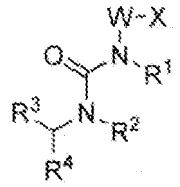
CLAIMS

1. A compound represented by formula [I]:

[Chemical Formula 1]



[I]

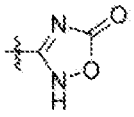
,

or a pharmaceutically acceptable salt thereof, or a hydrate thereof,

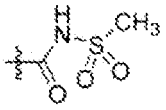
wherein

X represents carboxy, C_{1-4} alkoxycarbonyl, carbamoyl, tetrazolyl, or a group selected from formula group [II]:

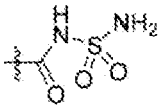
[Chemical Formula 2]



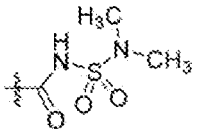
[II-1],



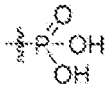
[II-2],



[II-3],



[II-4],



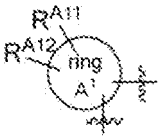
[II-5]

[II]

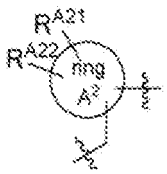
;

W represents linear C_{1-3} alkanediyl or a structure selected from formula group [III]:

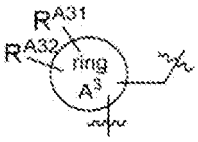
[Chemical Formula 3]



[III-1],



[III-2],



[III-3]

[III]

,

where

the linear C_{1-3} alkanediyl is optionally substituted with one group selected from the group consisting of C_{1-6} alkyl (the C_{1-6} alkyl is optionally substituted with one group selected from the group consisting of hydroxy and carboxy), halo-C_{1-6} alkyl, C_{3-8} cycloalkyl, phenyl-C_{1-3} alkyl, and pyridyl-C_{1-3} alkyl, and

when the linear C_{1-3} alkanediyl is substituted with one methyl, it is optionally further substituted with one methyl,

ring A^1, ring A^2, and ring A^3 each represent C_{3-8} cycloalkane, a partially saturated 9- to 10-membered fused hydrocarbon aromatic ring, an oxygen atom-containing 4- to 8-membered saturated heterocycle, a sulfur atom-containing 4- to 8-membered saturated heterocycle, or a nitrogen atom-containing 4- to 8-membered saturated heterocycle,

where

the sulfur atom in the sulfur atom-containing 4- to 8-membered saturated heterocycle is optionally substituted with one to two oxo,

the nitrogen atom in the nitrogen atom-containing 4- to 8-membered saturated heterocycle is optionally substituted with one group selected from the group consisting of C_{1-4} alkylcarbonyl and C_{1-4} alkoxycarbonyl, and

R^{A11}, R^{A21}, and R^{A31} each independently represent a hydrogen atom, hydroxy, carboxy, a halogen atom, C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkylcarbonyl, or nitrogen atom-containing 4- to 6-membered saturated heterocyclyl (the nitrogen atom-containing 4- to 6-membered saturated heterocyclyl is optionally substituted with one C_{1-3} alkyl), and

R^{A12}, R^{A22}, and R^{A32} each independently represent a hydrogen atom, a halogen atom, or methyl, or

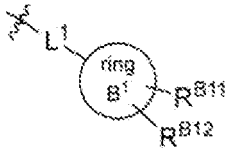
R^{A11} and R^{A12}, R^{A21} and R^{A22}, and R^{A31} and R^{A32} each optionally together form oxo, or

R^{A11} and R^{A12}, R^{A21} and R^{A22}, and R^{A31} and R^{A32} each optionally form C_{3-6} cycloalkane together with the carbon atom(s) in the adjacent ring;

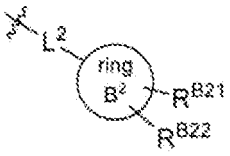
R^1 represents a hydrogen atom or methyl;

R^2 represents C_{6-10} alkyl, C_{6-10} alkenyl, C_{6-10} alkynyl, or a group represented by formula [IV-1] or [IV-2]:

[Chemical Formula 4]



[IV-1],



[IV-2],

where

ring B^1 represents C_{3-8} cycloalkyl, nitrogen atom-containing 4- to 8-membered saturated heterocyclyl, phenyl, or nitrogen atom-containing 5- to 6-membered heteroaryl,

R^{B11} and R^{B12} each independently represent a hydrogen atom, a halogen atom, C_{1-6} alkyl, or C_{1-6} alkoxy,

L^1 represents C_{3-8} alkanediyl (the C_{3-8} alkanediyl is optionally substituted with 1 to 5 fluorine atoms), a structure represented by formula [V-6]: $-CH_2CH_2CH=C(CH_3)-$, or a structure represented by formula [V-1]:

[Chemical Formula 5]



[V-1],

where

n11 represents an integer of 0 to 3,

n12 represents an integer of 0 to 5,

n13 represents an integer of 0 to 3, and

one carbon atom in the C_{3-8} alkanediyl, that is two or more atoms away from the nitrogen atom to which R^2 is bonded, is optionally replaced with formula -O-, formula -S-, or formula $-N(R^{L11})-$, and furthermore,

two consecutive carbon atoms in the C_{3-8} alkanediyl, that are one or more atoms away from the nitrogen atom to which R^2 is bonded, are optionally replaced with formula $-C(=O)N(R^{L12})-$,

R^{L11} represents a hydrogen atom or C_{1-3} alkyl, and

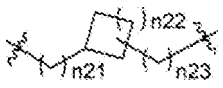
R^{L12} represents a hydrogen atom or C_{1-3} alkyl,

ring B^2 represents partially saturated 9- to 10-membered fused aryl or nitrogen atom-containing 9- to 10-membered fused heteroaryl,

R^{B21} and R^{B22} each independently represent a hydrogen atom, a halogen atom, C_{1-6} alkyl, or C_{1-6} alkoxy,

L^2 represents C_{1-2} alkanediyl (the C_{1-2} alkanediyl is optionally substituted with 1 to 4 fluorine atoms), C_{3-6} alkanediyl (the C_{3-6} alkanediyl is optionally substituted with 1 to 5 fluorine atoms), or a structure represented by formula [V-2]:

[Chemical Formula 6]



[V-2],

where

n21 represents an integer of 0 to 3,

n22 represents an integer of 0 to 5,

n23 represents an integer of 0 to 3, and

one carbon atom in the C_{3-6} alkanediyl, that is two or more atoms away from the nitrogen atom to which R^2 is bonded, is optionally replaced with formula -O-, formula -S-, or formula -N(R^{L21})-, and furthermore,

two consecutive carbon atoms in the C_{3-6} alkanediyl, that are one or more atoms away from the nitrogen atom to which R^2 is bonded, are optionally replaced with formula -C(=O)N(R^{L22})-,

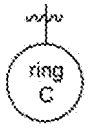
R^{L21} represents a hydrogen atom or C_{1-3} alkyl, and

R^{L22} represents a hydrogen atom or C_{1-3} alkyl;

R^3 represents a hydrogen atom or C_{1-3} alkyl (the C_{1-3} alkyl is optionally substituted with one group selected from the group consisting of hydroxy and methoxy); and

R^4 represents a group represented by formula [VI]:

[Chemical Formula 7]



