4-(dimethylamino)cyclohexylamino] quinolin-3-yl}-3-methylbutan-1-one | |
| 349 | {6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]quinolin-3-yl} (cyclopropyl)methanone | 0.0046 |
| 350 | {6-(3-Chloro-4-hydroxyphenyl)-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]quinolin-3-yl} (cyclopropyl)methanone | 0.005 |
| 351 | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]quinolin-3-yl} (cyclopropyl)methanone | 0.0022 |
| 353 | Cyclopropyl[4-{4-[(dimethylamino)methyl] piperidin-1-yl}-6-(3-ethoxy-4-hydroxyphenyl) quinolin-3-yl]methanone | 0.0017 |
| 384 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-3-yl)(cyclopentyl)methanone | 0.0046 |
| 385 | (6-(3-chloro-4-hydroxyphenyl)-4-(4-(diethylamino)cyclohexylamino)quinolin-3-yl)(cyclopentyl)methanone | 0.019 |
| 386 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(diethylamino)cyclohexylamino)quinolin-3-yl)(cyclopentyl)methanone | 0.0092 |
| 387 | (6-(3-chloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)(cyclopentyl)methanone | 0.089 |
| 388 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)(cyclopentyl)methanone | 0.014 |
| 389 | (6-(3-chloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-3-yl)(cyclopentyl)methanone | 0.031 |
| 391 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)ethanone | 0.0037 |
| 392 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.0034 |
| 394 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(2-(pyrroli | 0.0018 |

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| | din-1-yl)ethyl)piperazin-1-yl)quinolin-3-yl)(cyclopropyl)methanone | |
| 397 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)methanone | 0.0076 |
| 398 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0084 |
| 399 | 2-chloro-4-(4-(4-((dimethylamino)methyl)phenylamino)-3-(methylsulfonyl)quinolin-6-yl)-6-fluorophenol | 0.016 |
| 400 | 2,6-dichloro-4-(4-(4-((dimethylamino)methyl)phenylamino)-3-(methylsulfonyl)quinolin-6-yl)phenol | 0.0034 |
| 401 | 2,6-dichloro-4-(4-(4-((dimethylamino)methyl)phenylamino)-3-(methylsulfonyl)quinolin-6-yl)phenol hydrochloride | 0.0055 |
| 402 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl)piperazin-1-yl)quinolin-3-yl)(cyclopropyl)methanone | 0.0058 |
| 403 | (6-(3-chloro-4-hydroxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl)piperazin-1-yl)quinolin-3-yl)(cyclopropyl)methanone | 0.011 |
| 404 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(5-(piperazin-1-yl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0038 |
| 405 | cyclopropyl(6-(4-hydroxy-3-methoxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)methanone | 0.017 |
| 406 | (6-(3-chloro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.019 |
| 407 | 2-chloro-6-fluoro-4-(3-(methylsulfonyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin-1-yl)quinolin-6-yl)phenol | 0.0051 |
| 408 | 2-chloro-4-(3-(methylsulfonyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin-1-yl)quinolin-6-yl)phenol | 0.009 |
| 409 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(5-(piperazin-1-yl)pyridin-2-ylamino)quinolin-3-yl)methanone | 0.0017 |
| 410 | 2-chloro-4-(4-(4-((dimethylamino)methyl)phenylamino)-3-(methylsulfonyl)quinolin-6-yl)-6-methoxyphenol | 0.0068 |
| 411 | 2-chloro-4-(4-(4-((dimethylamino)methyl)phenylamino)-3- | 0.0091 |

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| | (methylsulfonyl)quinolin-6-yl)phenol | |
| 412 | 2-chloro-6-methoxy-4-(3-(methylsulfonyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin-1-yl)quinolin-6-yl)phenol | 0.002 |
| 413 | 5-(3-acetyl-4-(4-(pyrrolidin-1-ylmethyl)phenylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | 0.0029 |
| 414 | 5-(3-acetyl-4-(4-((dimethylamino)methyl)phenylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | 0.0022 |
| 415 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)phenylamino)quinolin-3-yl)ethanone | 0.035 |
| 416 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)phenylamino)quinolin-3-yl)ethanone **dihydrobromide** | 0.0032 |
| 417 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(5-((dimethylamino)methyl)pyridin-2-ylamino)quinolin-3-yl)methanone | 0.0099 |
| 418 | 5-(3-acetyl-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | 0.0073 |
| 419 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)phenylamino)quinolin-3-yl)ethanone | 0.0059 |
| 420 | 2,6-dichloro-4-(4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl)phenol | 0.0023 |
| 421 | 2,6-dichloro-4-(4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl)phenol | 0.0017 |
| 422 | 2-chloro-4-(4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl)-6-methoxyphenol | 0.0041 |
| 423 | 2-chloro-4-(4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl)-6-fluorophenol | 0.0063 |
| 424 | 2-chloro-4-(4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl)phenol | 0.013 |
| 425 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0027 |
| 426 | 5-(3-(cyclopropanecarbonyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | 0.0025 |
| 427 | (6-(3-chloro-4-hydroxyphenyl)-4-(5-(piperazin-1-yl)pyridi | 0.0062 |

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| | n-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | |
| 429 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(5-((dimethylamino)methyl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.019 |
| 435 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(5-((dimethylamino)methyl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.049 |
| 439 | 5-(3-(cyclopropanecarbonyl)-4-(5-((dimethylamino)methyl)pyridin-2-ylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | 0.058 |
| 440 | 4-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-yl)-1-(2-(pyrrolidin-1-yl)ethyl)piperazin-2-one | 0.0044 |
| 443 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(5-(1-methylpyrrolidin-2-yl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.043 |
| 444 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(5-(1-methylpyrrolidin-2-yl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.036 |
| 445 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(5-(1-methylpyrrolidin-2-yl)pyridin-2-ylamino)quinolin-3-yl)methanone | 0.022 |
| 448 | (6-(5-chloro-4-hydroxy-2-methylphenyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-3-yl)(cyclopropyl)methanone | 0.06 |
| 449 | cyclopropyl(4-(4-((dimethylamino)methyl)piperidin-1-yl)-6-(6-hydroxynaphthalen-2-yl)quinolin-3-yl)methanone | 0.014 |
| 453 | cyclopropyl(4-(4-((dimethylamino)methyl)piperidin-1-yl)-6-(1H-indol-5-yl)quinolin-3-yl)methanone | 0.094 |
| 457 | (6-(3-chloro-5-ethoxy-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-3-yl)(cyclopropyl)methanone | 0.0024 |
| 459 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-yl)quinolin-3-yl)methanone | 0.0091 |
| 460 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(morpholinomethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.083 |
| 461 | 5-(3-(cyclopropanecarbonyl)-4-(4-(morpholinomethyl)phe | 0.015 |

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| | nylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | |
| 462 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(morpholinomethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.066 |
| 463 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(morpholinomethyl)phenylamino)quinolin-3-yl)methanone | 0.02 |
| 469 | 5-(3-(cyclopropanecarbonyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | 0.0015 |
| 470 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.015 |
| 471 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.011 |
| 472 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone | 0.023 |
| 474 | 5-(3-(cyclopropanecarbonyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-6-yl)indolin-2-one | 0.66 |
| 480 | 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(5-hydroxy-1H-indol-2-yl)quinolin-3-yl)-2-methylpropan-1-one | 0.054 |
| 481 | methyl 4-(3-(cyclopropanecarbonyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-6-yl)benzoate | 1.4 |
| 482 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenyl)quinolin-3-yl)methanone | 0.0061 |
| 483 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone | 0.016 |
| 486 | 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-5-ethoxy-4-hydroxyphenyl)quinolin-3-yl)ethanone | 0.0021 |
| 487 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone | 0.01 |
| 488 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone | 0.0041 |

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| | iperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone | |
| 493 | (4-(1R,4R)-4-(aminomethyl)cyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.003 |
| 494 | (4-(1R,4R)-4-(aminomethyl)cyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 0.0016 |
| 495 | (4-(1R,4R)-4-(aminomethyl)cyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0029 |
| 496 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0048 |
| 497 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)methanone | 0.0021 |
| 501 | (4-(1R,4R)-4-(aminomethyl)cyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.046 |
| 502 | 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)-2-methylpropan-1-one | 0.007 |
| 503 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0047 |
| 504 | (4-(4-(aminomethyl)phenylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0089 |
| 505 | (4-(4-(aminomethyl)phenylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 0.0027 |
| 506 | (4-(4-(aminomethyl)phenylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0032 |
| 507 | (4-(4-(aminomethyl)phenylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0038 |
| 508 | (4-(4-(aminomethyl)phenylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 0.0017 |
| 509 | 5-(4-(4-(aminomethyl)phenylamino)-3-(cyclopropanecarbo | 0.0013 |

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| | nyl)quinolin-6-yl)pyrimidine-2-carbonitrile | |
| 510 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-3-yl)methanone | 0.0019 |
| 511 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(piperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)methanone | 0.017 |
| 512 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1-(piperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0022 |
| 513 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.002 |
| 514 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0028 |
| 515 | (4-((1s,4s)-4-(aminomethyl)cyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0034 |
| 517 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1R,4R)-4-(methylamino)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone | 0.0014 |
| 518 | 2-((((1s,4s)-4-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino)cyclohexyl)methyl)(methyl)amino)acetonitrile | 0.013 |
| 519 | (6-(3-chloro-4-hydroxyphenyl)-4-(1-(piperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.003 |
| 520 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(piperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0016 |
| 522 | 5-(3-(cyclopropanecarbonyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | 0.0014 |
| 523 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0024 |
| 524 | 2-((((1s,4s)-4-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino)cyclohexyl)methyl)(methyl)amino)acetonitrile | 0.01 |

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| 525 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(5-(piperazin-1-yl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0048 |
| 526 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)methanone | 0.0021 |
| 527 | 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone | 0.015 |
| 528 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(5-(piperazin-1-yl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 0.0044 |
| 529 | 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)butan-1-one | 0.0038 |
| 530 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)butan-1-one | 0.0045 |
| 531 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)butan-1-one dihydrochloride | 0.0052 |
| 532 | 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)butan-1-one | 0.017 |
| 535 | 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)butan-1-one | 0.0024 |
| 537 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)butan-1-one | 0.016 |
| 538 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)butan-1-one | 0.02 |
| 539 | 5-(3-butyryl-4-(4-((dimethylamino)methyl)phenylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | 0.0038 |
| 540 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-7-fluoroquinolin-3-yl)(cyclopropyl)methanone | 0.064 |
| 541 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-7-fluoroquinolin-3-yl)(cyclopropyl)methanone | 0.077 |
| 542 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-3-yl)ethanone | 0.0043 |
| 543 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-( | 0.0018 |

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| | methylamino)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | |
| 547 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-7-fluoroquinolin-3-yl)methanone | 0.02 |
| 548 | (4-(6-(4-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.002 |
| 549 | (4-(6-(4-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 0.0027 |
| 550 | (4-(6-(4-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0057 |
| 551 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone | 1.1 |
| 552 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-8-fluoroquinolin-3-yl)methanone | 0.58 |
| 553 | (4-(2-(4-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0056 |
| 554 | (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0031 |
| 555 | (4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone | 5.1 |
| 556 | (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0044 |
| 557 | (4-(6-(4-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0056 |
| 558 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-3-yl)ethanone | 0.0025 |

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| 559 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-7-fluoro-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone | 0.01 |
| 560 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-3-yl)ethanone | 0.11 |
| 561 | (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0027 |
| 562 | (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 0.0017 |
| 563 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone | 1.8 |
| 564 | (4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone | 0.26 |
| 565 | (4-(1R,4R)-4-aminocyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone | 2.1 |
| 566 | (4-(2-(4-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.003 |
| 567 | (4-(2-(4-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0083 |
| 568 | (4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0027 |
| 569 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(((R)-3-fluoropyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.011 |
| 570 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(((R)-3-fluoropyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.016 |
| 571 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(((R)-3-fluoropyrrolidin-1-yl)methyl)cyclohexylamino)q | 0.0043 |

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| | uinolin-3-yl)methanone | |
| 572 | (4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.003 |
| 573 | (4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 0.004 |
| 574 | (4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0018 |
| 575 | (4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0031 |
| 576 | (4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0019 |
| 577 | (4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride) | 0.0037 |
| 578 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-7-fluoro-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.021 |
| 579 | (4-((1R,3r,5S)-8-azabicyclo[3.2.1]octan-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0042 |
| 580 | (4-((1R,3r,5S)-8-azabicyclo[3.2.1]octan-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0045 |
| 582 | (4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0031 |
| 584 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)methanone | 0.0016 |
| 585 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)methanone hydrochloride | 0.0014 |

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| 586 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0028 |
| 587 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0032 |
| 588 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 0.0037 |
| 589 | (4-(6-aminopyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.011 |
| 590 | (4-(6-aminopyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.014 |
| 591 | (4-(6-aminopyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.032 |
| 592 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0015 |
| 593 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)methanone | 0.0013 |
| 594 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)ethanone | 0.0048 |
| 595 | (4-(4,4'-bipiperidin-1-yl)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0042 |
| 596 | (4-(4,4'-bipiperidin-1-yl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0016 |
| 597 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)butan-1-one | 0.0073 |
| 598 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((3-methoxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)methanone | 0.0023 |
| 599 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((3-methoxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.005 |
| 600 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)- | 0.00073 |

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| | 4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)methanone | |
| 601 | (4-(4-(2-aminopropan-2-yl)phenylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 0.0014 |
| 602 | (4-(4-(2-aminopropan-2-yl)phenylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0011 |
| 603 | (4-(4-(2-aminopropan-2-yl)phenylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0036 |
| 604 | (4-(4-(2-aminopropan-2-yl)phenylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0028 |
| 605 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)butan-1-one | 0.002 |
| 606 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)-2-methylpropan-1-one | 0.0063 |
| 607 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)butan-1-one | 0.0051 |
| 608 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)-2-methylpropan-1-one | 0.0022 |
| 609 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(piperidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0025 |
| 610 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(piperidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)methanone | 0.0017 |
| 611 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(piperidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0023 |
| 612 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0055 |
| 613 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(di | 0.0022 |

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| | methylamino)ethyl)phenylamino)quinolin-3-yl)methanone | |
| 614 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)methanone hydrochloride | 0.0016 |
| 615 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0082 |
| 616 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)ethanone | 0.0044 |
| 617 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)butan-1-one | 0.0042 |
| 620 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)-2-methylpropan-1-one | 0.0066 |
| 621 | (4-((1R,3r,5S)-8-azabicyclo[3.2.1]octan-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.01 |
| 622 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(3-((dimethylamino)methyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0037 |
| 623 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)butan-1-one | 0.011 |
| 624 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-((dimethylamino)methyl)phenylamino)quinolin-3-yl)methanone | 0.0016 |
| 625 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)butan-1-one | 0.15 |
| 626 | (4-(2-(3-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0011 |
| 627 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((3-methoxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.024 |
| 628 | (4-(2-(3-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0015 |
| 629 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-((dimethylamino)methyl)phenylamino)quinolin-3-yl)(cyclopropyl)metha | 0.0051 |

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| | none | |
| 630 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0023 |
| 631 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0021 |
| 632 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0031 |
| 633 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0016 |
| 634 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)methanone | 0.0008 |
| 635 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)methanone hydrochloride | 0.00074 |
| 638 | (4-(4-amino-4-methylcyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0034 |
| 639 | (4-(4-amino-4-methylcyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0012 |
| 640 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)-2-methylpropan-1-one | 0.027 |
| 641 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)-2-methylpropan-1-one | 0.0076 |
| 644 | (4-(2-(3-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0028 |
| 646 | (S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0011 |
| 647 | (S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5 | 0.0015 |

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| | -dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | |
| 648 | (S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0019 |
| 649 | (R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0021 |
| 650 | (R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.001 |
| 651 | (R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.00076 |
| 652 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)-4-hydroxycyclohexylamino)quinolin-3-yl)methanone | 0.0011 |
| 653 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)ethanone | 0.0098 |
| 654 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)ethanone | 0.0082 |
| 655 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((4-((4-methylpiperazin-1-yl)methyl)phenyl)amino)quinolin-3-yl)ethanone | 0.0029 |
| 656 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)ethanone | 0.033 |
| 657 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-((dimethylamino)methyl)pyridin-3-ylamino)quinolin-3-yl)methanone | 0.0089 |
| 658 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(pyrrolidin-1-ylmethyl)pyridin-3-ylamino)quinolin-3-yl)methanone | 0.0078 |
| 659 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(pyrrolidin-1-ylmethyl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.013 |
| 660 | (S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopro | 0.0024 |