[VI],

where

ring C represents phenyl, nitrogen atom-containing 6-membered heteroaryl, or 9- to 10-membered fused heteroaryl,

the phenyl is substituted with one group selected from the group consisting of a halogen atom, C_{1-6} alkyl, C_{1-6} alkoxy, and C_{1-6} alkylcarbonyl, and furthermore,

the phenyl is optionally substituted with one to four groups that are the same or different, selected from the group consisting of hydroxy, carboxy, carbamoyl, cyano, a halogen atom, C_{1-6} alkyl (the C_{1-6} alkyl is optionally substituted with one group selected from the group consisting of hydroxy and C_{1-6} alkoxy), halo-C_{1-6} alkyl (the halo-C_{1-6} alkyl is optionally substituted with one hydroxy), C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-8} cycloalkyl (the C_{3-8} cycloalkyl is optionally substituted with one hydroxy), C_{1-6} alkoxy, halo-C_{1-6} alkoxy, C_{3-8} cycloalkoxy, C_{1-6} alkylsulfanyl, C_{1-6} alkylsulfinyl, C_{1-6} alkylsulfonyl, mono-C_{1-6} alkylamino, di-C_{1-6} alkylamino, C_{1-6} alkylcarbonyl, halo-C_{1-6} alkylcarbonyl, C_{1-6} alkoxycarbonyl, mono-C_{1-6} alkylaminocarbonyl, and di-C_{1-6} alkylaminocarbonyl,

the nitrogen atom-containing 6-membered heteroaryl is substituted with one C_{1-6} alkoxy, and furthermore,

the nitrogen atom-containing 6-membered heteroaryl is optionally substituted with one to two groups that are the same or different, selected from the group consisting of cyano, C_{1-6} alkyl, C_{1-6} alkoxy, and oxo, and

the 9- to 10-membered fused heteroaryl is optionally substituted with one to four groups that are the same or different, selected from the group consisting of C_{1-6} alkyl, C_{1-6} alkoxy, and oxo; or

R^3 and R^4, together with their adjacent carbon atom, optionally form a partially saturated 9- to 10-membered fused hydrocarbon aromatic ring or a partially saturated oxygen

atom-containing 9- to 10-membered fused heteroaromatic ring,

where

the partially saturated 9- to 10-membered fused hydrocarbon aromatic ring is optionally substituted with one to two halogen atoms, and

the partially saturated oxygen atom-containing 9- to 10-membered fused heteroaromatic ring is optionally substituted with one to two halogen atoms.

2. The compound according to claim 1, or a pharmaceutically acceptable salt thereof, or a hydrate thereof

wherein, in formula group [III] for W,

R^{A11}, R^{A21}, and R^{A31} each independently represent a hydrogen atom, hydroxy, carboxy, a halogen atom, C_{1-6} alkyl, C_{1-6} alkoxy, or nitrogen atom-containing 4- to 6-membered saturated heterocyclyl (the nitrogen atom-containing 4- to 6-membered saturated heterocyclyl is optionally substituted with one C_{1-3} alkyl), and

R^{A12}, R^{A22}, and R^{A32} each independently represent a hydrogen atom, a halogen atom, or methyl, or

R^{A11} and R^{A12}, R^{A21} and R^{A22}, and R^{A31} and R^{A32} each optionally together form oxo, or

R^{A11} and R^{A12}, R^{A21} and R^{A22}, and R^{A31} and R^{A32} each optionally form C_{3-6} cycloalkane together with the carbon atom(s) in the adjacent ring, and

wherein, in formula [IV-1] for R^2,

L^1 represents C_{3-8} alkanediyl (the C_{3-8} alkanediyl is optionally substituted with 1 to 5 fluorine atoms) or a structure represented by formula [V-1],

where

one carbon atom in the C_{3-8} alkanediyl, that is two or more atoms away from the nitrogen atom to which R^2 is bonded, is optionally replaced with formula -O-, formula -S-, or formula -N(R^{L11})-, and furthermore,

two consecutive carbon atoms in the C_{3-8} alkanediyl, that are one or more atoms away from the nitrogen atom to which R^2 is bonded, are optionally replaced with formula -C(=O)N(R^{L12})-,

R^{L11} represents a hydrogen atom or C_{1-3} alkyl, and

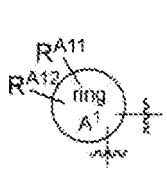
R^{L12} represents a hydrogen atom or C_{1-3} alkyl.

3. The compound according to claim 1 or 2, or a pharmaceutically acceptable salt thereof, or a hydrate thereof,

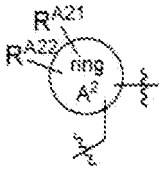
wherein, in the above formula [I],

W is linear C_{1-3} alkanediyl or a structure selected from formula group [III]:

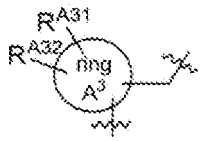
[Chemical Formula 8]



[III－1],



[III－2],



[III－3] [III],

where

the linear C_{1-3} alkanediyl is optionally substituted with one group selected from the group consisting of C_{1-6} alkyl (the C_{1-6} alkyl is optionally substituted with one group selected from the group consisting of hydroxy and carboxy), halo-C_{1-6} alkyl, C_{3-8} cycloalkyl, phenyl-C_{1-3} alkyl, and pyridyl-C_{1-3} alkyl, and

when the linear C_{1-3} alkanediyl is substituted with one methyl, it is optionally further substituted with one methyl,

ring A^1 is C_{3-8} cycloalkane, dihydroindene, oxetane, tetrahydrofuran, tetrahydropyran, tetrahydrothiopyran, azetidine, pyrrolidine, or piperidine,

ring A^2 is C_{3-8} cycloalkane or tetrahydropyran, and

ring A^3 is C_{3-8} cycloalkane, dihydroindene, or tetrahydropyran,

where

the sulfur atom in the tetrahydrothiopyran is optionally substituted with one to two oxo, and

the nitrogen atom in each of the azetidine, pyrrolidine, and piperidine is optionally

substituted with one C_{1-4} alkylcarbonyl, and

R^{A11} is a hydrogen atom, hydroxy, carboxy, a halogen atom, C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkylcarbonyl, or nitrogen atom-containing 4- to 6-membered saturated heterocyclyl (the nitrogen atom-containing 4- to 6-membered saturated heterocyclyl is optionally substituted with one C_{1-3} alkyl), and

R^{A12} represents a hydrogen atom, a halogen atom, or methyl, or

R^{A11} and R^{A12} optionally together form oxo,

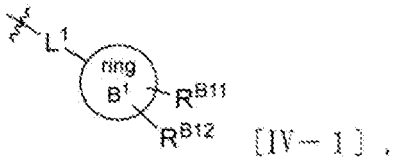
R^{A21} and R^{A22} are both hydrogen atoms,

R^{A31} and R^{A32} are both hydrogen atoms, or

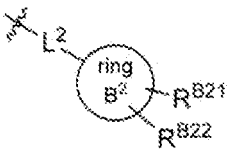
R^{A11} and R^{A12} optionally form C_{3-6} cycloalkane together with the carbon atom(s) in the adjacent ring;

R^2 is C_{6-10} alkyl or a group represented by formula [IV-1] or [IV-2]:

[Chemical Formula 9]



[IV-1],



[IV-2],

where

ring B^1 is C_{3-8} cycloalkyl, piperidinyl, phenyl, pyrazolyl, or pyridyl,

R^{B11} and R^{B12} are each independently a hydrogen atom, a halogen atom, C_{1-6} alkyl, or C_{1-6} alkoxy, and

L^1 is any of structures represented by formulas [V-3] to [V-12] and [V-14] to [V-19]:

[Chemical Formula 10]

$-(CH_2)_{n4}-$ [V-3],

$-CH_2CH(CH_3)CH_2CH_2-$ [V-4],

$-CH_2CH_2CH_2CH(CH_3)-$ [V-5],

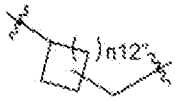
$-CH_2CH_2CH=C(CH_3)-$ [V-6],

$-CH_2CH_2CF_2CH_2-$ [V-7],

$-CH_2CH_2CH_2CF_2-$ [V-8],

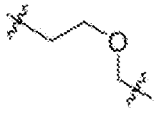


[V-9],

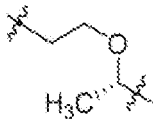


[V-10],

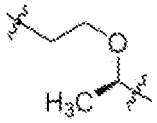
$-CH_2CH_2CH_2-O-$ [V-11],



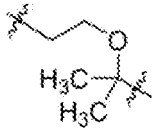
[V-12],



[V-14],



[V-15],



[V-16],

$-CH_2CH_2CH_2-S-$ [V-17],

$-CH_2CH_2CH_2-N(CH_3)-$ [V-18],

$-CH_2-C(=O)NH-CH_2-$ [V-19]

,

where

n4 represents an integer of 3 to 5,

n12' represents an integer of 0 to 3,

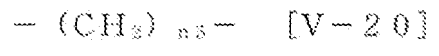
n12'' represents an integer of 0 to 3, and

ring B^2 is dihydroindenyl, indolyl, or isoindolinyl,

R^{B21} and R^{B22} are both hydrogen atoms, and

L^2 is a structure represented by formula [V-20]:

[Chemical Formula 11]



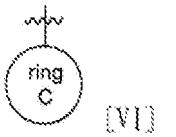
[V-20],

where

n5 represents an integer of 1 to 2; and

R^4 is a group represented by formula [VI]:

[Chemical Formula 12]



[VI],

where

ring C is phenyl, pyridyl, pyrimidinyl, dihydropyridinyl, dihydrobenzofuranyl, benzodioxanyl, indolyl, indazolyl, benzimidazolyl, pyrazolopyridinyl, indolinyl, or dihydroquinazolinyl,

the phenyl is substituted with one group selected from the group consisting of a halogen atom, C_{1-6} alkyl, C_{1-6} alkoxy, and C_{1-6} alkylcarbonyl, and furthermore,

the phenyl is optionally substituted with one to four groups that are the same or different, selected from the group consisting of hydroxy, carboxy, carbamoyl, cyano, a halogen atom, C_{1-6} alkyl (the C_{1-6} alkyl is optionally substituted with one group selected from the group consisting of hydroxy and C_{1-6} alkoxy), halo-C_{1-6} alkyl (the halo-C_{1-6} alkyl is optionally substituted with one hydroxy), C_{2-6} alkenyl, C_{3-8} cycloalkyl (the C_{3-8} cycloalkyl is optionally substituted with one hydroxy), C_{1-6} alkoxy, halo-C_{1-6} alkoxy, C_{3-8} cycloalkoxy, C_{1-6} alkylsulfinyl, C_{1-6} alkylsulfonyl, mono-C_{1-6} alkylamino, di-C_{1-6} alkylamino, C_{1-6} alkylcarbonyl, halo-C_{1-6} alkylcarbonyl, C_{1-6} alkoxycarbonyl, and mono-C_{1-6} alkylaminocarbonyl,

the pyridyl is substituted with one C_{1-6} alkoxy, and furthermore,

the pyridyl is optionally substituted with one group selected from the group consisting of cyano and C_{1-6} alkoxy,

the pyrimidinyl is substituted with one C_{1-6} alkoxy, and furthermore,

the pyrimidinyl is optionally substituted with one C_{1-6} alkoxy,

the dihydropyridinyl is substituted with one C_{1-6} alkoxy, and furthermore,

the dihydropyridinyl is optionally substituted with one to two groups that are the same or different, selected from the group consisting of C_{1-6} alkyl and oxo,

the dihydrobenzofuranyl and benzodioxanyl are optionally substituted with one C_{1-6} alkoxy,

the indolyl, indazolyl, benzimidazolyl, pyrazolopyridinyl, and indolinyl are optionally substituted with one to two groups that are the same or different, selected from the group consisting of C_{1-6} alkyl and C_{1-6} alkoxy, and

the dihydroquinazolinyl is optionally substituted with one to four groups that are the same or different, selected from the group consisting of C_{1-6} alkyl, C_{1-6} alkoxy, and oxo; and

the fused ring formed by R^3 and R^4 together with their adjacent carbon atom is dihydroindene or dihydrobenzofuran, and

the dihydroindene and dihydrobenzofuran are optionally substituted with one to two halogen atoms.

4. The compound according to claim 1 or 2, or a pharmaceutically acceptable salt thereof, or a hydrate thereof

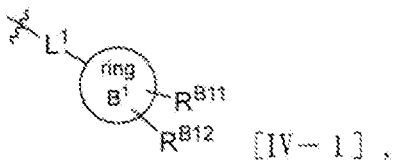
wherein, in the above formula [I],

X is carboxy, C_{1-4} alkoxycarbonyl, or tetrazolyl;

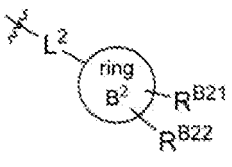
R^1 is a hydrogen atom; and

R^2 is a group represented by the above formula [IV-1] or [IV-2]:

[Chemical Formula 13]



[IV-1],



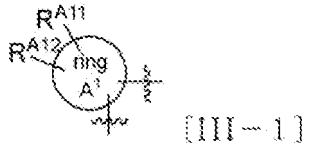
[IV-2].

5. The compound according to any one of claims 1, 2, and 4, or a pharmaceutically acceptable salt thereof, or a hydrate thereof,

wherein, in the above formula [I],

W is methanediyl or a structure represented by formula [III-1]:

[Chemical Formula 14]



,

where

the methanediyl is optionally substituted with one group selected from the group consisting of C_{1-6} alkyl (the C_{1-6} alkyl is optionally substituted with one group selected from the group consisting of hydroxy and carboxy), halo-C_{1-6} alkyl, C_{3-8} cycloalkyl, phenyl-C_{1-3} alkyl, and pyridyl-C_{1-3} alkyl, and

when the methanediyl is substituted with one methyl, it is optionally further substituted with one methyl, and

wherein, in the structure represented by formula [III-1],

ring A^1 is C_{3-8} cycloalkane, a partially saturated 9- to 10-membered fused hydrocarbon aromatic ring, an oxygen atom-containing 4- to 8-membered saturated heterocycle, a sulfur atom-containing 4- to 8-membered saturated heterocycle, or a nitrogen atom-containing 4- to 8-membered saturated heterocycle,

where

the sulfur atom in the sulfur atom-containing 4- to 8-membered saturated heterocycle is optionally substituted with one to two oxo, and

the nitrogen atom in the nitrogen atom-containing 4- to 8-membered saturated heterocycle is optionally substituted with one group selected from the group consisting of C_{1-4} alkylcarbonyl and C_{1-4} alkoxycarbonyl, and

R^{A11} is a hydrogen atom, hydroxy, carboxy, a halogen atom, C_{1-6} alkyl, C_{1-6} alkoxy, or nitrogen atom-containing 4- to 6-membered saturated heterocyclyl (the nitrogen atom-containing 4- to 6-membered saturated heterocyclyl is optionally substituted with one C_{1-3} alkyl), and

R^{A12} is a hydrogen atom, a halogen atom, or methyl, or

R^{A11} and R^{A12} optionally together form oxo, or

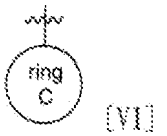
R^{A11} and R^{A12} optionally form C_{3-6} cycloalkane together with the carbon atom(s) in the adjacent ring.

6. The compound according to any one of claims 1, 2, 4, and 5, or a pharmaceutically acceptable salt thereof, or a hydrate thereof

wherein, in the above formula [I],

R^4 is a group represented by formula [VI]:

[Chemical Formula 15]



[VI],

where

ring C is phenyl,

the phenyl is substituted with one group selected from the group consisting of a halogen atom, C_{1-6} alkyl, C_{1-6} alkoxy, and C_{1-6} alkylcarbonyl, and furthermore,

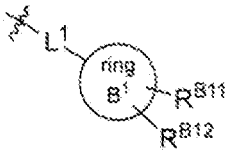
the phenyl is optionally substituted with one to four groups that are the same or different, selected from the group consisting of hydroxy, carboxy, carbamoyl, cyano, a halogen atom, C_{1-6} alkyl (the C_{1-6} alkyl is optionally substituted with one group selected from the group consisting of hydroxy and C_{1-6} alkoxy), halo-C_{1-6} alkyl (the halo-C_{1-6} alkyl is optionally substituted with one hydroxy), C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-8} cycloalkyl (the C_{3-8} cycloalkyl is optionally substituted with one hydroxy), C_{1-6} alkoxy, halo-C_{1-6} alkoxy, C_{3-8} cycloalkoxy, C_{1-6} alkylsulfanyl, C_{1-6} alkylsulfinyl, C_{1-6} alkylsulfonyl, mono-C_{1-6} alkylamino, di-C_{1-6} alkylamino, C_{1-6} alkylcarbonyl, halo-C_{1-6} alkylcarbonyl, C_{1-6} alkoxycarbonyl, mono-C_{1-6} alkylaminocarbonyl, and di-C_{1-6} alkylaminocarbonyl.