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| | pyl)methanone | |
| 661 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(3-methoxypyrrolidin-1-yl)cyclohexylamino)quinolin-3-yl)methanone | 0.0018 |
| 665 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(pyrrolidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0033 |
| 666 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(pyrrolidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)methanone | 0.024 |
| 667 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(pyrrolidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.01 |
| 672 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(pyrrolidin-1-ylmethyl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.014 |
| 673 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)-4-hydroxycyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0042 |
| 674 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)-2-methylpropan-1-one | 0.0069 |
| 680 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)-2-methylpropan-1-one | 0.011 |
| 681 | 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)ethanone | 0.00086 |
| 685 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((methylamino)methyl)cyclohexylamino)quinolin-3-yl)methanone | 0.0016 |
| 686 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(3-methoxypyrrolidin-1-yl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0035 |
| 687 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(3-methoxypyrrolidin-1-yl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0033 |
| 688 | 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-ch | 0.0032 |

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| | loro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)ethanone | |
| 692 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0056 |
| 693 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0083 |
| 698 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)methanone | 0.0024 |
| 699 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-3-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0026 |
| 702 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone hydrochloride | 0.0014 |
| 703 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-3-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)methanone | 0.0013 |
| 704 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone hydrochloride | 0.0023 |
| 706 | (4-(1-(1R,4R)-4-aminocyclohexyl)-1H-pyrazol-4-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 0.0011 |
| 707 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)-1-hydroxyethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0059 |
| 708 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(2-(dimethylamino)-1-hydroxyethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0065 |
| 709 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)-1-hydroxyethyl)phenylamino)quinolin-3-yl)methanone | 0.0035 |
| 710 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0069 |
| 711 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)met | 0.0032 |

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| 712 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0036 |
| 713 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)propan-1-one | 0.0024 |
| 714 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)propan-1-one | 0.004 |
| 715 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)propan-1-one | 0.0015 |
| 716 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)propan-1-one dihydrochloride | 0.0016 |
| 717 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclopentylamino)quinolin-3-yl)ethanone | 0.011 |
| 718 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclopentylamino)quinolin-3-yl)ethanone | 0.0055 |
| 719 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(piperidin-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0092 |
| 720 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(dimethylamino)-2,3-dihydro-1H-inden-5-ylamino)quinolin-3-yl)ethanone | 0.0033 |
| 721 | 1-(6-(3,5-difluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.035 |
| 722 | (4-(6-(2-aminoethoxy)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0043 |
| 723 | (4-(6-(2-aminoethoxy)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0019 |
| 724 | (4-(6-(2-aminoethoxy)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0055 |
| 725 | (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dif | 0.003 |

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| | luoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | |
| 726 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(piperidin-4-ylamino)quinolin-3-yl)methanone | 0.0057 |
| 727 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(piperidin-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0034 |
| 729 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone | 0.0022 |
| 730 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone | 0.0026 |
| 731 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.0047 |
| 732 | 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone | 0.0017 |
| 733 | 1-(4-((6-(3-aminopiperidin-1-yl)pyridin-3-yl)amino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone | 0.00099 |
| 734 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.0016 |
| 735 | (4-(2-(4-aminopiperidin-1-yl)pyridin-4-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.0041 |
| 736 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)propan-1-one | 0.036 |
| 737 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)propan-1-one | 0.055 |
| 738 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.0026 |
| 739 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.0032 |
| 740 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 0.0013 |
| 741 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(2- | 0.0048 |

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| | (dimethylamino)ethyl)cyclohexylamino)quinolin-3-yl)ethanone | |
| 742 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexylamino)quinolin-3-yl)ethanone **di**hydrochloride | 0.0044 |
| 743 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone | 0.0042 |
| 744 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone | 0.0017 |
| 745 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone | 0.0083 |
| 746 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0029 |
| 747 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)methanone | 0.0043 |
| 748 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)methanone hydrochloride | 0.0026 |
| 749 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.0017 |
| 750 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.0023 |
| 751 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.0067 |
| 752 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.001 |
| 753 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.0015 |
| 754 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)propan-1-one | 0.02 |
| 755 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-( | 0.0018 |

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| | dimethylamino)cyclohexylamino)quinolin-3-yl)propan-1-one | |
| 756 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl)piperidin-1-yl)quinolin-3-yl)methanone | 0.0023 |
| 757 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)propan-1-one | 0.0062 |
| 758 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)ethanone | 0.0053 |
| 759 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone | 0.013 |
| 760 | 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one | 0.0034 |
| 761 | 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one | 0.0026 |
| 762 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)ethanone | 0.014 |
| 763 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)ethanone | 0.0087 |
| 765 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)ethanone | 0.0022 |
| 766 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-(dimethylamino)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 0.0017 |
| 767 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.0018 |
| 768 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 0.0015 |
| 769 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)propan-1-one | 0.0049 |
| 770 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)propan-1-one | 0.015 |
| 771 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)propan-1-one | 0.0054 |
| 772 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(piperaz | 0.0021 |

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| | in-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | |
| 773 | 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone | 0.006 |
| 774 | 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)ethanone | 0.0019 |
| 775 | 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)propan-1-one | 0.0034 |
| 776 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0027 |
| 777 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone trihydrochloride | 0.0034 |
| 778 | cyclopropyl(6-(3,5-difluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone | 0.021 |
| 779 | 1-(4-(1R,4R)-4-((3-aminopyrrolidin-1-yl)methyl)cyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)ethanone hydrochloride | 0.0017 |
| 780 | 1-(4-(1R,4R)-4-((3-aminopyrrolidin-1-yl)methyl)cyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)ethanone hydrochloride | 0.002 |
| 783 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(piperazin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 0.0088 |
| 784 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1r,3r)-3-((dimethylamino)methyl)cyclobutylamino)quinolin-3-yl)ethanone | 0.0031 |
| 785 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(3-(methylamino)pyrrolidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone trihydrochloride | 0.0056 |
| 786 | 1-(4-(1R,4R)-4-((3-aminopyrrolidin-1-yl)methyl)cyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone hydrochloride | 0.0031 |
| 788 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(3-(methylamino)pyrrolidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone | 0.0017 |

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| | trihydrochloride | |
| 789 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(3-(methylamino)pyrrolidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone trihydrochloride | 0.0028 |
| 790 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((diethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 0.0018 |
| 791 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((diethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride | 0.0031 |
| 792 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1S,4r)-4-(((S)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.0011 |
| 793 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1S,4r)-4-((S)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.0018 |
| 794 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((diethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 0.0056 |
| 795 | cyclopropyl(6-(3,5-difluoro-4-hydroxyphenyl)-4-(6-(pyrrolidin-1-ylmethyl)pyridin-3-ylamino)quinolin-3-yl)methanone | 0.035 |
| 796 | cyclopropyl(6-(3,5-difluoro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)methanone | 0.026 |
| 797 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)methanone | 0.0056 |
| 798 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)methanone hydrochloride | 0.0029 |
| 799 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0047 |
| 800 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 0.012 |
| 801 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)ethanone | 0.004 |

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| 802 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-3-yl)ethanone hydrochloride | 0.0021 |
| 803 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)ethanone | 0.016 |
| 804 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(3-(methylamino)pyrrolidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone trihydrochloride | 0.002 |
| 805 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)ethanone hydrochloride | 0.0028 |
| 806 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(3-(methylamino)piperidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone trihydrochloride | 0.0012 |
| 807 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(3-(methylamino)piperidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone trihydrochloride | 0.0015 |
| 808 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(((R)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride | 0.0065 |
| 809 | 1-(4-(1R,4R)-4-((3-aminopiperidin-1-yl)methyl)cyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)ethanone hydrochloride | 0.016 |
| 810 | 1-(4-(1R,4R)-4-((3-aminopiperidin-1-yl)methyl)cyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)ethanone trihydrochloride | 0.0018 |
| 811 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(((R)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.0027 |
| 812 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(((R)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.0017 |
| 813 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(1-methylpyrrolidin-3-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)ethanone dihydrochloride | 0.0021 |
| 814 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(1-methylpyrrolidin-3-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)ethanone | 0.0009 |

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| | dihydrochloride | |
| 815 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(3-(methylamino)piperidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone trihydrochloride | 0.0018 |
| 816 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((ethyl(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride | 0.0027 |
| 817 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((ethyl(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 0.0014 |
| 818 | 1-(4-(1R,4R)-4-((3-aminopiperidin-1-yl)methyl)cyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone trihydrochloride | 0.0043 |
| 819 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)methanone | 0.0024 |
| 820 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)methanone | 0.0018 |
| 821 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)ethanone | 0.0053 |
| 822 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.0031 |
| 823 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)ethanone | 0.0027 |
| 824 | 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one trihydrochloride | 0.0016 |
| 825 | 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one trihydrochloride | 0.0018 |
| 826 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1S,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride | 0.0083 |
| 827 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1S,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.0033 |

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| | hydrochloride | |
| 828 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(4-methylpiperazin-1-yl)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.017 |
| 829 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(4-methylpiperazin-1-yl)ethyl)phenylamino)quinolin-3-yl)methanone | 0.0051 |
| 830 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(4-methylpiperazin-1-yl)ethyl)phenylamino)quinolin-3-yl)ethanone | 0.019 |
| 831 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(4-methylpiperazin-1-yl)ethyl)phenylamino)quinolin-3-yl)ethanone | 0.0054 |
| 836 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)ethanone dihydrochloride | 0.0014 |
| 843 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)propan-1-one dihydrochloride | 0.0016 |
| 844 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1S,4r)-4-(((S)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.0046 |
| 845 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((ethyl(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 0.002045 |
| 846 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)propan-1-one dihydrochloride | 0.0023 |
| 848 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)ethanone hydrochloride | 0.011 |
| 852 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)ethanone dihydrochloride | 0.0028 |
| 861 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(((1S,3R)-3-(2-(dimethylamino)ethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 0.0032 |
| 862 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(((1S,3R)-3-(2-(dimethylamino)ethyl)cyclohexyl)amino)quinolin-3-yl)eth | 0.0067 |

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| | anone hydrochloride | |
| 864 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((bis-(trideuteromethyl)amino)methyl)cyclohexyl)amino)quinolin-3-yl)ethanone dihydrochloride | 0.0011 |
| 873 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((5-(2-(pyrrolidin-1-yl)ethyl)pyridin-3-yl)amino)quinolin-3-yl)ethanone hydrochloride | 0.0067 |
| 876 | N-(1R,4R)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-(dimethylamino)acetamide dihydrochloride | 0.0088 |
| 877 | N-(1R,4R)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-(dimethylamino)acetamide hydrochloride | 0.0027 |
| 878 | (S)-N-((1r,4S)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-aminopropanamide dihydrochloride | 0.0079 |
| 879 | 2-chloro-6-fluoro-4-(3-(methylsulfonyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-6-yl)phenol hydrochloride | 0.011 |
| 880 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((5-(2-(pyrrolidin-1-yl)ethyl)pyridin-3-yl)amino)quinolin-3-yl)ethanone hydrochloride | 0.04 |
| 881 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((5-(2-(pyrrolidin-1-yl)ethyl)pyridin-3-yl)amino)quinolin-3-yl)methanone | 0.0064 |
| 882 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((5-(2-(pyrrolidin-1-yl)ethyl)pyridin-3-yl)amino)quinolin-3-yl)(cyclopropyl)methanone | 0.019 |
| 883 | 2,6-dichloro-4-(3-(methylsulfonyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-6-yl)phenol hydrochloride | 0.002 |
| 884 | 2,6-dichloro-4-(4-((6-(2-(dimethylamino)ethoxy)pyridin-3-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)phenol hydrochloride | 0.0035 |
| 885 | 2-chloro-4-(4-((6-(2-(dimethylamino)ethoxy)pyridin-3-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)-6-fluorophenol hydrochloride | 0.0083 |
| 886 | (S)-N-((1r,4S)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphen | 0.00066 |

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| | yl)quinolin-4-yl)amino)cyclohexyl)-2-aminopropanamide dihydrochloride | |
| 890 | 2,6-dichloro-4-(3-(methylsulfonyl)-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-6-yl)phenol hydrochloride | 0.0027 |
| 891 | 2-chloro-6-fluoro-4-(3-(methylsulfonyl)-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-6-yl)phenol hydrochloride | 0.0095 |
| 895 | 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)quinolin-3-yl)ethanone hydrochloride | 0.065 |
| 896 | 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-3-yl)ethanone hydrochloride | 0.22 |
| 899 | 2,6-dichloro-4-(4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)phenol hydrochloride | 0.0017 |
| 900 | 2-chloro-6-fluoro-4-(4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)phenol hydrochloride | 0.0032 |
| 901 | 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((6-(4-methylpiperazin-1-yl)pyridin-3-yl)amino)quinolin-3-yl)ethanone hydrochloride | 0.1 |
| 902 | 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((6-(2-(dimethylamino)ethoxy)pyridin-3-yl)amino)quinolin-3-yl)ethanone hydrochloride | 0.042 |
| 903 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-7-fluoroquinolin-3-yl)ethanone hydrochloride | 0.0017 |
| 904 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-7-fluoroquinolin-3-yl)ethanone hydrochloride | 0.017 |
| 907 | N-(1R,4R)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-amino-3-methylbutanamide dihydrochloride | 0.0047 |
| 908 | 1-(4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-6-(pyridin-4-yl)quinolin-3-yl)ethanone hydrochloride | 0.23 |
| 909 | 4-(4-((6-(3-aminopiperidin-1-yl)pyridin-3-yl)amino)-3-(me | 0.0016 |

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| | thylsulfonyl)quinolin-6-yl)-2-chloro-6-fluorophenol trihydrochloride | |
| 910 | 1-(4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-6-(1H-indazol-5-yl)quinolin-3-yl)ethanone hydrochloride | 0.1 |
| 911 | 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 0.13 |
| 912 | 1-(4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-6-(1H-pyrazol-4-yl)quinolin-3-yl)ethanone hydrochloride | 0.074 |
| 913 | 4-(4-((6-(3-aminopiperidin-1-yl)pyridin-3-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)-2,6-dichlorophenol trihydrochloride | 0.00094 |
| 914 | (S)-N-((1r,4S)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-amino-3,3-dimethylbutanamide hydrochloride | 0.028 |
| 915 | N-(1R,4R)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-amino-3-methylbutanamide dihydrochloride | 0.0031 |
| 916 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)(cyclopentyl)methanone hydrochloride | 0.0048 |
| 917 | cyclopentyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)methanone hydrochloride | 0.003 |
| 918 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)-2,2-dimethylpropan-1-one hydrochloride | 0.022 |
| 919 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)-2,2-dimethylpropan-1-one hydrochloride | 0.034 |
| 920 | (S)-N-((1r,4S)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)pyrrolidine-2-carboxamide dihydrochloride | 0.0019 |
| 921 | (S)-N-((1r,4S)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)pyrrolidine-2-carb | 0.012 |

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| | oxamide dihydrochloride | |
| 922 | (S)-N-((1r,4S)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-amino-3,3-dimethylbutanamide hydrochloride | 0.0042 |
| 923 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-7-fluoro-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 0.007 |
| 924 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-3-yl)(cyclopentyl)methanone hydrochloride | 0.018 |
| 925 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-7-fluoro-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 0.019 |
| 926 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-7-fluoro-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 0.0079 |
| 927 | cyclopentyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-3-yl)methanone hydrochloride | 0.0096 |
| 928 | 2-amino-N-(1R,4R)-4-((6-(3,5-dichloro-4-hydroxyphenyl)-3-pivaloylquinolin-4-yl)amino)cyclohexyl)propanamide hydrochloride | 0.015 |
| 929 | 1-(4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-6-(6-hydroxynaphthalen-2-yl)quinolin-3-yl)ethanone hydrochloride | 0.064 |
| 930 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)quinolin-3-yl)-2,2-dimethylpropan-1-one hydrochloride | 0.017 |
| 931 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)quinolin-3-yl)-2,2-dimethylpropan-1-one hydrochloride | 0.0062 |
| 932 | 2-amino-N-(1R,4R)-4-((6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-pivaloylquinolin-4-yl)amino)cyclohexyl)propanamide hydrochloride | 0.047 |
| 934 | (S)-1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxy phenyl)quinolin-3-yl)propan-1-one trihydrochloride | 0.0012 |