7. The compound according to any one of claims 1, 2, and 4 to 6, or a pharmaceutically acceptable salt thereof, or a hydrate thereof,

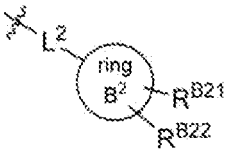
wherein, in the above formula [I],

R^2 is a group represented by formula [IV-1] or [IV-2]:

[Chemical Formula 16]



[IV-1],



[IV-2],

where

ring B^1 is phenyl,

R^{B11} and R^{B12} are each independently a hydrogen atom, a halogen atom, C_{1-6} alkyl, or C_{1-6} alkoxy, and

L^1 is any of structures represented by formulas [V-3] to [V-5], [V-7] to [V-8], [V-11] to [V-12], and [V-14] to [V-16]:

[Chemical Formula 17]

$-(CH_2)_{n4}-$ [V-3],

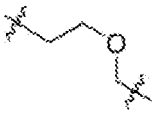
$-CH_2CH(CH_3)CH_2CH_2-$ [V-4],

$-CH_2CH_2CH_2CH(CH_3)-$ [V-5],

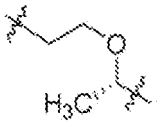
$-CH_2CH_2CF_2CH_2-$ [V-7],

$-CH_2CH_2CH_2CF_2-$ [V-8],

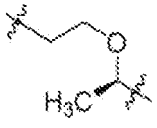
$-CH_2CH_2CH_2-O-$ [V-11],



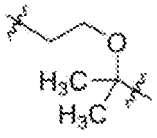
[V-12],



[V-14],



[V-15],



[V-16],

where

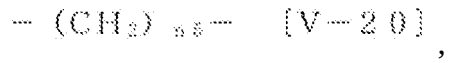
n4 represents an integer of 3 to 5, and

ring B^2 is dihydroindenyl, indolyl, or isoindolinyl,

R^{B21} and R^{B22} are both hydrogen atoms, and

L^2 is a structure represented by formula [V-20]:

[Chemical Formula 18]



[V-20],

where

n5 is an integer of 1 to 2.

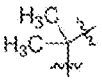
8. The compound according to any one of claims 4 to 7, or a pharmaceutically acceptable salt thereof, or a hydrate thereof,

wherein, in the above formula [I],

X is carboxy;

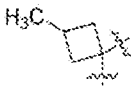
W is any of structures represented by formulas [III-4] to [III-17]:

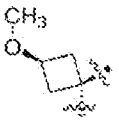
[Chemical Formula 19]

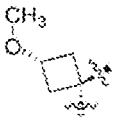

[III－4],

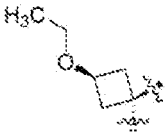

[III－5],

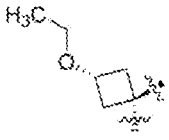

[III－6],

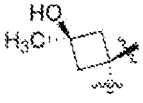

[III－7],

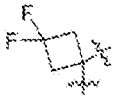

[III－8],

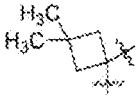

[III－9],


[III－10],


[III－11],


[III－12],


[III－13],


[III－14],


[III－15],

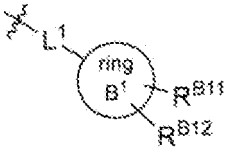

[III－16],


[III－17]

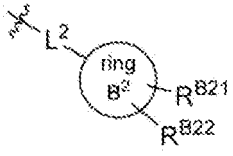
;

R^2 is a group represented by formula [IV-1] or [IV-2]:

[Chemical Formula 20]



[IV－1],



[IV－2],

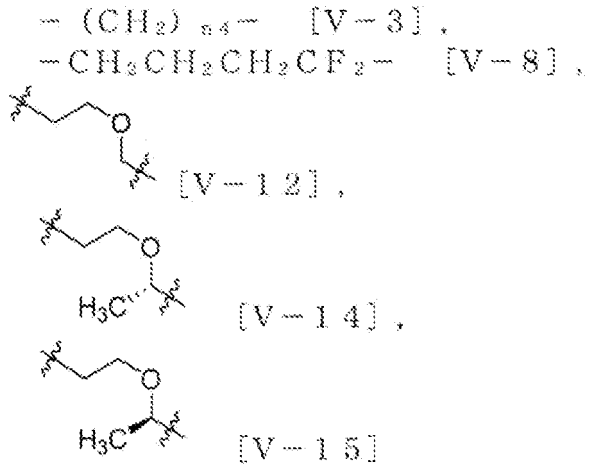
where

ring B^1 is phenyl,

R^{B11} and R^{B12} are both hydrogen atoms, and

L^1 is a structure represented by formula [V-3], [V-8], [V-12], [V-14], or [V-15]:

[Chemical Formula 21]



where

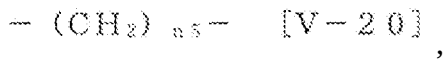
n4 is an integer of 3 to 4, and

ring B^2 is dihydroindenyl,

R^{B21} and R^{B22} are both hydrogen atoms, and

L^2 is a structure represented by formula [V-20]:

[Chemical Formula 22]

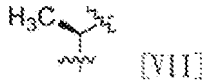


where

n5 is 2;

R^3 is methyl having a steric configuration represented by formula [VII]:

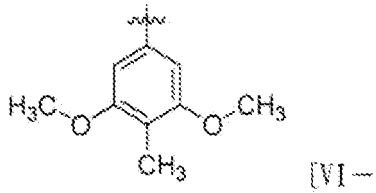
[Chemical Formula 23]



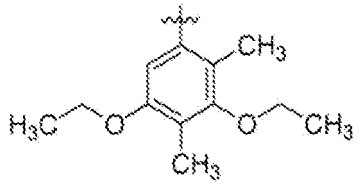
; and

R^4 is a group represented by any of formulas [VI-1] to [VI-21]:

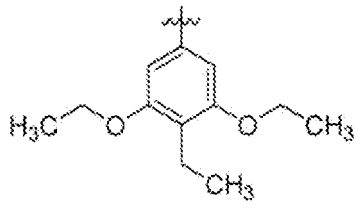
[Chemical Formula 24]



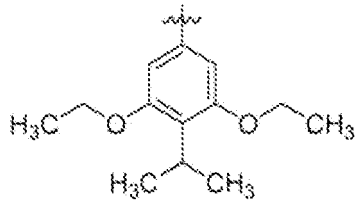
[VI－1],



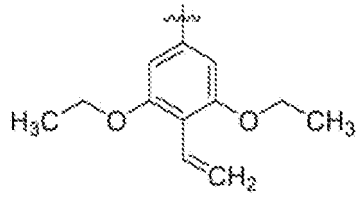
[VI－2],



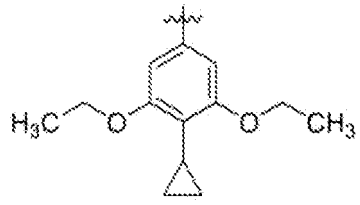
[VI－3],



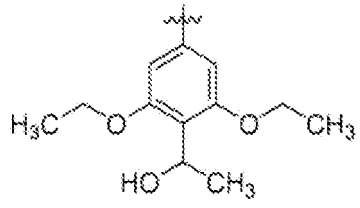
[VI－4],



[VI－5],

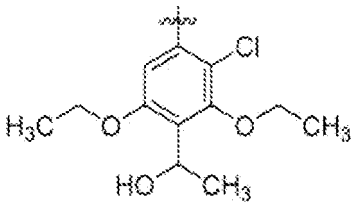


[VI－6],

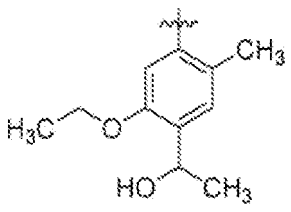


[VI－7],

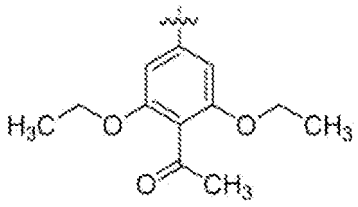
[Chemical Formula 25]



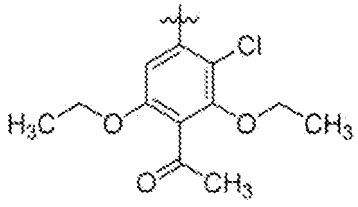
[VI－8],



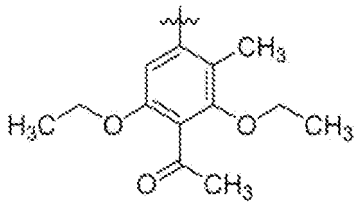
[VI－9],



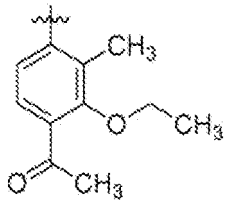
[VI－10],



[VI－11],

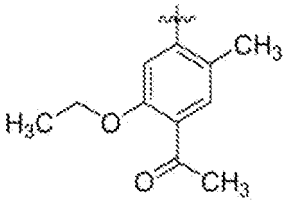


[VI－12],

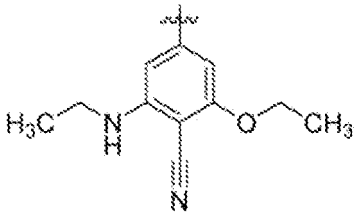


[VI－13],

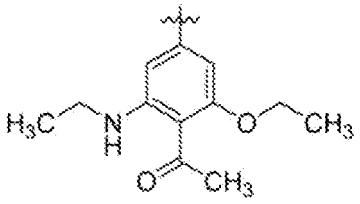
[Chemical Formula 26]



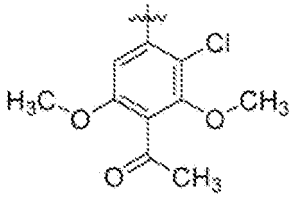
[VI－14]，



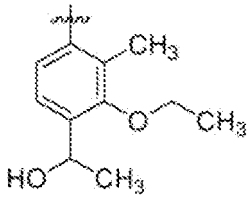
[VI－15]，



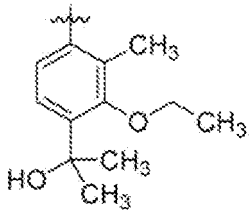
[VI－16]，



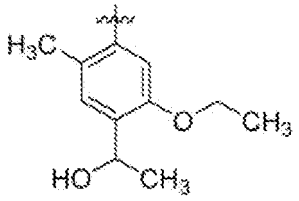
[VI－17]，



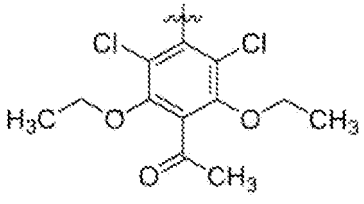
[VI－18]，



[VI－19]，



[VI－20]，



[VI－21]

.

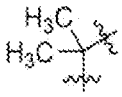
9. The compound according to any one of claims 4 to 7, or a pharmaceutically acceptable salt thereof, or a hydrate thereof,

wherein, in the above formula [I],

X is carboxy;

W is a structure represented by any of formulas [III-4] to [III-11], [III-13] to [III-14], and [III-18] to [III-19]:

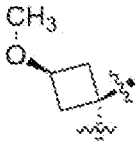
[Chemical Formula 27]

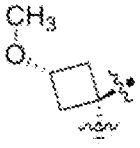

[III-4],

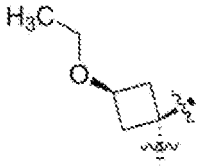

[III-5],

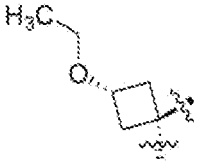

[III-6],

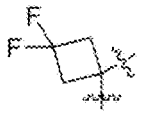

[III-7],

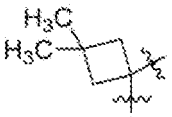

[III-8],


[III-9],


[III-10],


[III-11],


[III-13],


[III-14],

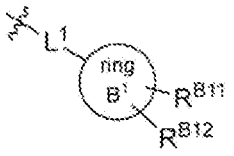

[III-18],


[III-19]

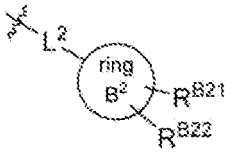
;

R^2 is a group represented by formula [IV-1] or [IV-2]:

[Chemical Formula 28]



[IV-1],



[IV-2],

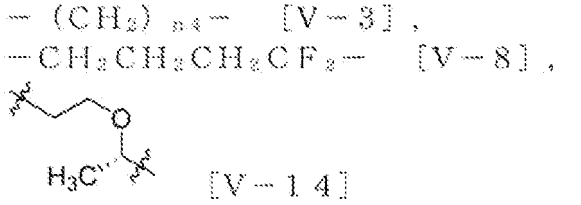
where

ring B^1 is phenyl,

R^{B11} and R^{B12} are both hydrogen atoms, and

L^1 is a structure represented by formula [V-3], [V-8], or [V-14]:

[Chemical Formula 29]



,

where

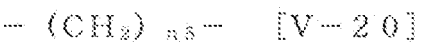
n4 is 4, and

ring B^2 is dihydroindenyl,

R^{B21} and R^{B22} are both hydrogen atoms, and

L^2 is a structure represented by formula [V-20]:

[Chemical Formula 30]



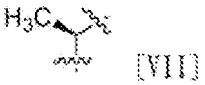
,

where

n5 is 2;

R^3 is methyl having a steric configuration represented by formula [VII]:

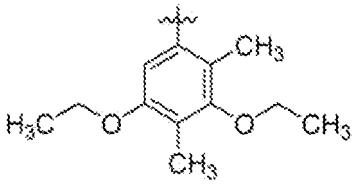
[Chemical Formula 31]



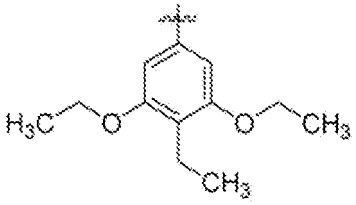
; and

R^4 is a group represented by formula [VI-2], [VI-3], [VI-8], [VI-10] to [VI-12], [VI-16], [VI-19], or [VI-21]:

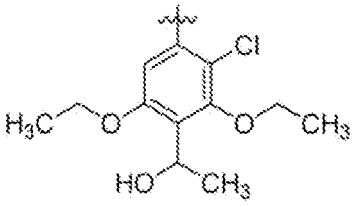
[Chemical Formula 32]



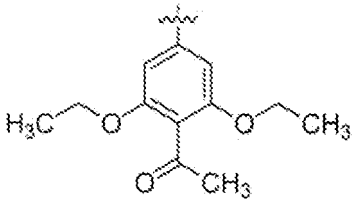
[VI－2]，



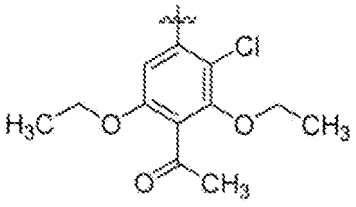
[VI－3]，



[VI－8]，

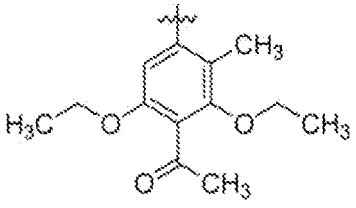


[VI－10]，

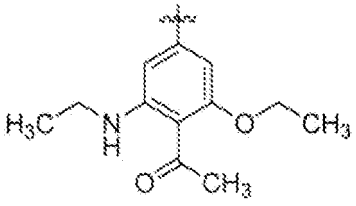


[VI－11]，

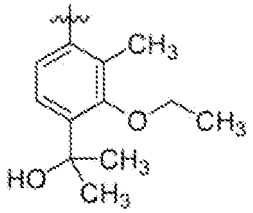
[Chemical Formula 33]



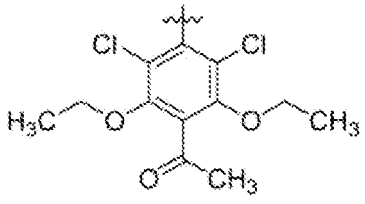
[VI－12],



[VI－16],



[VI－19],



[VI－21].