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| 935 | 1-(4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino) -6-(4-hydroxyphenyl)quinolin-3-yl)ethanone dihydrochloride | 0.08 |
| 936 | (4-((trans)-4-aminocyclohexylamino)-6- (3-chloro-5-fluoro-4- hydroxyphenyl)quinolin-3-yl) (cyclopropyl)methanone hydrochloride | 0.0019 |
| 937 | 1-(4-((trans)-4-aminocyclohexylamino) -6-(3-chloro-5-fluoro-4- hydroxyphenyl)quinolin-3-yl) -2-methylpropan-1-one dihydrochloride | 0.0054 |
| 938 | 1-(4-((trans)-4-aminocyclohexylamino)-6- (3,5-difluoro-4-hydroxyphenyl) quinolin-3-yl)-2- methylpropan-1-one dihydrochloride | 0.017 |
| 939 | 1-(4-((trans)-4-aminocyclohexylamino)-6- (3,5-dichloro-4-hydroxyphenyl) quinolin-3-yl)ethanone hydrochloride | 0.0034 |
| 940 | 1-(4-((trans)-4-aminocyclohexylamino)-6- (3-chloro-4-hydroxy-5- methoxyphenyl)quinolin-3-yl) ethanone dihydrochloride | 0.0012 |
| 941 | cyclopropyl(6-(3,5-dichloro-4- hydroxyphenyl)-4-((trans)-4- (dimethylamino)cyclohexylamino) quinolin-3-yl)methanone dihydrobromide | 0.0016 |
| 264 | (6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-((trans)-4- (dimethylamino)cyclohexylamino) quinolin-3-yl)(cyclopropyl) methanone | 0.0029 |
| 324 | cyclopropyl(6-(3,5-dichloro-4- hydroxyphenyl)-4-((trans)-4- ((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl) methanone | 0.00085 |
| 366 | Cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[4-(pyrr olidin-1-ylmethyl)phenylamino]quinolin-3-yl}methanone | 0.15 |
| 374 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((4-((dimethylamin o)methyl)phenyl)amino)quinolin-3-yl)ethanone | 0.0066 |
| 942 | 1-(6-(3,5-dichloro-4- hydroxyphenyl)-4-(4- ((dimethylamino)methyl) phenylamino)quinolin-3-yl) ethanone dihydrobromide | 0.0022 |
| 378 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((*trans*-4-((di methylamino)methyl)cyclohexyl)amino)quinolin-3-yl)etha | 0.0061 |

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| | none | |
| 943 | 1-(6-(3-chloro-5-fluoro-4- hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl) ethanone dihydrochloride | 0.004 |
| 379 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((*trans*-4-((dimethy lamino)methyl)cyclohexyl)amino)quinolin-3-yl)ethanone | 0.0031 |
| 944 | 1-(6-(3,5-dichloro-4- hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl) cyclohexylamino)quinolin-3-yl) ethanone dihydrochloride | 0.00094 |

Examples

Western blot analysis

To evaluate the expression status of MELK in several cell lines, western blot analysis was performed using crude cell lysate collected from those cells. Anti-MELK antibody (clone 31, BD Biosciences) was used to visualize the expression. Breast cancer cell lines, BT-549, T47D and A549 expressed MELK significantly although Bladder cancer cell line and HT-1197 showed no expression of MELK.

Examples

Cell-based assay

Active candidate inhibitors against MELK were evaluated for their target-specific cytotoxicity using T47D, A549, BT-549, and HT-1197 cells was used for negative control. 100 micro-L of cell suspension was seeded onto 96-well microtiter plate (ViewPlate-96FTC, PerkinElmer). The initial cell concentration of T47D, A549, BT-549, and HT-1197 were 3,000 cells/well, 2,000 cells/well and 2,500 cells/well, respectively. Cellular growth was determined using Cell Counting Kit-8 (DOJINDO) at 72 hours after the exposure of the candidate inhibitors. IC50 was used as an indicator of the anti-proliferative activity of the inhibitors, and calculated by serial dilution method (0, 1.5625, 3.125, 6.25, 12.5, 25, 50, and 100 micro-M). Accurate IC50 values were calculated as described previously.

$IC_{50}$ values of the typical compounds of the present invention are shown in following table 3:

Table 3;

| Example | Compound Name | IC50 (μM) (BT549) | $IC_{50}$ (μM) (T47D) | $IC_{50}$ (μM) (A549) | $IC_{50}$ (μM) (HT1197) |
|---|---|---|---|---|---|
| 55 | {4-[*trans*-4-aminocyclohexylamino]-6-(4-hydroxyphenyl)quinolin-3- yl}(cyclopropyl)methanone | 0.43 | 0.2 | 0.48 | 2 |
| 81 | {4-[*trans*-4-aminocyclohexylamino]-6-(4-hydroxy-3-methoxyphenyl) quinolin-3-yl}(cyclopropyl) | 0.55 | 0.13 | 0.23 | 1.2 |

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| | methanone | | | | |
| 96 | 5-{4-[*trans*-4-aminocyclohexylamino]-3-(cyclopropanecarbonyl) quinolin-6-yl}pyrimidine-2-carbonitrile | 0.93 | 0.29 | 1.3 | 1.5 |
| 108 | 5-{4-[*trans*-4-aminocyclohexylamino]-3-isobutyrylquinolin-6-yl} picolinonitrile | 14 | 6.1 | 13 | 15 |
| 116 | {4-[*trans*-4-aminocyclohexylamino]-6-(1*H*-benzo[*d*]imidazol-5-yl ) quinolin-3-yl}(cyclopropyl) methanone | 5.7 | 1.8 | 13 | 15 |
| 119 | 5-{4-[*trans*-4-aminocyclohexylamino]-3-(cyclopropanecarbonyl) quinolin-6-yl}thiophene-2-carbonitrile | 14 | 8.8 | 5.4 | 8 |
| 133 | Cyclopropyl[4-{4-[(dimethylamino)methyl] piperidin-1-yl}-6-(4-hydroxy-3-methoxyphenyl) quinolin-3-yl]methanone | 1.7 | 0.7 | 0.79 | 1.9 |
| 155 | [6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-(2,8-diazaspiro[4,5]decan-8-yl )quinolin-3-yl]( cyclopropyl) methanone | 0.79 | 0.43 | 0.68 | 2.4 |
| 156 | {4-[*trans*-4-aminocyclohexylamino]-6-(3,5-difluoro-4-hydroxyphenyl )quinolin-3-yl}(cyclopropyl ) methanone | 0.16 | 0.095 | 0.88 | 3.1 |
| 157(a) | {4-[*trans*-4-aminocyclohexylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl} (cyclopropyl)methanone | 0.33 | 0.15 | 0.57 | 3.7 |
| 157(b) | {4-[*trans*-4-aminocyclohexylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl} | 0.31 | 0.096 | 0.3 | 4.7 |

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| | (cyclopropyl)methanone dihydrochloride | | | | |
| 160 | {4-[*trans*-4-aminocyclohexylamino]-6-(2,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl)methanone | 0.39 | 0.28 | 0.68 | 1.2 |
| 165 | {4-(*cis*-4-aminocyclohexylamino)-6-(4-hydroxy-3-methoxyphenyl) quinolin-3-yl}(cyclopropyl) methanone | 0.93 | 0.57 | 0.45 | 2.1 |
| 177 | Cyclopropyl[6-(4-hydroxy-3-methoxyphenyl)-4-(1-methylpiperidin-4-ylamino) quinolin-3-yl]methanone | 2.6 | 0.88 | 0.83 | 2.3 |
| 179 | {4-[*trans*-4-aminocyclohexylamino]-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl}(cyclopropyl)methanone | 0.22 | 0.11 | 0.85 | 5.2 |
| 180 | [4-(*cis*-4-aminocyclohexylamino)-6-(3,5-difluoro-4-hydroxyphenyl )quinolin-3-yl](cyclopropyl) methanone | 0.3 | 0.17 | 0.9 | 4.5 |
| 181 | Cyclopropyl[6-(3,5-difluoro-4-hydroxyphenyl)-4-{4-[1-(dimethylamino)ethyl] piperidin-1-yl}quinolin-3-yl] methanone | 0.73 | 0.47 | 0.7 | 1.1 |
| 185(a) | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(diethylamino) cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone | 2 | 0.59 | 0.42 | 6.9 |
| 185(b) | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(diethylamino) cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone dihydrochloride | 1 | 0.49 | 0.18 | 4.7 |
| 187 | Cyclopropyl(4-{4-[1-(dimethyla | 2 | 0.44 | 0.65 | 2.2 |

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| | mino) ethyl]piperidin-1-yl}-6-(4-hydroxy-3-methoxyphenyl) quinolin-3-yl)methanone | | | | |
| 192 | {6-(3-Chloro-4-hydroxyphenyl)-4-[4-(diethylamino) cyclohexylamino]quinolin -3-yl}(cyclopropyl)methanone | 1.3 | 0.57 | 0.42 | 2.2 |
| 193 | Cyclopropyl{4-[4-(diethylamino) cyclohexylamino]-6-(4-hydroxy-3-methoxyphenyl) quinolin-3-yl}methanone | 2 | 0.52 | 0.59 | 4.2 |
| 201 | {6-(3-Chloro-4-hydroxy-5 -methoxyphenyl)-4 -[(1-methylpiperidin-4-yl) methylamino]quinolin-3-yl} (cyclopropyl)methanone | 1.8 | 0.76 | 0.73 | 7.4 |
| 205 | 1-{4-[*trans*-4-aminocyclohexylamino]-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl} -2-methylpropan-1-one | 0.15 | 0.066 | 0.6 | 2.4 |
| 212 | {4-[*trans*-4-aminocyclohexylamino]-6-(pyridin-4-yl)quinolin-3-yl } (cyclopropyl)methanone | 2.5 | 2.7 | 0.99 | 7.2 |
| 213 | {4-[*trans*-4-aminocyclohexylamino]-6-(1*H*-pyrazol-4-yl)quinolin -3-yl}(cyclopropyl)methanone | 1.7 | 0.89 | 5.1 | 14 |
| 214 | 1-{4-[*trans*-4-aminocyclohexylamino]-6-(3,5-difluoro-4-hydroxy phenyl )quinolin-3-yl}-2-methylpropan-1-one | 0.084 | 0.048 | 0.65 | 1.4 |
| 215 | {6-(3-Chloro-4-hydroxyphenyl)-4-[2-(piperazin-1-yl)ethylamino] quinolin-3-yl}(cyclopropyl) methanone | 1.5 | 0.92 | 1.2 | 3.9 |
| 219 | 1-{4-[*trans*-4-aminocyclohexylamino]-6-(3-chloro-4-hydroxyphe | 0.25 | 0.11 | 0.32 | 1.2 |

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| | nyl) quinolin-3-yl}-2-methylpropan-1-one | | | | |
| 225(a) | 1-{4-[*trans*-4-aminocyclohexylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}-2-methylpropan-1-one | 0.18 | 0.073 | 0.43 | 2 |
| 225(b) | 1-{4-[*trans*-4-aminocyclohexylamino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl}-2-methylpropan-1-one dihydrochloride | 0.17 | 0.048 | 0.22 | 1.6 |
| 240 | 2-Chloro-4-{4-[4-(diethylamino)cyclohexylamino]-3-(methylsulfonyl)quinolin-6-yl}-6-methoxyphenol dihydrochloride | 1.5 | 0.97 | 0.78 | 3.8 |
| 243 | [6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-(piperidin-4-ylmethylamino)quinolin-3-yl](cyclopropyl)methanone | 1.8 | 0.33 | 0.62 | 7.3 |
| 245 | 2-Chloro-4-[4-{4-[1-(dimethylamino)ethyl]piperidin-1-yl}-3-(methylsulfonyl)quinolin-6-yl]-6-methoxyphenol | 0.74 | 0.35 | 0.25 | 2.3 |
| 246 | 2-Chloro-4-[4-{4-[1-(dimethylamino)ethyl]piperidin-1-yl}-3-(methylsulfonyl)quinolin-6-yl] phenol | 0.72 | 0.18 | 0.35 | 1.2 |
| 249 | [6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-(1-methylpiperidin-4-ylamino)quinolin-3-yl](cyclopropyl)methanone | 1.3 | 0.83 | 0.3 | 4.4 |
| 250 | [6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-{4-[1-(dimethylamino)ethyl] | 0.61 | 0.16 | 0.11 | 1.7 |

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| | piperidin-1-yl}quinolin-3-yl] (cyclopropyl)methanone | | | | |
| 255 | {6-(3-Chloro-4-hydroxy-5 -methoxyphenyl)-4-[*trans*-4-(di methylamino) cyclohexylamino]quinolin -3-yl}(cyclopropyl)methanone | 0.64 | 0.28 | 0.18 | 1.9 |
| 256 | 1-{4-[*trans*-4-aminocyclohexyla mino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl} ethanone | 0.31 | 0.064 | 0.44 | 100 |
| 258 | 1-{4-[*trans*-4-aminocyclohexyla mino]-6-(3,5-difluoro-4-hydroxy phenyl )quinolin-3-yl}ethanone | 0.16 | 0.071 | 0.85 | 100 |
| 259 | 1-{4-[*trans*-4-aminocyclohexyla mino]-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl} ethanone | 0.43 | 0.057 | 0.099 | 2.5 |
| 262 | 1-(4-((trans)-4-aminocyclohexyl amino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl) -3-methylbutan-1-one | 0.91 | 0.13 | 0.36 | 2.2 |
| 263 | Cyclopropyl{6-(3,5-dichloro-4-hydroxyphenyl)-4-[*trans*-4-(dim ethylamino) cyclohexylamino] quinolin-3-yl}methanone | 0.41 | 0.13 | 0.2 | 1.2 |
| 266 | Cyclopropyl(4-((trans)-4-(dimeth ylamino) cyclohexylamino)-6-(4-hydroxy-3-methoxyphenyl) quinolin-3-yl)methanone | 0.94 | 0.29 | 0.37 | 3 |
| 267 | 1-{4-[*trans*-4-aminocyclohexyla mino]-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl} -3-methylbutan-1-one dihydrochloride | 0.72 | 0.14 | 0.38 | 3 |
| 269 | [6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-{4-[1-(dimeth | 0.5 | 0.22 | 0.44 | 1.3 |

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| | ylamino)ethyl] piperidin-1-yl}quinolin-3-yl] (cyclopropyl)methanone | | | | |
| 270 | {6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[(1-methylpiperidin-4-yl) methylamino]quinolin-3-yl} (cyclopropyl)methanone | 1.1 | 0.51 | 0.69 | 2.9 |
| 276 | [6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-{4-[(dimethylamino)methyl] piperidin-1-yl}quinolin-3-yl] (cyclopropyl)methanone | 0.58 | 0.16 | 0.21 | 1.8 |
| 279 | [6-(3-Chloro-4-hydroxyphenyl)-4-{4-[(dimethylamino) methyl]piperidin-1-yl} quinolin-3-yl](cyclopropyl) methanone | 0.86 | 0.21 | 0.3 | 6.7 |
| 280 | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl) piperidin-1-yl]quinolin-3-yl} (cyclopropyl)methanone | 0.71 | 0.25 | 0.2 | 2.9 |
| 283 | {6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl) piperidin-1-yl]quinolin-3-yl} (cyclopropyl)methanone | 0.72 | 0.35 | 0.54 | 3 |
| 284 | {4-[*trans*-4-aminocyclohexylamino]-6-(3-chloro-4-hydroxy-5-methoxyphenyl)-7-fluoroquinolin-3-yl} (cyclopropyl)methanone | 1.7 | 0.62 | 0.49 | 2.2 |
| 294 | Cyclopropyl{6-(3,5-difluoro-4-hydroxyphenyl)-4-[*trans*-4-(dimethylamino) cyclohexylamino]-7- | 0.55 | 0.68 | 0.43 | 1.5 |

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| | fluoroquinolin-3-yl} methanone | | | | |
| 295 | {6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[*trans*-4-(dimethylamino) cyclohexylamino]-7-fluoroquinolin-3-yl} (cyclopropyl)methanone | 0.39 | 0.42 | 0.31 | 1.2 |
| 303 | 1-{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(diethylamino) cyclohexylamino]quinolin-3-yl}ethanone | 1.7 | 0.39 | 0.35 | 7.4 |
| 305 | 1-[6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-{4-[(dimethylamino)methyl] piperidin-1-yl}quinolin-3-yl] ethanone | 0.33 | 0.21 | 0.14 | 3.6 |
| 307 | Cyclopropyl{6-(3-fluoro-4-hydroxy-5-methoxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl) piperidin-1-yl]quinolin-3-yl} methanone | 1.2 | 0.79 | 0.53 | 3 |
| 309 | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[(3-amino) adamantylamino]quinolin-3-yl}(cyclopropyl)methanone | 0.49 | 0.32 | 0.28 | 0.5 |
| 311 | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[*cis*-4-(diethylamino) cyclohexylamino]quinolin-3-yl}(cyclopropyl)methanone | 1.5 | 0.51 | 0.21 | 7.6 |
| 313 | Cyclopropyl{6-[4-hydroxy-3-(trifluoromethoxy)phenyl]-4-[4-(pyrrolidin-1-ylmethyl] piperidin-1-yl}quinolin-3-yl) methanone | 1.3 | 0.67 | 0.8 | 3.2 |
| 314 | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[*trans*-4-(die | 0.73 | 0.16 | 0.22 | 4.3 |