10. The compound according to any one of claims 4 to 7, or a pharmaceutically acceptable salt thereof, or a hydrate thereof,

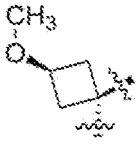
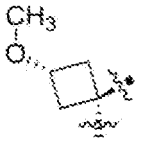
wherein, in the above formula [I],

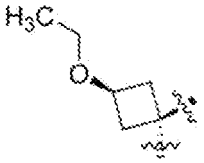
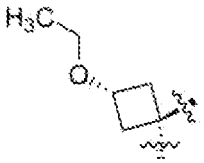
X is carboxy or tetrazolyl;

W is a structure represented by formula [III-5], [III-8] to [III-11], or [III-13]:

[Chemical Formula 34]

 [III－5],

 [III－8],  [III－9],

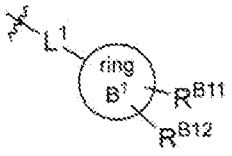
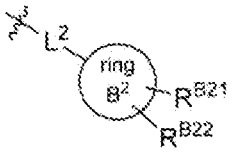
 [III－10],  [III－11],

 [III－13]

;

R^2 is a group represented by formula [IV-1] or [IV-2]:

[Chemical Formula 35]

 [IV－1],  [IV－2],

where

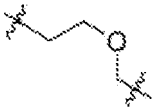
ring B^1 is phenyl,

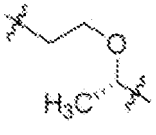
R^{B11} and R^{B12} are both hydrogen atoms, and

L^1 is a structure represented by formula [V-3], [V-12], or [V-14]:

[Chemical Formula 36]

 [V－3],

 [V－12],

 [V－14],

where

n4 is an integer of 4, and

ring B^2 is dihydroindenyl,

R^{B21} and R^{B22} are both hydrogen atoms, and

L^2 is a structure represented by formula [V-20]:

[Chemical Formula 37]



[V-20]

,

where

n5 is 2;

R^3 is methyl having a steric configuration represented by formula [VII]:

[Chemical Formula 38]

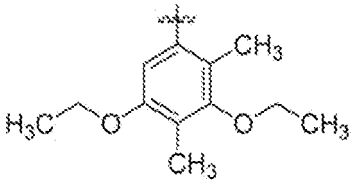


[VII]

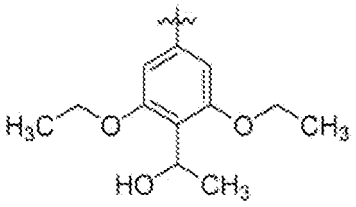
; and

R^4 is a group represented by formula [VI-2], [VI-7], [VI-8], [VI-10], [VI-11], or [VI-12]:

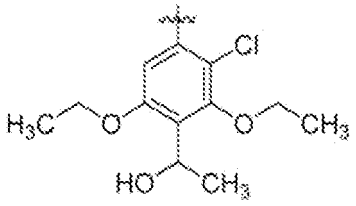
[Chemical Formula 39]



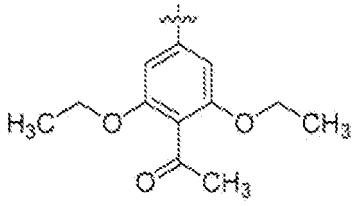
[VI－2],



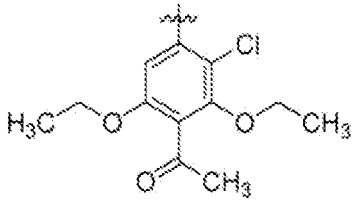
[VI－7],



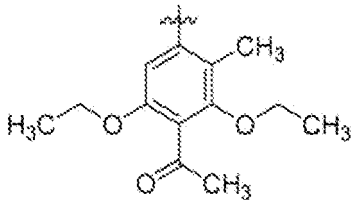
[VI－8],



[VI－10],



[VI－11],

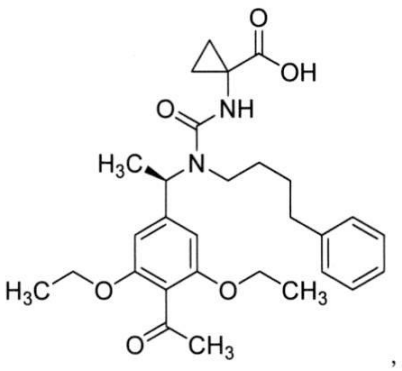


[VI－12]

.