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| | thylamino) cyclohexylamino]quinolin -3-yl}(cyclopropyl)methanone | | | | |
| 315 | [6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-{[*trans*-4-(dimethylamino)cyclohexyl] methylamino}quinolin-3-yl] (cyclopropyl)methanone | 1.4 | 0.64 | 0.3 | 3 |
| 316 | [6-(3-Chloro-4-hydroxy-5 -methoxyphenyl)-4-{*trans*-4-[(dimethylamino)methyl] cyclohexylamino}quinolin -3-yl](cyclopropyl)methanone | 1.3 | 0.5 | 0.32 | 6.3 |
| 318 | 1-{6-(3-Chloro-4-hydroxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl) piperidin-1-yl]quinolin-3-yl} -2-methylpropan-1-one | 1.8 | 0.92 | 0.87 | 1.4 |
| 321 | 1-{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl) piperidin-1-yl]quinolin-3-yl} ethanone | 0.29 | 0.19 | 0.18 | 5.1 |
| 323 | 1-{6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl) piperidin-1-yl]quinolin-3-yl} -2-methylpropan-1-one | 1.5 | 0.63 | 0.87 | 1.2 |
| 325 | Cyclopropyl[6-(3,5-dichloro -4-hydroxyphenyl)-4-{[*trans*-4-(dimethylamino)cyclohexyl] methylamino}quinolin-3-yl] methanone | 1.9 | 0.78 | 0.62 | 10 |
| 327 | [6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-{[*trans*-4-(dimethylamino)cyclohexyl] methylamino}quinolin-3-yl] | 1 | 0.48 | 0.42 | 3 |

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| | (cyclopropyl)methanone | | | | |
| 332 | {6-(3-Chloro-4-hydroxyphenyl)-4-[4-(morpholinomethyl) piperidin-1-yl]quinolin-3-yl} (cyclopropyl)methanone | 1.5 | 0.67 | 0.55 | 10 |
| 334 | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(morpholinomethyl)piperidin-1-yl]quinolin-3-yl} (cyclopropyl)methanone | 0.77 | 0.55 | 0.41 | 4.8 |
| 335 | 1-{6-(3-Chloro-4-hydroxyphenyl)-4-[4-(diethylamino) cyclohexylamino]quinolin -3-yl}ethanone | 0.65 | 0.1 | 0.29 | 1.2 |
| 336 | 1-{6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[4-(pyrrolidin-1-ylmethyl) piperidin-1-yl]quinolin-3-yl} ethanone | 0.85 | 0.33 | 0.8 | 5 |
| 339 | [-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-{4-[(dimethylamino)methyl] phenylamino}quinolin-3-yl] cyclopropyl)methanone | 0.49 | 0.15 | 0.19 | 1.9 |
| 342 | {6-(3-Chloro-4-hydroxyphenyl)-4-[*trans*-4-(pyrrolidin-1-yl) cyclohexylamino]quinolin -3-yl}(cyclopropyl)methanone | 0.68 | 0.25 | 0.27 | 1.8 |
| 343 | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[*trans*-4-(pyrrolidin-1-yl) cyclohexylamino]quinolin -3-yl}(cyclopropyl)methanone | 0.68 | 0.33 | 0.2 | 3.4 |
| 345 | Cyclopropyl[6-(3,5-dichloro-4-hydroxyphenyl)-4-{4- | 0.1 | 0.054 | 0.051 | 0.67 |

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| | [(dimethylamino)methyl] phenylamino}quinolin-3-yl] methanone | | | | |
| 347 | [6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-{4-[(dimethylamino)methyl] piperidin-1-yl}quinolin-3-yl] (cyclopropyl)methanone | 0.62 | 0.42 | 0.48 | 1.8 |
| 348 | 1-{6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[*trans*-4-(dimethylamino) cyclohexylamino]quinolin-3-yl}-3-methylbutan-1-one | 0.93 | 0.41 | 0.47 | 3 |
| 349 | {6-(3-Chloro-5-fluoro-4-hydroxyphenyl)-4-[4-(4-methylpiperazin-1-yl) piperidin-1-yl]quinolin-3-yl} (cyclopropyl)methanone | 0.91 | 0.49 | 0.98 | 5.8 |
| 350 | {6-(3-Chloro-4-hydroxyphenyl)-4-[4-(4-methylpiperazin-1-yl) piperidin-1-yl]quinolin-3-yl} (cyclopropyl)methanone | 0.98 | 0.26 | 0.44 | 2.5 |
| 351 | {6-(3-Chloro-4-hydroxy-5-methoxyphenyl)-4-[4-(4-methyl piperazin-1-yl) piperidin-1-yl]quinolin-3-yl} (cyclopropyl)methanone | 0.67 | 0.34 | 0.33 | 3 |
| 353 | Cyclopropyl[4-{4-[(dimethylamino)methyl] piperidin-1-yl}-6-(3-ethoxy-4-hydroxyphenyl)quinolin-3-yl]methanone | 1.5 | 0.61 | 0.68 | 2.5 |

">100" in the table means over 100 microM.

$IC_{50}$ values of the typical compounds of the present invention are shown in following table 4:

Table 4;

| Example | Compound Name | IC50 (μM) (22Rv1) | IC50 (μM) (T47D) | IC50 (μM) (HT1197) | IC50 (μM) (A549) | IC50 (μM) (DU4475) |
|---|---|---|---|---|---|---|
| 384 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-3-yl)(cyclopentyl)methanone | NT | 2 | 4 | 1.9 | NT |
| 385 | (6-(3-chloro-4-hydroxyphenyl)-4-(4-(diethylamino)cyclohexylamino)quinolin-3-yl)(cyclopentyl)methanone | NT | 1.7 | 1.9 | 0.94 | NT |
| 386 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(diethylamino)cyclohexylamino)quinolin-3-yl)(cyclopentyl)methanone | NT | 0.41 | 0.78 | 0.4 | 0.29 |
| 387 | (6-(3-chloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)(cyclopentyl)methanone | NT | 1.6 | 1.9 | 1 | NT |
| 388 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)(cyclopentyl)methanone | NT | 0.52 | 1.5 | 0.52 | 0.21 |
| 389 | (6-(3-chloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-3-yl)(cyclopentyl)methanone | NT | 2.9 | 6.9 | 1.7 | NT |
| 391 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)ethanone | NT | 0.12 | 4.2 | 1 | NT |
| 392 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone | NT | 0.25 | 10 | 0.27 | 0.44 |
| 394 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)eth | NT | 0.4 | 5.3 | 0.25 | 0.24 |

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| | yl)piperazin-1-yl)quinolin-3-yl)(cyclopropyl)methanone | | | | | |
| 397 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)methanone | NT | 0.33 | 5.2 | 0.15 | 0.088 |
| 398 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.78 | 4.7 | 0.38 | 0.73 |
| 399 | 2-chloro-4-(4-(4-((dimethylamino)methyl)phenylamino)-3-(methylsulfonyl)quinolin-6-yl)-6-fluorophenol | NT | 0.27 | 1.9 | 0.47 | 0.16 |
| 400 | 2,6-dichloro-4-(4-(4-((dimethylamino)methyl)phenylamino)-3-(methylsulfonyl)quinolin-6-yl)phenol | NT | 0.23 | 1.8 | 0.3 | 0.07 |
| 401 | 2,6-dichloro-4-(4-(4-((dimethylamino)methyl)phenylamino)-3-(methylsulfonyl)quinolin-6-yl)phenol hydrochloride | 0.52 | 0.19 | 2.2 | 0.44 | 0.11 |
| 402 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl)piperazin-1-yl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.88 | 5.1 | 1.2 | 0.48 |
| 403 | (6-(3-chloro-4-hydroxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl)piperazin-1-yl)quinolin-3-yl)(cyclopropyl)methanone | NT | 4.5 | 10 | 1.3 | NT |
| 404 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(5-(piperazin-1-yl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.31 | 2.2 | 0.42 | NT |
| 405 | cyclopropyl(6-(4-hydroxy-3-methoxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)methanone | NT | 0.76 | 3.5 | 0.8 | NT |
| 406 | (6-(3-chloro-4-hydroxyphenyl)-4-(4 | NT | 1.3 | 3.4 | 0.49 | NT |

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| | -((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | | | | | |
| 407 | 2-chloro-6-fluoro-4-(3-(methylsulfonyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin-1-yl)quinolin-6-yl)phenol | NT | 0.75 | 6.5 | 3.8 | NT |
| 408 | 2-chloro-4-(3-(methylsulfonyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin-1-yl)quinolin-6-yl)phenol | NT | 8.2 | 9.5 | 3.2 | NT |
| 409 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(5-(piperazin-1-yl)pyridin-2-ylamino)quinolin-3-yl)methanone | NT | 0.074 | 1.6 | 0.26 | 0.098 |
| 410 | 2-chloro-4-(4-(4-((dimethylamino)methyl)phenylamino)-3-(methylsulfonyl)quinolin-6-yl)-6-methoxyphenol | NT | 0.58 | 6.2 | 1.2 | NT |
| 411 | 2-chloro-4-(4-(4-((dimethylamino)methyl)phenylamino)-3-(methylsulfonyl)quinolin-6-yl)phenol | NT | 0.29 | 0.63 | 0.37 | NT |
| 412 | 2-chloro-6-methoxy-4-(3-(methylsulfonyl)-4-(4-(pyrrolidin-1-ylmethyl)piperidin-1-yl)quinolin-6-yl)phenol | NT | 1.4 | 2.5 | 0.58 | NT |
| 413 | 5-(3-acetyl-4-(4-(pyrrolidin-1-ylmethyl)phenylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | NT | 0.35 | 1.2 | 1.7 | NT |
| 414 | 5-(3-acetyl-4-(4-((dimethylamino)methyl)phenylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | NT | 0.24 | 0.8 | 1.5 | NT |
| 415 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)phenylamino)quinolin-3-yl)ethanone | NT | 0.12 | 10 | 0.15 | 0.067 |
| 416 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(pyrrolidin-1-ylmethyl)phenylamino)quinolin-3-yl)ethanone dihydrobromide | 0.19 | 0.066 | 6.1 | 0.11 | 0.053 |
| 417 | cyclopropyl(6-(3,5-dichloro-4-hydr | NT | 1.7 | 22 | 1.8 | NT |

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| | oxyphenyl)-4-(5-((dimethylamino) methyl)pyridin-2-ylamino)quinolin-3-yl)methanone | | | | | |
| 418 | 5-(3-acetyl-4-(1R,4R)-4-((dimethyl amino)methyl)cyclohexylamino)qui nolin-6-yl)pyrimidine-2-carbonitril e | NT | 0.23 | 1.4 | 0.95 | 0.5 |
| 419 | 1-(6-(3-chloro-4-hydroxy-5-methox yphenyl)-4-(4-(pyrrolidin-1-ylmeth yl)phenylamino)quinolin-3-yl)ethan one | NT | 0.99 | 5.1 | 0.84 | NT |
| 420 | 2,6-dichloro-4-(4-(1R,4R)-4-((dime thylamino)methyl)cyclohexylamino )-3-(methylsulfonyl)quinolin-6-yl)p henol | NT | 0.47 | 2.5 | 0.69 | 0.14 |
| 421 | 2,6-dichloro-4-(4-(1R,4R)-4-((dime thylamino)methyl)cyclohexylamino )-3-(methylsulfonyl)quinolin-6-yl)p henol | 0.64 | 0.47 | 2.1 | 0.68 | 0.086 |
| 422 | 2-chloro-4-(4-(1R,4R)-4-((dimethyl amino)methyl)cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl)-6-m ethoxyphenol | NT | 0.7 | 4.4 | 0.65 | NT |
| 423 | 2-chloro-4-(4-(1R,4R)-4-((dimethyl amino)methyl)cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl)-6-fl uorophenol | NT | 0.42 | 2.4 | 0.93 | 0.31 |
| 424 | 2-chloro-4-(4-(1R,4R)-4-((dimethyl amino)methyl)cyclohexylamino)-3-(methylsulfonyl)quinolin-6-yl)phen ol | NT | 0.43 | 1.1 | 0.79 | NT |
| 425 | (6-(3-chloro-5-fluoro-4-hydroxyphe nyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl )methanone | 0.082 | 0.042 | 1.4 | 0.16 | 0.044 |
| 426 | 5-(3-(cyclopropanecarbonyl)-4-(1R ,4R)-4-((dimethylamino)methyl)cy | NT | 0.43 | 3.7 | 1.5 | NT |

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| | clohexylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | | | | | |
| 427 | (6-(3-chloro-4-hydroxyphenyl)-4-(5-(piperazin-1-yl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.2 | 1.4 | 0.24 | 0.24 |
| 429 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(5-((dimethylamino)methyl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 3.8 | 19 | 5.1 | NT |
| 435 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(5-((dimethylamino)methyl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 2.7 | 12 | 2.8 | NT |
| 439 | 5-(3-(cyclopropanecarbonyl)-4-(5-((dimethylamino)methyl)pyridin-2-ylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | NT | 0.61 | 3.6 | 4 | NT |
| 440 | 4-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-yl)-1-(2-(pyrrolidin-1-yl)ethyl)piperazin-2-one | NT | 1.1 | 10 | 5.1 | NT |
| 443 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(5-(1-methylpyrrolidin-2-yl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 7.1 | 10 | 6.6 | NT |
| 444 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(5-(1-methylpyrrolidin-2-yl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 6.8 | 10 | 7.6 | NT |
| 445 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(5-(1-methylpyrrolidin-2-yl)pyridin-2-ylamino)quinolin-3-yl)methanone | NT | 7.5 | 10 | 4.1 | NT |
| 448 | (6-(5-chloro-4-hydroxy-2-methylphenyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-3-yl)(cyclo | NT | 2 | 7.9 | 1.7 | NT |

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| | propyl)methanone | | | | | |
| 449 | cyclopropyl(4-(4-((dimethylamino)methyl)piperidin-1-yl)-6-(6-hydroxynaphthalen-2-yl)quinolin-3-yl)methanone | NT | 1.8 | 3.3 | 0.64 | NT |
| 453 | cyclopropyl(4-(4-((dimethylamino)methyl)piperidin-1-yl)-6-(1H-indol-5-yl)quinolin-3-yl)methanone | NT | 1.2 | 2.3 | 0.48 | NT |
| 457 | (6-(3-chloro-5-ethoxy-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.22 | 2.4 | 0.14 | 0.21 |
| 459 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-yl)quinolin-3-yl)methanone | NT | 0.83 | 10 | 1.9 | NT |
| 460 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(morpholinomethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.65 | 4.2 | 0.59 | 0.42 |
| 461 | 5-(3-(cyclopropanecarbonyl)-4-(4-(morpholinomethyl)phenylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | NT | 0.17 | 2 | 1.6 | 0.41 |
| 462 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(morpholinomethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.44 | 6 | 0.7 | 1.1 |
| 463 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(morpholinomethyl)phenylamino)quinolin-3-yl)methanone | NT | 0.52 | 3.6 | 0.43 | 0.26 |
| 469 | 5-(3-(cyclopropanecarbonyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | NT | 0.18 | 1.4 | 0.99 | 0.43 |
| 470 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(4-methylpiperazin-1- | NT | 0.26 | 2.2 | 0.56 | 0.68 |

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| | yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | | | | | |
| 471 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.14 | 2.8 | 0.21 | 0.14 |
| 472 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone | NT | 0.3 | 5.7 | 0.18 | 0.11 |
| 474 | 5-(3-(cyclopropanecarbonyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-6-yl)indolin-2-one | NT | 10 | 10 | NT | NT |
| 480 | 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(5-hydroxy-1H-indol-2-yl)quinolin-3-yl)-2-methylpropan-1-one | NT | 0.59 | 4.6 | 2.7 | 0.93 |
| 481 | methyl 4-(3-(cyclopropanecarbonyl)-4-(4-((dimethylamino)methyl)piperidin-1-yl)quinolin-6-yl)benzoate | NT | 10 | 10 | NT | NT |
| 482 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenyl)quinolin-3-yl)methanone | NT | 0.54 | 3.1 | 0.96 | 0.9 |
| 483 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone | NT | 0.64 | 0.89 | 0.64 | 0.69 |

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| 486 | 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-5-ethoxy-4-hydroxyphenyl)quinolin-3-yl)ethanone | NT | 0.15 | 2.2 | 0.11 | 0.13 |
| 487 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone | NT | 0.041 | 1.4 | 0.088 | 0.1 |
| 488 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone | 0.38 | 0.084 | 2.1 | 0.2 | 0.14 |
| 493 | (4-(1R,4R)-4-(aminomethyl)cyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.078 | 0.82 | 0.095 | 0.068 |
| 494 | (4-(1R,4R)-4-(aminomethyl)cyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 0.13 | 0.081 | 0.48 | 0.085 | 0.055 |
| 495 | (4-(1R,4R)-4-(aminomethyl)cyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.045 | 3.9 | 0.35 | 0.018 |
| 496 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.036 | 0.64 | 0.079 | 0.068 |
| 497 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)methanone | NT | 0.052 | 0.97 | 0.12 | 0.056 |
| 501 | (4-(1R,4R)-4-(aminomethyl)cyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.061 | 1.2 | 0.57 | 0.031 |
| 502 | 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-4-hydroxy-5-met | NT | 0.045 | 0.31 | 0.1 | 0.041 |

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| | hoxyphenyl)quinolin-3-yl)-2-methylpropan-1-one | | | | | |
| 503 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.24 | 1.1 | 0.37 | 0.46 |
| 504 | (4-(4-(aminomethyl)phenylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.084 | 0.71 | 0.081 | 0.019 |
| 505 | (4-(4-(aminomethyl)phenylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 0.088 | 0.063 | 0.4 | 0.067 | 0.026 |
| 506 | (4-(4-(aminomethyl)phenylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.15 | 0.74 | 0.18 | 0.13 |
| 507 | (4-(4-(aminomethyl)phenylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.094 | 0.58 | 0.059 | 0.018 |
| 508 | (4-(4-(aminomethyl)phenylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 0.099 | 0.078 | 0.49 | 0.067 | 0.02 |
| 509 | 5-(4-(4-(aminomethyl)phenylamino)-3-(cyclopropanecarbonyl)quinolin-6-yl)pyrimidine-2-carbonitrile | NT | 0.19 | 0.95 | 0.79 | 0.6 |
| 510 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-3-yl)methanone | NT | 0.054 | 1 | 0.12 | 0.018 |
| 511 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(piperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)methanone | NT | 0.18 | 10 | 0.31 | 0.019 |

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| 512 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1-(piperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.41 | 2.9 | 0.3 | 0.31 |
| 513 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.19 | 3.8 | 0.099 | 0.086 |
| 514 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.44 | 0.77 | 0.26 | 0.21 |
| 515 | (4-((1s,4s)-4-(aminomethyl)cyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.23 | 3.9 | 0.83 | 0.12 |
| 517 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1R,4R)-4-(methylamino)cyclohexyl)amino)quinolin-3-yl)(cyclopropyl)methanone | 0.18 | 0.067 | 0.38 | 0.072 | 0.048 |
| 518 | 2-((((1s,4s)-4-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino)cyclohexyl)methyl)(methyl)amino)acetonitrile | NT | 0.16 | 3.4 | 0.17 | 0.078 |
| 519 | (6-(3-chloro-4-hydroxyphenyl)-4-(1-(piperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.12 | 1.6 | 0.14 | 0.1 |
| 520 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(piperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.081 | 10 | 0.52 | 0.042 |
| 522 | 5-(3-(cyclopropanecarbonyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | NT | 0.23 | 1.1 | 0.95 | 0.91 |

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| 523 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.033 | 1.3 | 0.19 | 0.02 |
| 524 | 2-((((1s,4s)-4-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-(cyclopropanecarbonyl)quinolin-4-ylamino)cyclohexyl)methyl)(methyl)amino)acetonitrile | NT | 0.2 | 1.7 | 0.39 | 0.1 |
| 525 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(5-(piperazin-1-yl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.48 | 11 | 1.7 | 0.46 |
| 526 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)methanone | NT | 0.29 | 1.2 | 0.25 | 0.15 |
| 527 | 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone | NT | 0.034 | 10 | 0.42 | 0.02 |
| 528 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(5-(piperazin-1-yl)pyridin-2-ylamino)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | NT | 1.8 | 4.2 | 1.3 | 1.7 |
| 529 | 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)butan-1-one | NT | 0.081 | 1.5 | 0.15 | 0.076 |
| 530 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)butan-1-one | NT | 0.07 | 1.2 | 0.15 | 0.086 |
| 531 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)butan-1-one dihydrochloride | NT | 0.11 | 1.3 | 0.18 | 0.072 |
| 532 | 1-(4-(1R,4R)-4-aminocyclohexyla | NT | 0.046 | 2.9 | 0.49 | 0.03 |

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| | mino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)butan-1-one | | | | | |
| 535 | 1-(4-(1R,4R)-4-aminocyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)butan-1-one | NT | 0.077 | 3.3 | 0.24 | 0.025 |
| 537 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)butan-1-one | NT | 0.11 | 0.94 | 0.15 | 0.098 |
| 538 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)butan-1-one | NT | 0.28 | 3.1 | 0.45 | 0.27 |
| 539 | 5-(3-butyryl-4-(4-((dimethylamino)methyl)phenylamino)quinolin-6-yl)pyrimidine-2-carbonitrile | NT | 0.37 | 1.6 | 1.6 | 1.5 |
| 540 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-7-fluoroquinolin-3-yl)(cyclopropyl)methanone | NT | 0.89 | 3.7 | 0.25 | 0.35 |
| 541 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-7-fluoroquinolin-3-yl)(cyclopropyl)methanone | NT | 0.42 | 1.1 | 0.076 | 0.087 |
| 542 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-3-yl)ethanone | NT | 0.078 | 1.7 | 0.1 | 0.069 |
| 543 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 0.14 | 0.047 | 1.1 | 0.076 | 0.051 |
| 547 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-7-fluoroquinolin-3-yl)methanone | NT | 0.41 | 1.9 | 0.13 | 0.14 |

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| 548 | (4-(6-(4-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.097 | 3.4 | 0.45 | 0.099 |
| 549 | (4-(6-(4-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | NT | 0.15 | 3.2 | 0.48 | 0.078 |
| 550 | (4-(6-(4-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.1 | 2.7 | 0.58 | 1 |
| 551 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone | NT | 2 | 6.9 | NT | NT |
| 552 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-8-fluoroquinolin-3-yl)methanone | NT | 1.1 | 9 | NT | NT |
| 553 | (4-(2-(4-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.12 | 2.1 | 0.39 | 0.95 |
| 554 | (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.068 | 1.9 | 0.08 | 0.025 |
| 555 | (4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone | NT | 0.44 | 10 | NT | NT |
| 556 | (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.03 | 0.96 | 0.023 | 0.016 |
| 557 | (4-(6-(4-aminopiperidin-1-yl)pyridi | NT | 0.11 | 3.1 | 0.52 | 0.18 |

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| | n-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | | | | | |
| 558 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-3-yl)ethanone | NT | 0.094 | 10 | 0.32 | 0.043 |
| 559 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-7-fluoro-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone | NT | 0.46 | 3.2 | 0.59 | 0.35 |
| 560 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(methylamino)cyclohexylamino)quinolin-3-yl)ethanone | NT | 0.041 | 10 | NT | NT |
| 561 | (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.0055 | 0.3 | 0.008 | 0.0066 |
| 562 | (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | NT | 0.0064 | 0.19 | 0.012 | 0.0089 |
| 563 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone | NT | 1.3 | 3.3 | NT | NT |
| 564 | (4-(1R,4R)-4-aminocyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone | NT | 0.43 | 1.8 | NT | NT |
| 565 | (4-(1R,4R)-4-aminocyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)-8-fluoroquinolin-3-yl)(cyclopropyl)methanone | NT | 0.3 | 10 | NT | NT |
| 566 | (4-(2-(4-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclo | NT | 0.11 | 2.6 | 0.4 | 0.13 |

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| | propyl)methanone | | | | | |
| 567 | (4-(2-(4-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.076 | 1.9 | 0.34 | 0.18 |
| 568 | (4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.057 | 0.62 | 0.082 | 0.045 |
| 569 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(((R)-3-fluoropyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.62 | 1.8 | 0.4 | 0.41 |
| 570 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(((R)-3-fluoropyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.14 | 0.16 | 0.13 | 0.089 |
| 571 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(((R)-3-fluoropyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)methanone | NT | 0.18 | 0.39 | 0.16 | 0.08 |
| 572 | (4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.0076 | 0.37 | 0.03 | 0.011 |
| 573 | (4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | NT | 0.0072 | 0.57 | 0.032 | 0.013 |
| 574 | (4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.031 | 1.4 | 0.087 | 0.021 |
| 575 | (4-(6-(3-aminopyrrolidin-1-yl)pyrid | NT | 0.028 | 1.2 | 0.068 | 0.029 |

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| | in-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | | | | | |
| 576 | (4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.0094 | 0.53 | 0.026 | 0.012 |
| 577 | (4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride) | NT | 0.0065 | 0.52 | 0.029 | 0.014 |
| 578 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-7-fluoro-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 3 | 8 | 1.9 | 2.8 |
| 579 | (4-((1R,3r,5S)-8-azabicyclo[3.2.1]octan-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.17 | 7.8 | 0.27 | 0.14 |
| 580 | (4-((1R,3r,5S)-8-azabicyclo[3.2.1]octan-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.25 | 4.1 | 0.69 | 0.12 |
| 582 | (4-(2-(3-aminopyrrolidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.052 | 1.1 | 0.097 | 0.064 |
| 584 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)methanone | NT | 0.13 | 0.86 | 0.071 | 0.053 |
| 585 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)methanone hydrochloride | 0.1 | 0.12 | 0.78 | 0.073 | 0.043 |

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| 586 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.38 | 3 | 0.2 | 0.19 |
| 587 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.11 | 0.55 | 0.084 | 0.065 |
| 588 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 0.16 | 0.091 | 0.46 | 0.096 | 0.063 |
| 589 | (4-(6-aminopyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.61 | 1.4 | 0.18 | 0.21 |
| 590 | (4-(6-aminopyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.48 | 2.2 | 0.48 | 0.19 |
| 591 | (4-(6-aminopyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.26 | 1.4 | 0.36 | 0.12 |
| 592 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.24 | 2.8 | 0.13 | 0.068 |
| 593 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)methanone | NT | 0.32 | 4.3 | 0.094 | 0.044 |
| 594 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)ethanone | NT | 0.025 | 0.66 | 0.063 | 0.048 |
| 595 | (4-(4,4'-bipiperidin-1-yl)-6-(3-chlor | NT | 0.41 | 3.4 | 0.57 | 0.64 |

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| | o-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | | | | | |
| 596 | (4-(4,4'-bipiperidin-1-yl)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.18 | 5.1 | 1.5 | 0.14 |
| 597 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)butan-1-one | NT | 0.11 | 1.1 | 0.16 | 0.083 |
| 598 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((3-methoxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)methanone | NT | 0.18 | 1 | 0.13 | 0.066 |
| 599 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((3-methoxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.51 | 2.8 | 0.54 | 0.37 |
| 600 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)methanone | NT | 0.078 | 0.76 | 0.12 | 0.029 |
| 601 | (4-(4-(2-aminopropan-2-yl)phenylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | NT | 0.09 | 0.42 | 0.047 | 0.023 |
| 602 | (4-(4-(2-aminopropan-2-yl)phenylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | 0.082 | 0.13 | 0.73 | 0.074 | 0.038 |
| 603 | (4-(4-(2-aminopropan-2-yl)phenylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.52 | 1.7 | 0.64 | 0.37 |
| 604 | (4-(4-(2-aminopropan-2-yl)phenylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cycloprop | 0.087 | 0.094 | 0.79 | 0.097 | 0.039 |

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| | yl)methanone | | | | | |
| 605 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)butan-1-one | NT | 0.095 | 1.1 | 0.13 | 0.051 |
| 606 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)-2-methylpropan-1-one | NT | 0.65 | 1.1 | 0.65 | 0.34 |
| 607 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)butan-1-one | NT | 0.24 | 3.4 | 0.48 | 0.24 |
| 608 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)-2-methylpropan-1-one | NT | 0.15 | 0.46 | 0.25 | 0.072 |
| 609 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(piperidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.22 | 3.9 | 0.68 | 0.34 |
| 610 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(piperidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)methanone | NT | 0.22 | 10 | 0.39 | 0.073 |
| 611 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(piperidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.13 | 10 | 0.57 | 0.39 |
| 612 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.84 | 4.7 | 0.72 | 0.4 |
| 613 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)methanone | NT | 0.13 | 1 | 0.075 | 0.028 |

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| 614 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl) methanone hydrochloride | 0.12 | 0.12 | 1.6 | 0.075 | 0.024 |
| 615 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl) phenylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.17 | 1.4 | 0.086 | 0.042 |
| 616 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(2-(piperazin-1-yl)pyrimidin-5-ylamino)quinolin-3-yl)ethanone | NT | 0.22 | 1.8 | 0.66 | 0.5 |
| 617 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)butan-1-one | NT | 0.33 | 1.7 | 0.19 | 0.32 |
| 620 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)-2-methylpropan-1-one | NT | 0.16 | 0.17 | 0.18 | 0.095 |
| 621 | (4-((1R,3r,5S)-8-azabicyclo[3.2.1]octan-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.24 | 3.9 | 0.91 | 0.11 |
| 622 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(3-((dimethylamino)methyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 1.1 | 5.5 | 0.43 | 0.32 |

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| 623 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)butan-1-one | NT | 0.085 | 2 | 0.2 | 0.1 |
| 624 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-((dimethylamino)methyl)phenylamino)quinolin-3-yl)methanone | NT | 0.55 | 3 | 0.089 | 0.043 |
| 625 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)butan-1-one | NT | 1.5 | 10 | NT | NT |
| 626 | (4-(2-(3-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.0051 | 0.05 | 0.0073 | 0.0048 |
| 627 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((3-methoxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.15 | 0.55 | 0.11 | 0.083 |
| 628 | (4-(2-(3-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.0069 | 0.33 | 0.019 | 0.0056 |
| 629 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-((dimethylamino)methyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.58 | 3.3 | 0.12 | 0.069 |
| 630 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.41 | 3.6 | 0.19 | 0.17 |
| 631 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methan | NT | 0.074 | 0.85 | 0.17 | 0.055 |

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| 632 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.069 | 0.72 | 0.1 | 0.069 |
| 633 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.21 | 2.3 | 0.12 | 0.15 |
| 634 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(((2-hydroxyethyl)(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)methanone | NT | 0.099 | 0.75 | 0.095 | 0.042 |
| 638 | (4-(4-amino-4-methylcyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.1 | 0.67 | 0.12 | 0.022 |
| 639 | (4-(4-amino-4-methylcyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.1 | 0.46 | 0.09 | 0.062 |
| 640 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)-2-methylpropan-1-one | NT | 0.54 | 0.82 | 0.61 | 0.52 |
| 641 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)-2-methylpropan-1-one | NT | 0.22 | 0.74 | 0.23 | 0.097 |
| 644 | (4-(2-(3-aminopiperidin-1-yl)pyrimidin-5-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.047 | 2.4 | 0.23 | 0.068 |
| 646 | (S)-(4-(6-(3-aminopiperidin-1-yl)py | NT | 0.02 | 0.56 | 0.022 | 0.0035 |

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| | ridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | | | | | |
| 647 | (S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 0.03 | 0.03 | 0.75 | 0.08 | 0.015 |
| 648 | (S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.0095 | 0.28 | 0.013 | 0.0046 |
| 649 | (R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.087 | 1.4 | 0.15 | 0.077 |
| 650 | (R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.0099 | 0.32 | 0.015 | 0.0072 |
| 651 | (R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.0054 | 0.12 | 0.0075 | 0.0071 |
| 652 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)-4-hydroxycyclohexylamino)quinolin-3-yl)methanone | NT | 0.15 | 1.4 | 0.15 | 0.051 |
| 653 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)ethanone | NT | 1.3 | 1.9 | 0.5 | 0.32 |
| 654 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)ethanone | NT | 0.091 | 8.7 | 0.19 | 0.11 |
| 655 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((4-((4-methylpiperazin-1-yl)m | 0.18 | 0.072 | 7.8 | 0.23 | 0.097 |