11. The compound according to claim 1, which is any of the following:

[Chemical Formula 40]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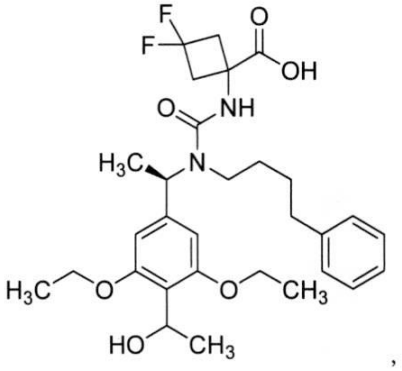
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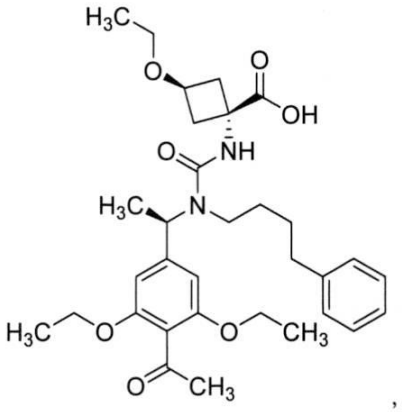
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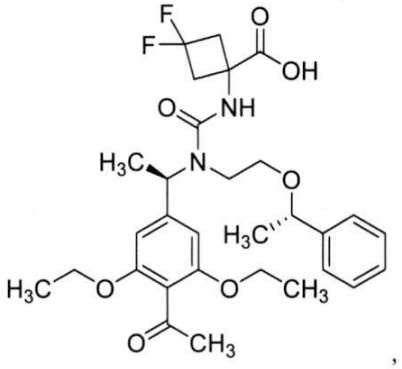
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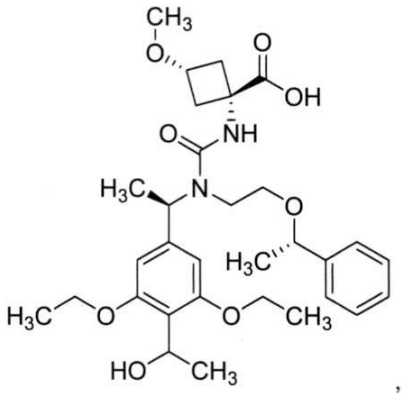
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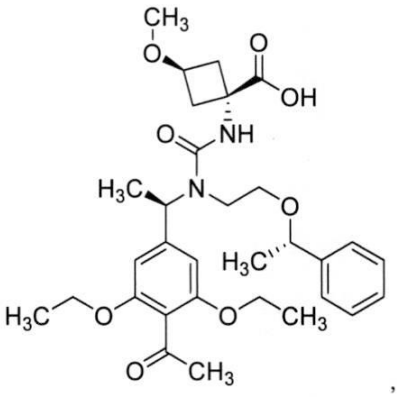
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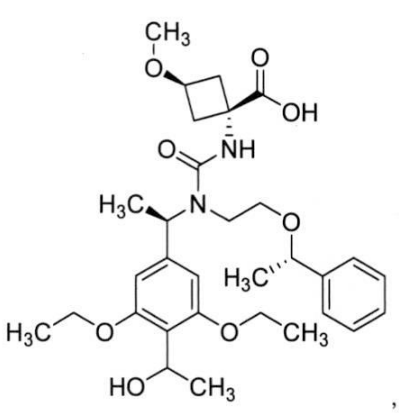
[Chemical Formula 41]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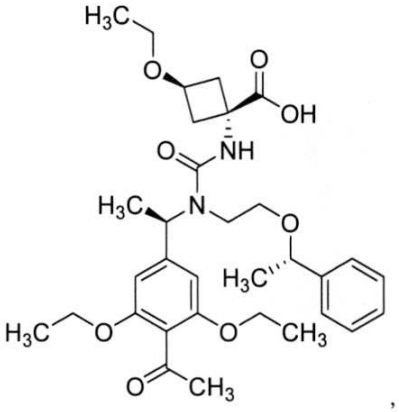
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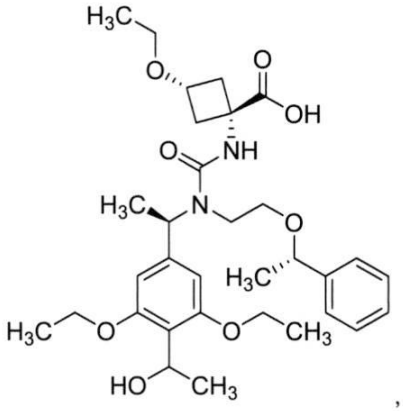
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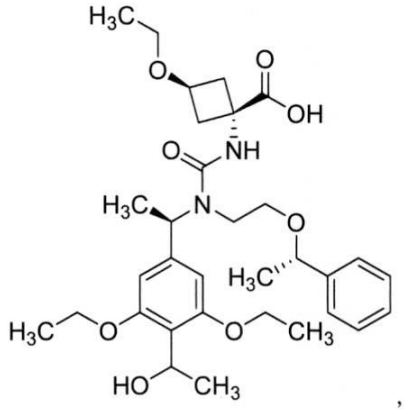
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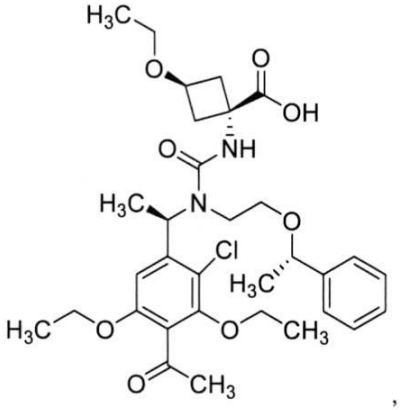
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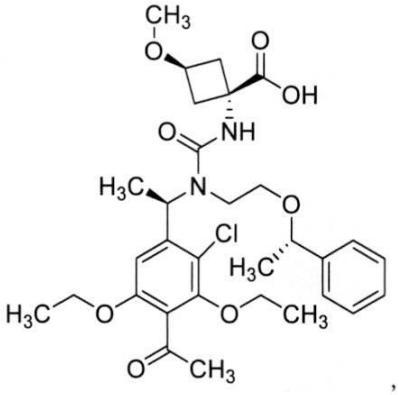
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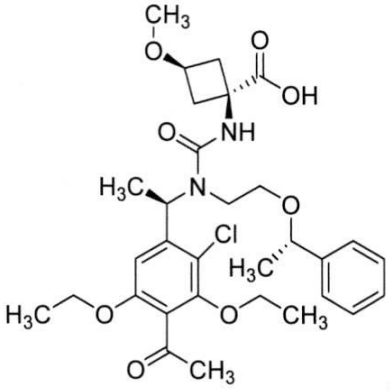
[Chemical Formula 42]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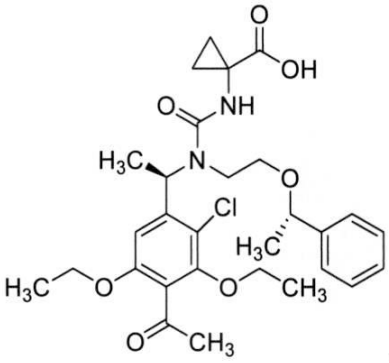
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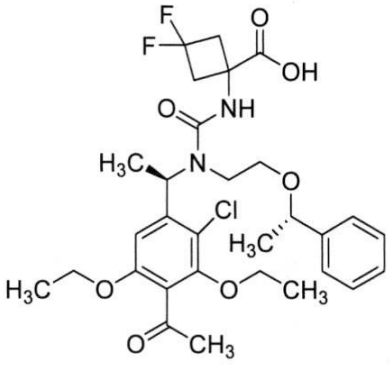
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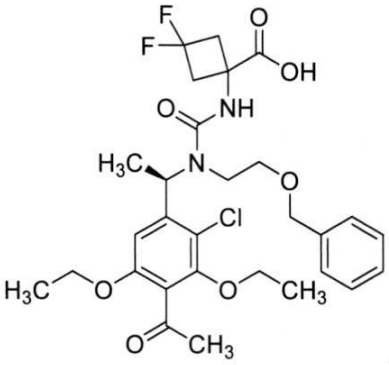
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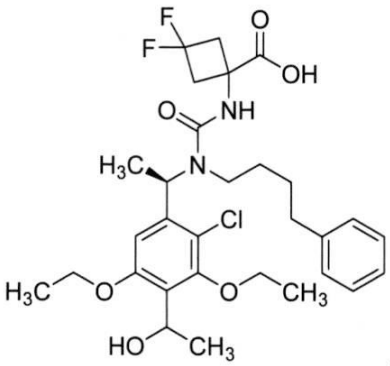
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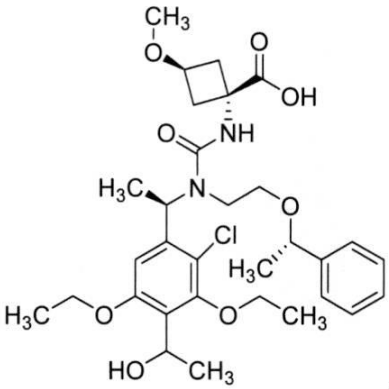
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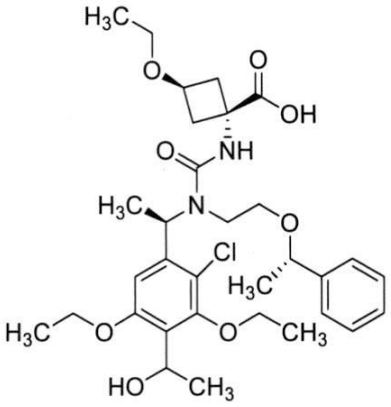
[Chemical Formula 43]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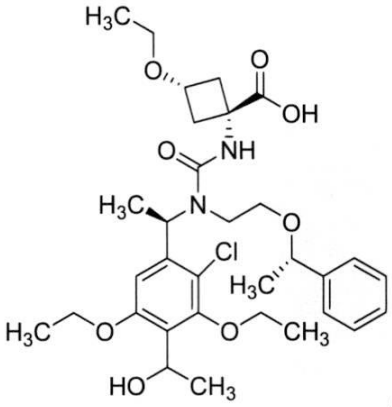
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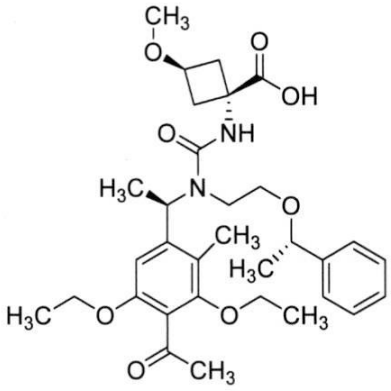
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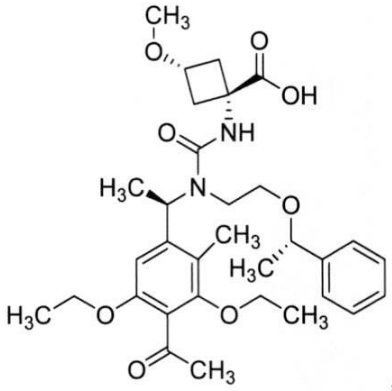
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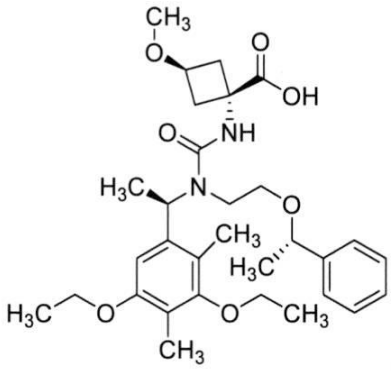
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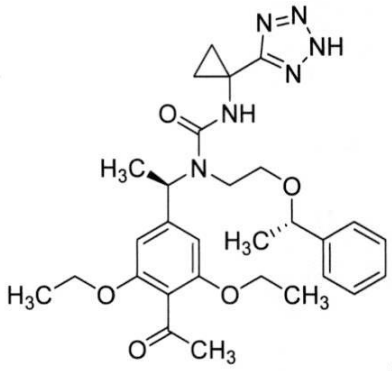
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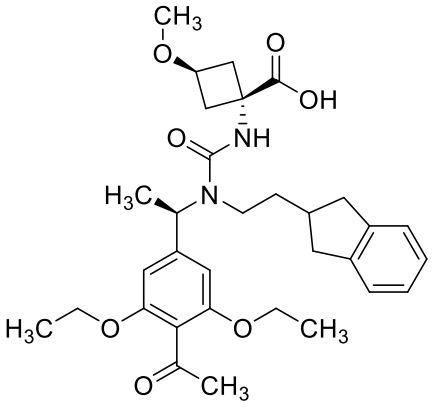
[Chemical Formula 44]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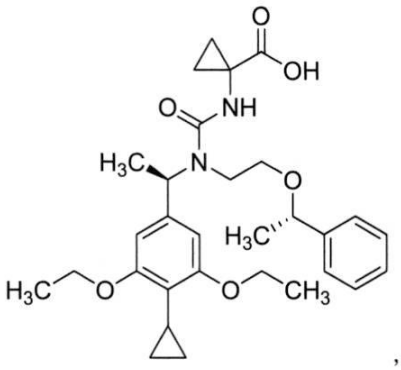
or a pharmaceutically acceptable salt thereof, or a hydrate thereof.