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| | ethyl)phenyl)amino)quinolin-3-yl)ethanone | | | | | |
| 656 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((4-methylpiperazin-1-yl)methyl)phenylamino)quinolin-3-yl)ethanone | NT | 0.19 | 6.1 | 0.41 | 0.27 |
| 657 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-((dimethylamino)methyl)pyridin-3-ylamino)quinolin-3-yl)methanone | NT | 0.31 | 2.8 | 0.18 | 0.098 |
| 658 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(pyrrolidin-1-ylmethyl)pyridin-3-ylamino)quinolin-3-yl)methanone | NT | 0.3 | 4.5 | 0.072 | 0.07 |
| 659 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(pyrrolidin-1-ylmethyl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.6 | 7.3 | 0.32 | 0.28 |
| 660 | (S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.1 | 2.9 | 0.22 | 0.046 |
| 661 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(3-methoxypyrrolidin-1-yl)cyclohexylamino)quinolin-3-yl)methanone | NT | 0.25 | 1.4 | 0.17 | 0.1 |
| 665 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(pyrrolidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.16 | 3.7 | 0.53 | 0.22 |
| 666 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(pyrrolidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)methanone | NT | 0.34 | 10 | 10 | 0.071 |
| 667 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(pyrrolidin-3-ylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclo | NT | 0.17 | 10 | 7.7 | 0.077 |

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| | propyl)methanone | | | | | |
| 672 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(pyrrolidin-1-ylmethyl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.39 | 3.2 | 0.17 | 0.16 |
| 673 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1s,4s)-4-((dimethylamino)methyl)-4-hydroxycyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.16 | 1.4 | 0.16 | 0.089 |
| 674 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)-2-methylpropan-1-one | NT | 0.11 | 2.4 | 0.46 | 0.15 |
| 680 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)-2-methylpropan-1-one | NT | 0.59 | 2.4 | 1.3 | 1 |
| 681 | 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)ethanone | NT | 0.0046 | 0.25 | 0.017 | 0.0085 |
| 685 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((methylamino)methyl)cyclohexylamino)quinolin-3-yl)methanone | NT | 0.054 | 0.73 | 0.14 | 0.018 |
| 686 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(3-methoxypyrrolidin-1-yl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.19 | 1.1 | 0.17 | 0.16 |
| 687 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(3-methoxypyrrolidin-1-yl)cyclohexylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.63 | 3.3 | 0.45 | 0.33 |
| 688 | 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl) | NT | 0.056 | 1.7 | 0.23 | 0.11 |

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| | ethanone | | | | | |
| 692 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 1 | 5.9 | 0.37 | 0.3 |
| 693 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.37 | 10 | 0.09 | 0.085 |
| 698 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)methanone | NT | 0.3 | 10 | 0.05 | 0.04 |
| 699 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-3-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.24 | 2.7 | 0.18 | 0.072 |
| 702 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone hydrochloride | NT | 0.046 | 2.4 | 0.14 | 0.044 |
| 703 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-3-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)methanone | NT | 0.33 | 5.5 | 0.11 | 0.052 |
| 704 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(piperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone hydrochloride | NT | 0.17 | 2.1 | 0.2 | 0.12 |
| 706 | (4-(1-(1R,4R)-4-aminocyclohexyl)-1H-pyrazol-4-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | NT | 0.042 | 7.9 | 0.59 | 0.02 |
| 707 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)-1-hydroxyethyl)phenylamino)quinolin-3 | NT | 0.21 | 3.4 | 0.13 | 0.081 |

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| | -yl)(cyclopropyl)methanone | | | | | |
| 708 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(2-(dimethylamino)-1-hydroxyethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.41 | 4.6 | 0.3 | 0.25 |
| 709 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)-1-hydroxyethyl)phenylamino)quinolin-3-yl)methanone | NT | 0.2 | 3.8 | 0.14 | 0.077 |
| 710 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.15 | 2 | 0.09 | 0.083 |
| 711 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)methanone | NT | 0.22 | 5.7 | 0.11 | 0.073 |
| 712 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(2-(dimethylamino)ethoxy)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.31 | 5.4 | 0.31 | 0.34 |
| 713 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)propan-1-one | NT | 0.2 | 4.9 | 0.18 | 0.15 |
| 714 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)propan-1-one | NT | 0.054 | 0.55 | 0.11 | 0.067 |
| 715 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)propan-1-one | NT | 0.087 | 0.84 | 0.11 | 0.046 |
| 716 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)propan-1-one dihydrochloride | 0.14 | 0.14 | 0.82 | 0.12 | 0.055 |

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| 717 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclopentylamino)quinolin-3-yl)ethanone | NT | 0.42 | 2 | 0.65 | 0.34 |
| 718 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclopentylamino)quinolin-3-yl)ethanone | NT | 0.36 | 2 | 0.44 | 0.19 |
| 719 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(piperidin-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.32 | 10 | 0.69 | 0.17 |
| 720 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(dimethylamino)-2,3-dihydro-1H-inden-5-ylamino)quinolin-3-yl)ethanone | NT | 0.059 | 0.38 | 0.063 | 0.032 |
| 721 | 1-(6-(3,5-difluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone | NT | 0.15 | 3.4 | 0.32 | 0.22 |
| 722 | (4-(6-(2-aminoethoxy)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.19 | 2.3 | 0.32 | 0.19 |
| 723 | (4-(6-(2-aminoethoxy)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.099 | 2.1 | 0.23 | 0.028 |
| 724 | (4-(6-(2-aminoethoxy)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.07 | 2.8 | 0.23 | 0.035 |
| 725 | (4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-difluoro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.0078 | 0.11 | 0.012 | 0.01 |
| 726 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(piperidin-4-ylamino) | NT | 0.56 | 2.4 | 0.52 | 0.14 |

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| | quinolin-3-yl)methanone | | | | | |
| 727 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(piperidin-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.37 | 1.1 | 0.19 | 0.14 |
| 729 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone | NT | 0.52 | 10 | 0.2 | 0.1 |
| 730 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone | NT | 2.1 | 8 | 0.82 | 0.69 |
| 731 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone | NT | 0.11 | 1.3 | 0.17 | 0.13 |
| 732 | 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone | NT | 0.0056 | 0.18 | 0.0094 | 0.0099 |
| 733 | 1-(4-((6-(3-aminopiperidin-1-yl)pyridin-3-yl)amino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone | 0.0064 | 0.0035 | 0.064 | 0.0086 | 0.01 |
| 734 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone | NT | 0.51 | 6.4 | 0.25 | 0.36 |
| 735 | (4-(2-(4-aminopiperidin-1-yl)pyridin-4-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)(cyclopropyl)methanone | NT | 1 | 20 | 3.5 | 0.5 |
| 736 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)propan-1-one | NT | 0.14 | 10 | 0.22 | 0.19 |
| 737 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyr | NT | 0.31 | 10 | 0.29 | 0.27 |

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| | idin-3-ylamino)quinolin-3-yl)propan-1-one | | | | | |
| 738 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexylamino)quinolin-3-yl)ethanone | NT | 0.51 | 7.8 | 0.34 | 2.1 |
| 739 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexylamino)quinolin-3-yl)ethanone | NT | 0.14 | 4 | 0.14 | 0.099 |
| 740 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 0.17 | 0.099 | 3.5 | 0.13 | 0.087 |
| 741 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexylamino)quinolin-3-yl)ethanone | NT | 0.037 | 2 | 0.085 | 0.062 |
| 742 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(2-(dimethylamino)ethyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 0.094 | 0.034 | 1.7 | 0.078 | 0.063 |
| 743 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone | NT | 0.66 | 4.8 | 0.53 | 0.36 |
| 744 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone | NT | 0.11 | 0.43 | 0.082 | 0.031 |
| 745 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone | NT | 0.12 | 0.99 | 0.16 | 0.063 |
| 746 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | NT | 0.23 | 6.2 | 0.18 | 0.11 |

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| 747 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)methanone | NT | 0.16 | 2.6 | 0.091 | 0.043 |
| 748 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)methanone hydrochloride | 0.1 | 0.088 | 1.6 | 0.069 | 0.032 |
| 749 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | NT | 0.12 | 6.4 | 0.22 | 0.21 |
| 750 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone | NT | 0.2 | 1.7 | 0.39 | 0.19 |
| 751 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone | NT | 0.32 | 1.7 | 0.58 | 0.29 |
| 752 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1R,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone | NT | 0.18 | 3.4 | 0.2 | 0.17 |
| 753 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((3-hydroxypyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | NT | 0.13 | 71 | 0.37 | 0.057 |
| 754 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)propan-1-one | NT | 0.19 | 10 | 0.22 | 0.072 |
| 755 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)propan-1-one | NT | 0.35 | 3.4 | 0.34 | 0.21 |

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| 756 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-(2-(pyrrolidin-1-yl)ethyl)piperidin-1-yl)quinolin-3-yl)methanone | NT | 0.5 | 10 | 0.54 | 0.27 |
| 757 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)propan-1-one | NT | 0.064 | 0.76 | 0.15 | 0.069 |
| 758 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)ethanone | NT | 0.15 | 24 | 0.22 | 0.055 |
| 759 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)ethanone | NT | 0.67 | 10 | 0.42 | 0.2 |
| 760 | 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one | NT | 0.0087 | 0.77 | 0.031 | 0.016 |
| 761 | 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one | NT | 0.031 | 1.5 | 0.053 | 0.022 |
| 762 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)ethanone | NT | 0.12 | 5.2 | 0.25 | 0.089 |
| 763 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)ethanone | 0.14 | 0.05 | 1.8 | 0.27 | 0.093 |
| 765 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(dimethylamino)cyclohexylamino)quinolin-3-yl)ethanone | 0.14 | 0.081 | 1.7 | 0.17 | 0.047 |
| 766 | 1-(6-(3,5-dichloro-4-hydroxypheny | 0.1 | 0.074 | 1 | 0.14 | 0.06 |

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| | l)-4-((1R,4R)-4-(dimethylamino)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | | | | | |
| 767 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.15 | 0.12 | 24 | 0.16 | 0.083 |
| 768 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 0.11 | 0.11 | 28 | 0.13 | 0.07 |
| 769 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)propan-1-one | 0.79 | 0.12 | 2.8 | 0.48 | 0.14 |
| 770 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)propan-1-one | 0.17 | 0.074 | 0.84 | 0.11 | 0.062 |
| 771 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(4-((dimethylamino)methyl)phenylamino)quinolin-3-yl)propan-1-one | 0.16 | 0.072 | 0.72 | 0.095 | 0.045 |
| 772 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(piperazin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 0.14 | 0.058 | 3.2 | 0.26 | 0.076 |
| 773 | 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone | 0.0094 | 0.0042 | 0.7 | 0.028 | 0.017 |
| 774 | 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)ethanone | 0.082 | 0.034 | 0.71 | 0.045 | 0.056 |
| 775 | 1-(4-(6-(3-aminopyrrolidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-4-hydr | 0.12 | 0.049 | 0.75 | 0.049 | 0.065 |

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| | oxy-5-methoxyphenyl)quinolin-3-yl)propan-1-one | | | | | |
| 776 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.15 | 0.073 | 1.2 | 0.08 | 0.038 |
| 777 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(2-(dimethylamino)ethylamino)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone trihydrochloride | 0.17 | 0.12 | 1.6 | 0.12 | 0.047 |
| 778 | cyclopropyl(6-(3,5-difluoro-4-hydroxyphenyl)-4-(6-(4-methylpiperazin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone | 0.48 | 0.1 | 2.6 | 0.17 | 0.22 |
| 779 | 1-(4-(1R,4R)-4-((3-aminopyrrolidin-1-yl)methyl)cyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)ethanone hydrochloride | 0.23 | 0.14 | 10 | 1 | 0.13 |
| 780 | 1-(4-(1R,4R)-4-((3-aminopyrrolidin-1-yl)methyl)cyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)ethanone hydrochloride | 0.67 | 0.41 | 3.2 | 0.62 | 1.5 |
| 783 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(piperazin-1-ylmethyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 0.087 | 0.027 | 4.2 | 0.2 | 0.057 |
| 784 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1r,3r)-3-((dimethylamino)methyl)cyclobutylamino)quinolin-3-yl)ethanone | 0.95 | 0.6 | 3.2 | 0.74 | 0.2 |
| 785 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(3-(methylamino)pyrrolidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone trihydrochloride | 0.076 | 0.035 | 1.3 | 0.094 | 0.074 |
| 786 | 1-(4-(1R,4R)-4-((3-aminopyrrolidin | 0.17 | 0.07 | 10 | 0.96 | 0.23 |

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| | -1-yl)methyl)cyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone hydrochloride | | | | | |
| 788 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(3-(methylamino)pyrrolidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone trihydrochloride | 0.1 | 0.071 | 8.6 | 0.16 | 0.07 |
| 789 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(3-(methylamino)pyrrolidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)(cyclopropyl)methanone trihydrochloride | 0.077 | 0.039 | 0.8 | 0.076 | 0.053 |
| 790 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((diethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 0.14 | 0.1 | 4.2 | 0.14 | 0.098 |
| 791 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((diethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride | 0.49 | 0.58 | 9.3 | 0.27 | 0.43 |
| 792 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1S,4r)-4-(((S)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.12 | 0.079 | 100 | 0.1 | 0.073 |
| 793 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1S,4r)-4-(((S)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.34 | 0.15 | 7.1 | 0.17 | 0.33 |
| 794 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-((diethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 0.094 | 0.031 | 0.75 | 0.077 | 0.074 |
| 795 | cyclopropyl(6-(3,5-difluoro-4-hydroxyphenyl)-4-(6-(pyrrolidin-1-ylmethyl)pyridin-3-ylamino)quinolin-3- | 0.83 | 0.51 | 3.5 | 0.34 | 0.31 |

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| | yl)methanone | | | | | |
| 796 | cyclopropyl(6-(3,5-difluoro-4-hydroxyphenyl)-4-(3-(2-(dimethylamino)ethyl)phenylamino)quinolin-3-yl)methanone | 0.52 | 0.43 | 0.67 | 0.14 | 0.14 |
| 797 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)methanone | 0.12 | 0.31 | 100 | 0.022 | 0.03 |
| 798 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)methanone hydrochloride | 0.092 | 0.16 | NT | 0.019 | 0.02 |
| 799 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.25 | 0.52 | 10 | 0.081 | 0.079 |
| 800 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone hydrochloride | 0.17 | 0.26 | NT | 0.041 | 0.046 |
| 801 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)ethanone | 0.15 | 0.37 | 100 | 0.081 | 0.06 |
| 802 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-3-yl)ethanone hydrochloride | 0.16 | 0.45 | 100 | 0.08 | 0.072 |
| 803 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(pyrrolidin-1-yl)ethyl)phenylamino)quinolin-3-yl)ethanone | 0.44 | 0.65 | 100 | 0.17 | 0.12 |
| 804 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(3-(methylamino)pyrrolidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone trihydrochloride | 0.1 | 0.088 | 1.4 | 0.17 | 0.042 |

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| 805 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)ethanone hydrochloride | 0.32 | 0.17 | 2.4 | 0.34 | 0.11 |
| 806 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(3-(methylamino)piperidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone trihydrochloride | 0.039 | 0.027 | 0.33 | 0.054 | 0.032 |
| 807 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(6-(3-(methylamino)piperidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)methanone trihydrochloride | 0.055 | 0.058 | 1.1 | 0.056 | 0.032 |
| 808 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1R,4R)-4-(((R)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride | 0.22 | 0.12 | 8.2 | 0.22 | 0.11 |
| 809 | 1-(4-(1R,4R)-4-((3-aminopiperidin-1-yl)methyl)cyclohexylamino)-6-(3-chloro-4-hydroxy-5-methoxyphenyl)quinolin-3-yl)ethanone hydrochloride | 2.6 | 4.6 | 10 | 3.1 | 10 |
| 810 | 1-(4-(1R,4R)-4-((3-aminopiperidin-1-yl)methyl)cyclohexylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)ethanone trihydrochloride | 0.056 | 0.034 | 2.3 | 0.12 | 0.044 |
| 811 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-(((R)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.45 | 0.49 | 5.4 | 0.28 | 0.38 |
| 812 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-(((R)-2-(hydroxymethyl)pyrrolidin-1-yl)methyl)cyclohexylamino)quinolin-3-yl)ethanone | 0.2 | 0.15 | 100 | 0.18 | 0.086 |
| 813 | 1-(6-(3-chloro-5-fluoro-4-hydroxyp | 0.11 | 0.07 | 0.75 | 0.25 | 0.054 |

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| | henyl)-4-(1-(1-methylpyrrolidin-3-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)ethanone dihydrochloride | | | | | |
| 814 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(1-methylpyrrolidin-3-yl)-1H-pyrazol-4-ylamino)quinolin-3-yl)ethanone dihydrochloride | 0.13 | 0.14 | 0.78 | 0.29 | 0.057 |
| 815 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(6-(3-(methylamino)piperidin-1-yl)pyridin-3-ylamino)quinolin-3-yl)ethanone trihydrochloride | 0.034 | 0.016 | 0.052 | 0.041 | 0.041 |
| 816 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((ethyl(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride | 0.44 | 0.28 | 7.3 | 0.25 | 0.36 |
| 817 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1R,4R)-4-((ethyl(methyl)amino)methyl)cyclohexylamino)quinolin-3-yl)ethanone dihydrochloride | 0.12 | 0.097 | 11 | 0.15 | 0.074 |
| 818 | 1-(4-(1R,4R)-4-((3-aminopiperidin-1-yl)methyl)cyclohexylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)ethanone trihydrochloride | 0.064 | 0.022 | 2.7 | 0.14 | 0.071 |
| 819 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)methanone | 0.64 | 0.38 | 3.3 | 0.44 | 0.17 |
| 820 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)methanone | 0.82 | 0.32 | 2.9 | 0.46 | 0.15 |
| 821 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)ethanone | 0.25 | 0.23 | 3.3 | 0.59 | 0.17 |

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| 822 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.43 | 0.29 | 2.5 | 0.48 | 0.16 |
| 823 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-(1-(2-(dimethylamino)ethyl)piperidin-4-ylamino)quinolin-3-yl)ethanone | 0.32 | 0.21 | 2.6 | 0.45 | 0.16 |
| 824 | 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one trihydrochloride | 0.026 | 0.021 | 0.28 | 0.036 | 0.026 |
| 825 | 1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one trihydrochloride | 0.016 | 0.01 | 0.069 | 0.017 | 0.018 |
| 826 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1S,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride | 0.48 | 0.25 | 1.9 | 0.54 | 0.22 |
| 827 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1S,3R)-3-((dimethylamino)methyl)cyclohexylamino)quinolin-3-yl)ethanone hydrochloride | 0.43 | 0.49 | 5.9 | 0.51 | 0.2 |
| 828 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(4-methylpiperazin-1-yl)ethyl)phenylamino)quinolin-3-yl)(cyclopropyl)methanone | 0.72 | 5.7 | 9.5 | 0.23 | 0.16 |
| 829 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-(3-(2-(4-methylpiperazin-1-yl)ethyl)phenylamino)quinolin-3-yl)methanone | 0.23 | 0.7 | 5.7 | 0.087 | 0.057 |
| 830 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(3-(2-(4-methylpiperazin-1-yl)ethyl)phenylamino)quinolin-3-yl)ethanone | 1.3 | 1.5 | 15 | 0.73 | 0.26 |
| 831 | 1-(6-(3,5-dichloro-4-hydroxypheny | 0.83 | 1.1 | 11 | 0.32 | 0.12 |

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| | l)-4-(3-(2-(4-methylpiperazin-1-yl) ethyl)phenylamino)quinolin-3-yl)et hanone | | | | | |
| 836 | 1-(6-(3,5-dichloro-4-hydroxypheny l)-4-(1-(1-methylpiperidin-4-yl)-1H -pyrazol-4-ylamino)quinolin-3-yl)et hanone dihydrochloride | 0.27 | 0.35 | 100 | 0.45 | 0.082 |
| 843 | 1-(6-(3,5-dichloro-4-hydroxypheny l)-4-(1R,4R)-4-(pyrrolidin-1-ylmet hyl)cyclohexylamino)quinolin-3-yl) propan-1-one dihydrochloride | 0.19 | 0.15 | 4.2 | 0.15 | 0.057 |
| 844 | 1-(6-(3-chloro-5-fluoro-4-hydroxyp henyl)-4-((1S,4r)-4-(((S)-2-(hydrox ymethyl)pyrrolidin-1-yl)methyl)cyc lohexylamino)quinolin-3-yl)ethano ne | 0.18 | 0.067 | 3.3 | 0.18 | 0.092 |
| 845 | 1-(6-(3-chloro-5-fluoro-4-hydroxyp henyl)-4-(1R,4R)-4-((ethyl(methyl) amino)methyl)cyclohexylamino)qui nolin-3-yl)ethanone dihydrochloride | 0.11 | 0.063 | 1.4 | 0.14 | 0.069 |
| 846 | 1-(6-(3-chloro-5-fluoro-4-hydroxyp henyl)-4-(1R,4R)-4-(pyrrolidin-1-yl methyl)cyclohexylamino)quinolin-3-yl)propan-1-one dihydrochloride | 0.16 | 0.096 | 0.71 | 0.13 | 0.071 |
| 848 | 1-(6-(3-chloro-5-fluoro-4-hydroxyp henyl)-4-(6-(2-(dimethylamino)eth oxy)pyridin-3-ylamino)quinolin-3-yl)ethanone hydrochloride | 0.44 | 0.14 | 5.3 | 0.29 | 0.16 |
| 852 | 1-(6-(3,5-dichloro-4-hydroxypheny l)-4-(6-(2-(dimethylamino)ethoxy)p yridin-3-ylamino)quinolin-3-yl)etha none dihydrochloride | 0.55 | 0.16 | 22 | 0.29 | 0.088 |
| 861 | 1-(6-(3,5-dichloro-4-hydroxypheny l)-4-(((1S,3R)-3-(2-(dimethylamino )ethyl)cyclohexyl)amino)quinolin-3 -yl)ethanone hydrochloride | 0.24 | 0.22 | 1 | 0.25 | 0.19 |

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| 862 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-(((1S,3R)-3-(2-(dimethylamino)ethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 0.2 | 0.26 | 1.1 | 0.29 | 0.2 |
| 864 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((bis-(trideuteromethyl)amino)methyl)cyclohexyl)amino)quinolin-3-yl)ethanone dihydrochloride | 0.081 | 0.067 | 1.3 | 0.11 | 0.043 |
| 873 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((5-(2-(pyrrolidin-1-yl)ethyl)pyridin-3-yl)amino)quinolin-3-yl)ethanone hydrochloride | 100 | 100 | 100 | 0.35 | 0.17 |
| 876 | N-(1R,4R)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-(dimethylamino)acetamide dihydrochloride | 0.14 | 0.033 | 1.5 | 0.16 | 0.092 |
| 877 | N-(1R,4R)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-(dimethylamino)acetamide hydrochloride | 0.18 | 0.11 | 2 | 0.2 | 0.11 |
| 878 | (S)-N-((1r,4S)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-aminopropanamide dihydrochloride | 0.096 | 0.027 | 21 | 0.83 | 0.03 |
| 879 | 2-chloro-6-fluoro-4-(3-(methylsulfonyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-6-yl)phenol hydrochloride | 3 | 1.1 | 9 | 3.8 | 0.9 |
| 880 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((5-(2-(pyrrolidin-1-yl)ethyl)pyridin-3-yl)amino)quinolin-3-yl)ethanone hydrochloride | 7.4 | 3.1 | 46 | 1.8 | 0.96 |
| 881 | cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((5-(2-(pyrrolidin-1-yl)ethyl)pyridin-3-yl)amino)quinolin | 100 | 100 | 100 | 0.15 | 0.078 |

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| | -3-yl)methanone | | | | | |
| 882 | (6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((5-(2-(pyrrolidin-1-yl)ethyl)pyridin-3-yl)amino)quinolin-3-yl)(cyclopropyl)methanone | 3.1 | 100 | 100 | 0.27 | 0.15 |
| 883 | 2,6-dichloro-4-(3-(methylsulfonyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-6-yl)phenol hydrochloride | 1.5 | 1.4 | 100 | 1.9 | 0.53 |
| 884 | 2,6-dichloro-4-(4-((6-(2-(dimethylamino)ethoxy)pyridin-3-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)phenol hydrochloride | 4.1 | 0.91 | 13 | 2.1 | 0.51 |
| 885 | 2-chloro-4-(4-((6-(2-(dimethylamino)ethoxy)pyridin-3-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)-6-fluorophenol hydrochloride | 2.5 | 0.7 | 10 | 3 | 0.62 |
| 886 | (S)-N-((1r,4S)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-aminopropanamide dihydrochloride | 0.088 | 0.045 | 11 | 0.64 | 0.016 |
| 890 | 2,6-dichloro-4-(3-(methylsulfonyl)-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-6-yl)phenol hydrochloride | 0.94 | 1.3 | 3 | 1.1 | 0.35 |
| 891 | 2-chloro-6-fluoro-4-(3-(methylsulfonyl)-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-6-yl)phenol hydrochloride | 0.92 | 0.73 | 2.4 | 1.3 | 0.46 |
| 895 | 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)quinolin-3-yl)ethanone hydrochloride | 2.2 | 0.94 | 9.3 | 4 | 9.1 |
| 899 | 2,6-dichloro-4-(4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)phenol hydrochloride | 1.5 | 1.6 | 10 | 4 | 0.26 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 900 | 2-chloro-6-fluoro-4-(4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)phenol hydrochloride | 3.1 | 1.6 | 10 | 10 | 0.54 |
| 901 | 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((6-(4-methylpiperazin-1-yl)pyridin-3-yl)amino)quinolin-3-yl)ethanone hydrochloride | 2.1 | 1.2 | 9.1 | 2.3 | 9.5 |
| 902 | 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((6-(2-(dimethylamino)ethoxy)pyridin-3-yl)amino)quinolin-3-yl)ethanone hydrochloride | 3.1 | 3.3 | 12 | 2.9 | 14 |
| 903 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-7-fluoroquinolin-3-yl)ethanone hydrochloride | 0.27 | 0.55 | 1.5 | 0.36 | 0.16 |
| 904 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-7-fluoroquinolin-3-yl)ethanone hydrochloride | 0.33 | 0.51 | 1.6 | 0.43 | 0.26 |
| 907 | N-(1R,4R)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-amino-3-methylbutanamide dihydrochloride | 0.059 | 0.016 | 3.7 | 0.18 | 0.033 |
| 909 | 4-(4-((6-(3-aminopiperidin-1-yl)pyridin-3-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)-2-chloro-6-fluorophenol trihydrochloride | 0.44 | 0.19 | 10 | 2.8 | 0.042 |
| 910 | 1-(4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-6-(1H-indazol-5-yl)quinolin-3-yl)ethanone hydrochloride | 3.4 | 6 | 9.8 | 2.6 | 5.4 |
| 911 | 1-(6-(1H-benzo[d]imidazol-6-yl)-4-((1R,4R)-4-((dimethylamino)methy | 5.4 | 10 | 13 | 3.2 | 10 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | l)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | | | | | |
| 912 | 1-(4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-6-(1H-pyrazol-4-yl)quinolin-3-yl)ethanone hydrochloride | 1.7 | 4.2 | 3 | 1.3 | 1.4 |
| 913 | 4-(4-((6-(3-aminopiperidin-1-yl)pyridin-3-yl)amino)-3-(methylsulfonyl)quinolin-6-yl)-2,6-dichlorophenol trihydrochloride | 0.58 | 0.27 | 100 | 2.6 | 0.025 |
| 914 | (S)-N-((1r,4S)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-amino-3,3-dimethylbutanamide hydrochloride | 0.28 | 0.075 | 3.6 | 0.65 | 0.19 |
| 915 | N-(1R,4R)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-amino-3-methylbutanamide dihydrochloride | 0.099 | 0.053 | 3.5 | 0.29 | 0.062 |
| 916 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)(cyclopentyl)methanone hydrochloride | 1.5 | 1.2 | 3.1 | 1.1 | 1 |
| 917 | cyclopentyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)methanone hydrochloride | 0.91 | 0.7 | 3.3 | 0.68 | 0.19 |
| 918 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quinolin-3-yl)-2,2-dimethylpropan-1-one hydrochloride | 6.6 | 3 | 10 | 5.5 | 3.2 |
| 919 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)quino | 3.5 | 1.9 | 6.4 | 4.3 | 2.5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | lin-3-yl)-2,2-dimethylpropan-1-one hydrochloride | | | | | |
| 920 | (S)-N-((1r,4S)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)pyrrolidine-2-carboxamide dihydrochloride | 0.34 | 0.1 | 6.5 | 0.86 | 0.073 |
| 921 | (S)-N-((1r,4S)-4-((3-acetyl-6-(3-chloro-5-fluoro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)pyrrolidine-2-carboxamide dihydrochloride | 0.21 | 0.048 | 10 | 1.2 | 0.068 |
| 922 | (S)-N-((1r,4S)-4-((3-acetyl-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-4-yl)amino)cyclohexyl)-2-amino-3,3-dimethylbutanamide hydrochloride | 0.65 | 0.2 | 4.5 | 0.62 | 0.21 |
| 923 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-7-fluoro-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 0.29 | 0.63 | 2.5 | 0.39 | 0.2 |
| 924 | (6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-3-yl)(cyclopentyl)methanone hydrochloride | 3 | 3.2 | 3.3 | 3.7 | 1.8 |
| 925 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-7-fluoro-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 0.27 | 0.52 | 1.5 | 0.38 | 0.27 |
| 926 | 1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-7-fluoro-4-((1R,4R)-4-(pyrrolidin-1-ylmethyl)cyclohexyl)amino)quinolin-3-yl)ethanone hydrochloride | 0.69 | 2.7 | 5 | 0.61 | 0.55 |
| 927 | cyclopentyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((3-(2-(pyrrolidin-1-yl)ethyl)phenyl)amino)quinolin-3-yl) | 0.78 | 1.3 | 12 | 0.71 | 0.48 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | methanone hydrochloride | | | | | |
| 928 | 2-amino-N-(1R,4R)-4-((6-(3,5-dichloro-4-hydroxyphenyl)-3-pivaloylquinolin-4-yl)amino)cyclohexyl)propanamide hydrochloride | 2 | 1.4 | 8.1 | 4.1 | 1.1 |
| 929 | 1-(4-((1R,4R)-4-((dimethylamino)methyl)cyclohexyl)amino)-6-(6-hydroxynaphthalen-2-yl)quinolin-3-yl)ethanone hydrochloride | 0.71 | 3.3 | 3.9 | 0.87 | 2.8 |
| 930 | 1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)quinolin-3-yl)-2,2-dimethylpropan-1-one hydrochloride | 2.5 | 1.7 | 14 | 4.4 | 1.3 |
| 931 | 1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)amino)quinolin-3-yl)-2,2-dimethylpropan-1-one hydrochloride | 2.1 | 1.4 | 100 | 1.8 | 1.5 |
| 932 | 2-amino-N-(1R,4R)-4-((6-(3-chloro-5-fluoro-4-hydroxyphenyl)-3-pivaloylquinolin-4-yl)amino)cyclohexyl)propanamide hydrochloride | 1.6 | 0.71 | 7.6 | 4.7 | 1 |
| 934 | (S)-1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one trihydrochloride | 0.02 | 0.014 | 0.6 | 0.034 | 0.016 |
| 935 | 1-(4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)-6-(4-hydroxyphenyl)quinolin-3-yl)ethanone dihydrochloride | 0.53 | 1.6 | 4.3 | 0.86 | 1.5 |

NT: Not tested

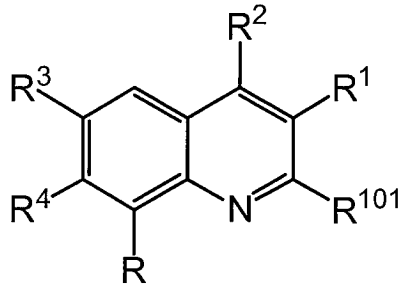
Industrial Applicability

The present invention provides a novel quinoline derivative having MELK inhibitory effect.

The compounds of the present invention may be used for pharmaceutical composition for inhibiting MELK. Such pharmaceutical compositions are suitable for treating or preventing cancer.

CLAIMS

1. A compound or a pharmaceutically acceptable salt thereof for use in the treatment or prevention of cancer, wherein the compound is represented by the following formula:



(I)

wherein,

$R^1$ represents

a $C_1$-$C_6$ alkylsulfonyl, or

-CO-$R^5$ [wherein,

$R^5$ is

a $C_1$-$C_6$ alkyl,

a $C_3$-$C_{10}$ cycloalkyl],

$R^2$ represents

-$NR^{6A}R^{7A}$;

wherein $R^{6A}$ represents a hydrogen atom, and $R^{7A}$ represents -$(CH_2)_n$-$R^{10A}$ (wherein n represents an integer of 0 to 6, and $R^{10A}$ represents a $C_3$-$C_{10}$ cycloalkyl which may have a substituent group selected from Substituent Group D, an aryl which may have a substituent group selected from Substituent Group E, an aliphatic heterocyclic group which may be substituted with a $C_1$-$C_6$ alkyl, an aromatic heterocyclic group which may have a substituent group selected from Substituent Group I), or $R^{6A}$ and $R^{7A}$ form with an adjacent nitrogen atom a heterocyclic group which may have a substituent group selected from Substituent Group F,

$R^3$ represents

an aryl which may have a substituent group selected from Substituent Group G, or an aromatic heterocyclic group which may have a substituent group selected from Substituent Group H;

$R^4$ represents

a hydrogen atom, or

a halogen;

R represents

a hydrogen atom, or
a halogen, and
$R^{101}$ represents
a hydrogen atom.

wherein the above-mentioned Substituents C to I are one to three substituents each independently selected from the following Substituent Groups:

Substituent Group C: a halogen, a hydroxy, a $C_1$-$C_6$ alkoxy, and a di($C_1$-$C_6$ alkyl) amino;

Substituent Group D: a hydroxy, a $C_1$-$C_6$ alkyl, a $C_1$-$C_6$ aminoalkyl, an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl) (wherein, the aliphatic heterocyclic may have an amino, a hydroxy, a $C_1$-$C_6$ hydroxyalkyl, a $C_1$-$C_6$ alkoxy, or a halogen as a substituent), a $C_1$-$C_6$ alkylamino-( $C_1$-$C_6$ alkylenyl), a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl) (wherein, either one of $C_1$-$C_6$ alkyl may have a hydroxy or a cyano as a substituent, and wherein hydrogen atom of $C_1$-$C_6$ alkyl may be substituted with deuterium atom), an amino, a $C_1$-$C_6$ alkylamino, a di($C_1$-$C_6$ alkyl)amino, a $C_1$-$C_6$ aminoalkylcarbonylamino, a di($C_1$-$C_6$ alkyl)amino($C_1$-$C_6$ alkylenyl)carbonylamino, an aliphatic heterocyclic group (wherein, the aliphatic heterocyclic group may have a $C_1$-$C_6$ alkoxy as a substituent), and an aliphatic heterocyclic-carbonylamino;

Substituent Group E: a halogen, a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl) (wherein, the $C_1$-$C_6$ alkylenyl may have a hydroxy as a substituent), an amino, a $C_2$-$C_7$ alkanoylamino, a di($C_1$-$C_6$ alkyl)amino, a $C_1$-$C_6$ aminoalkyl, and an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl) (wherein, the aliphatic heterocyclic may have a $C_1$-$C_6$ alkyl as a substituent);

Substituent Group F: a carbamoyl, an amino, a $C_1$-$C_6$ aminoalkyl, a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl), a $C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl), an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl), and an aliphatic heterocyclic group which may be substituted with a $C_1$-$C_6$ alkyl;

Substituent Group G: a halogen, a hydroxy, a cyano, a $C_1$-$C_6$ alkyl, a $C_1$-$C_6$ alkoxy, a trifluoromethoxy, a $C_1$-$C_6$ aminoalkyl, a $C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl), a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl), an amino, a $C_1$-$C_6$ alkylsulfonylamino, a carbamoyl, a sulfamoyl, a ($C_1$-$C_6$ alkyl)ureide, a benzylureide, andan aliphatic heterocyclic group;

Substituent Group H: a halogen, a cyano, a $C_1$-$C_6$ alkyl, a $C_1$-$C_6$ alkoxy, an amino, a carbamoyl, a dimethylaminopropylaminocarbonyl, and an aminocyclohexylaminocarbonyl;

Substituent Group I: an aliphatic heterocyclic group (wherein, the aliphatic heterocyclic group may have a $C_1$-$C_6$ alkyl, an amino group or a $C_1$-$C_6$ alkylamino as a substituent); an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl); an aliphatic heterocyclic-amino (wherein, the aliphatic heterocyclic may have a $C_1$-$C_6$ alkyl or an amino as a substituent); a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl); a $C_1$-$C_6$ aminoalkyloxy; a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)oxy; a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)amino; a cyclohexyl (wherein, the cyclohexyl may have an amino or a $C_1$-$C_6$ aminoalkyl as a substituent).

2. The compound or a pharmaceutically acceptable salt thereof of claim 1, wherein $R^1$ is -CO-$R^5$.

3. The compound or a pharmaceutically acceptable salt thereof of claim 1, wherein $R^1$ is a methylsulfonyl.

4. The compound or a pharmaceutically acceptable salt thereof of claim 1, wherein $R^{6A}$ is a hydrogen atom, and $R^{7A}$ is -$(CH_2)_n$-$R^{10A}$ (wherein, n and $R^{10A}$ each have the same meaning as described in claim 1).

5. The compound or a pharmaceutically acceptable salt thereof of claim 1, wherein $R^{6A}$ and $R^{7A}$ form with an adjacent nitrogen atom a heterocyclic group which may have a substituent group selected from Substituent Group F described in claim 1.

6. The compound or a pharmaceutically acceptable salt thereof of claim 1, wherein $R^2$ is a piperidin-4-spiro-3'-pyrrolidin-1-yl, a piperidyl which may have a substituent group selected from Substituent Group F described in claim 1, or a 1-piperazinyl which may have a substituent group selected from Substituent Group F described in claim 1.

7. The compound or a pharmaceutically acceptable salt thereof of claim 1, wherein $R^2$ is an aryl which may have a substituent group selected from Substituent Group C described in claim 1.

8. The compound or a pharmaceutically acceptable salt thereof of claim 1, wherein $R^2$ is a phenyl which may have a substituent group selected from Substituent Group C described in claim 1.

9. The compound or a pharmaceutically acceptable salt thereof of claim 1, wherein $R^3$ is an aryl which may have a substituent group selected from Substituent Group G described in claim 1, or an optionally substituted aromatic heterocyclic group which may have a substituent group selected from Substituent Group H described in claim 1.

10. The compound or a pharmaceutically acceptable salt thereof of claim 1, which is selected from

1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)-cyclo- hexylamino)quinolin-3-yl)ethanone;

2,6-dichloro-4-(4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)-3-(methylsulfonyl)-quinolin-6-yl)phenol;

cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1s,4s)-4-((dimethylamino)-methyl)cyclo-hexylamino)quinolin-3-yl)methanone;

1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)-methyl)cyclo-hexylamino)quinolin-3-yl)propan-1-one;

1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)-cyclohexyl)-amino)quinolin-3-yl)propan-1-one;

1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl)-cyclo-hexylamino)quinolin-3-yl)ethanone;

1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl)-cyclohexylamino)-quinolin-3-yl)ethanone;

cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((trans)-4-((dimethylamino)-methyl)cyclo-hexylamino)quinolin-3-yl)methanone;

(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)-quinolin-3-yl)(cyclopropyl)methanone;

(S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)-quinolin-3-yl)(cyclopropyl)methanone;

(R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)-quinolin-3-yl)(cyclopropyl)methanone;

1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)-quinolin-3-yl)ethanone;

1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4- hydroxyphenyl)-quinolin-3-yl)propan-1-one; and

(S)-1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one;

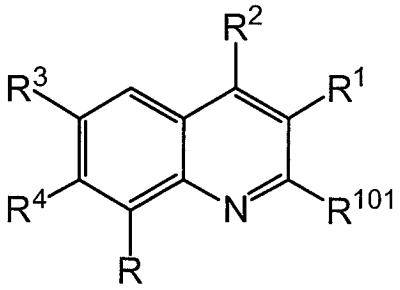
and a pharmaceutically acceptable salt thereof.

11. The compound or a pharmaceutically acceptable salt thereof of claim 1, wherein the cancer

is selected from the group consisting of breast cancer, lung cancer, bladder cancer, lymphoma, and uterine cancer.

12. A pharmaceutical composition for use in the treatment or prevention of cancer, which comprises as an active ingredient the compound or a pharmaceutically acceptable salt thereof of any one of claims 1 to 11.

13. Use of a compound or a pharmaceutically acceptable salt thereof in the manufacture of a medicament for the treatment or prevention of cancer, wherein the compound is represented by the following formula:



(I)

wherein,

$R^1$ represents

a $C_1$-$C_6$ alkylsulfonyl, or

-CO-$R^5$ [wherein,

$R^5$ is

a $C_1$-$C_6$ alkyl,

a $C_3$-$C_{10}$ cycloalkyl],

$R^2$ represents

-$NR^{6A}R^{7A}$;

wherein $R^{6A}$ represents a hydrogen atom, and $R^{7A}$ represents -$(CH_2)_n$-$R^{10A}$ (wherein n represents an integer of 0 to 6, and $R^{10A}$ represents a $C_3$-$C_{10}$ cycloalkyl which may have a substituent group selected from Substituent Group D, an aryl which may have a substituent group selected from Substituent Group E, an aliphatic heterocyclic group which may be substituted with a $C_1$-$C_6$ alkyl, an aromatic heterocyclic group which may have a substituent group selected from Substituent Group I), or $R^{6A}$ and $R^{7A}$ form with an adjacent nitrogen atom a heterocyclic group which may have a substituent group selected from Substituent Group F,

$R^3$ represents

an aryl which may have a substituent group selected from Substituent Group G, or an aromatic heterocyclic group which may have a substituent group selected from

Substituent Group H;

$R^4$ represents

a hydrogen atom, or

a halogen;

R represents

a hydrogen atom, or

a halogen, and

$R^{101}$ represents

a hydrogen atom.

wherein the above-mentioned Substituents C to I are one to three substituents each independently selected from the following Substituent Groups:

Substituent Group C: a halogen, a hydroxy, a $C_1$-$C_6$ alkoxy, and a di($C_1$-$C_6$ alkyl) amino;

Substituent Group D: a hydroxy, a $C_1$-$C_6$ alkyl, a $C_1$-$C_6$ aminoalkyl, an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl) (wherein, the aliphatic heterocyclic may have an amino, a hydroxy, a $C_1$-$C_6$ hydroxyalkyl, a $C_1$-$C_6$ alkoxy, or a halogen as a substituent), a $C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl), a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl) (wherein, either one of $C_1$-$C_6$ alkyl may have a hydroxy or a cyano as a substituent, and wherein hydrogen atom of $C_1$-$C_6$ alkyl may be substituted with deuterium atom), an amino, a $C_1$-$C_6$ alkylamino, a di($C_1$-$C_6$ alkyl)amino, a $C_1$-$C_6$ aminoalkylcarbonylamino, a di($C_1$-$C_6$ alkyl)amino($C_1$-$C_6$ alkylenyl)carbonylamino, an aliphatic heterocyclic group (wherein, the aliphatic heterocyclic group may have a $C_1$-$C_6$ alkoxy as a substituent), and an aliphatic heterocyclic-carbonylamino;

Substituent Group E: a halogen, a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl) (wherein, the $C_1$-$C_6$ alkylenyl may have a hydroxy as a substituent), an amino, a $C_2$-$C_7$ alkanoylamino, a di($C_1$-$C_6$ alkyl)amino, a $C_1$-$C_6$ aminoalkyl, and an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl) (wherein, the aliphatic heterocyclic may have a $C_1$-$C_6$ alkyl as a substituent);

Substituent Group F: a carbamoyl, an amino, a $C_1$-$C_6$ aminoalkyl, a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl), a $C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl), an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl), and an aliphatic heterocyclic group which may be substituted with a $C_1$-$C_6$ alkyl;

Substituent Group G: a halogen, a hydroxy, a cyano, a $C_1$-$C_6$ alkyl, a $C_1$-$C_6$ alkoxy, a trifluoromethoxy, a $C_1$-$C_6$ aminoalkyl, a $C_1$-$C_6$ alkylamino-($C_1$-$C_6$ alkylenyl), a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl), an amino, a $C_1$-$C_6$ alkylsulfonylamino, a carbamoyl, a

sulfamoyl, a ($C_1$-$C_6$ alkyl)ureide, a benzylureide, andan aliphatic heterocyclic group;

Substituent Group H: a halogen, a cyano, a $C_1$-$C_6$ alkyl, a $C_1$-$C_6$ alkoxy, an amino, a carbamoyl, a dimethylaminopropylaminocarbonyl, and an aminocyclohexylaminocarbonyl;

Substituent Group I: an aliphatic heterocyclic group (wherein, the aliphatic heterocyclic group may have a $C_1$-$C_6$ alkyl, an amino group or a $C_1$-$C_6$ alkylamino as a substituent); an aliphatic heterocyclic-($C_1$-$C_6$ alkylenyl); an aliphatic heterocyclic-amino (wherein, the aliphatic heterocyclic may have a $C_1$-$C_6$ alkyl or an amino as a substituent); a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl); a $C_1$-$C_6$ aminoalkyloxy; a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)oxy; a di($C_1$-$C_6$ alkyl)amino-($C_1$-$C_6$ alkylenyl)amino; a cyclohexyl (wherein, the cyclohexyl may have an amino or a $C_1$-$C_6$ aminoalkyl as a substituent).

14. The use of claim 13, wherein $R^1$ is -CO-$R^5$.

15. The use of claim 13, wherein $R^1$ is a methylsulfonyl.

16. The use of claim 13, wherein $R^{6A}$ is a hydrogen atom, and $R^{7A}$ is -$(CH_2)_n$-$R^{10A}$ (wherein, n and $R^{10A}$ each have the same meaning as described in claim 13).

17. The use of claim 13, wherein $R^{6A}$ and $R^{7A}$ form with an adjacent nitrogen atom a heterocyclic group which may have a substituent group selected from Substituent Group F described in claim 13.

18. The use of claim 13, wherein $R^2$ is a piperidin-4-spiro-3'-pyrrolidin-1-yl, a piperidyl which may have a substituent group selected from Substituent Group F described in claim 13, or a 1-piperazinyl which may have a substituent group selected from Substituent Group F described in claim 13.

19. The use of claim 13, wherein $R^2$ is an aryl which may have a substituent group selected from Substituent Group C described in claim 13.

20. The use of claim 13, wherein $R^2$ is a phenyl which may have a substituent group selected from Substituent Group C described in claim 13.

21. The use of claim 13, wherein $R^3$ is an aryl which may have a substituent group selected from Substituent Group G described in claim 13, or an optionally substituted aromatic heterocyclic group which may have a substituent group selected from Substituent Group H described in claim 13.

22. The use of claim 13, wherein the compound or a pharmaceutically acceptable salt thereof is selected from:

1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)methyl)-cyclo-hexylamino)quinolin-3-yl)ethanone;

2,6-dichloro-4-(4-(1R,4R)-4-((dimethylamino)methyl)cyclohexylamino)-3-(methylsulfonyl)-quinolin-6-yl)phenol;

cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1s,4s)-4-((dimethylamino)-methyl)cyclo-hexylamino)quinolin-3-yl)methanone;

1-(6-(3-chloro-4-hydroxy-5-methoxyphenyl)-4-(1R,4R)-4-((dimethylamino)-methyl)cyclo-hexylamino)quinolin-3-yl)propan-1-one;

1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((1R,4R)-4-((dimethylamino)methyl)-cyclohexyl)-amino)quinolin-3-yl)propan-1-one;

1-(6-(3-chloro-5-fluoro-4-hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl)-cyclo-hexylamino)quinolin-3-yl)ethanone;

1-(6-(3,5-dichloro-4-hydroxyphenyl)-4-((trans)-4-((dimethylamino)methyl)-cyclohexylamino)-quinolin-3-yl)ethanone;

cyclopropyl(6-(3,5-dichloro-4-hydroxyphenyl)-4-((trans)-4-((dimethylamino)-methyl)cyclo-hexylamino)quinolin-3-yl)methanone;

(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)-quinolin-3-yl)(cyclopropyl)methanone;

(S)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)-quinolin-3-yl)(cyclopropyl)methanone;

(R)-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)-quinolin-3-yl)(cyclopropyl)methanone;

1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4- hydroxyphenyl)-quinolin-3-yl)ethanone;

1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)-quinolin-3-yl)propan-1-one; and

(S)-1-(4-(6-(3-aminopiperidin-1-yl)pyridin-3-ylamino)-6-(3,5-dichloro-4-hydroxyphenyl)quinolin-3-yl)propan-1-one;

and a pharmaceutically acceptable salt thereof.

23. The use of claim 13, wherein the cancer is selected from the group consisting of breast cancer, lung cancer, bladder cancer, lymphoma, and uterine cancer.