12. The compound according to claim 1, which is any of the following:

[Chemical Formula 45]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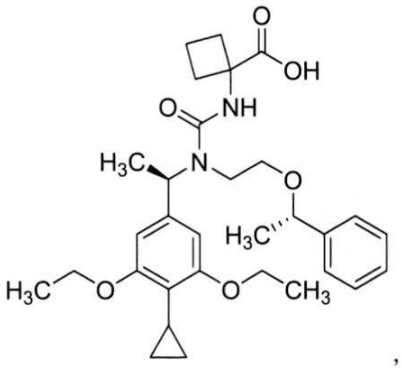
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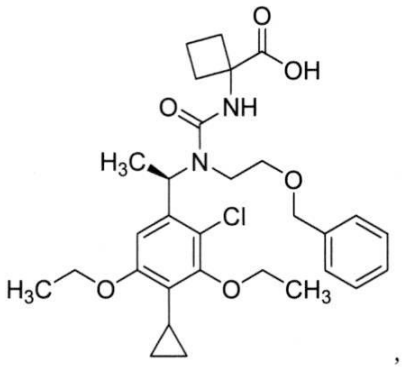
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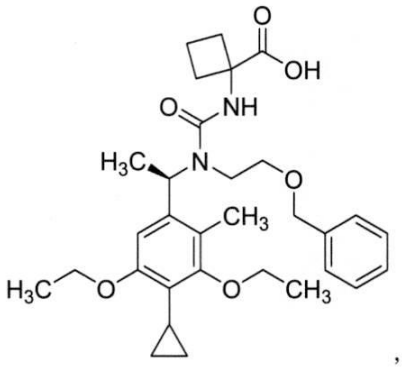
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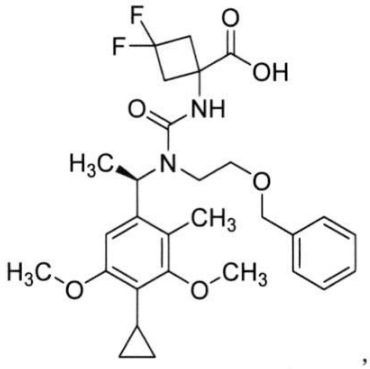
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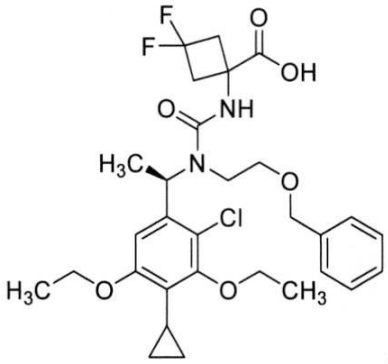
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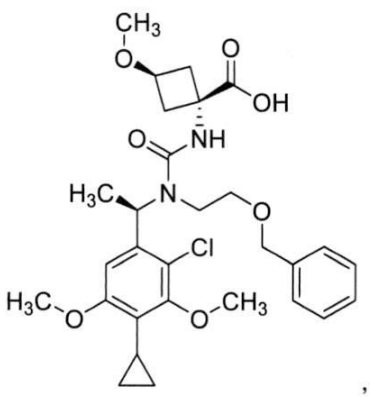
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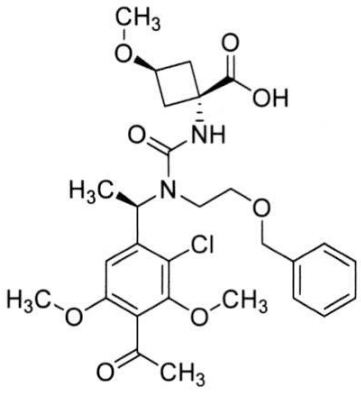
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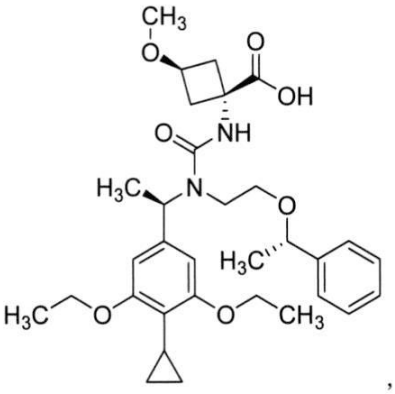
[Chemical Formula 46]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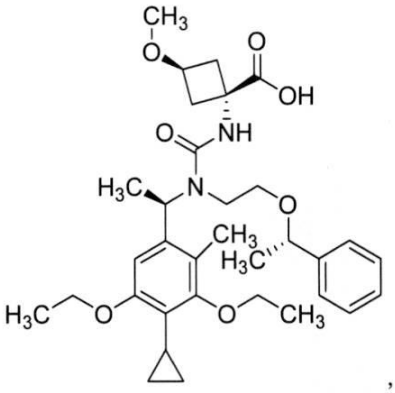
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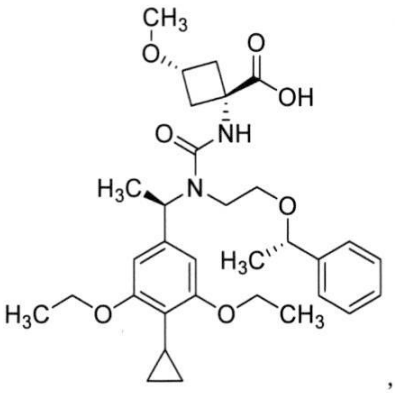
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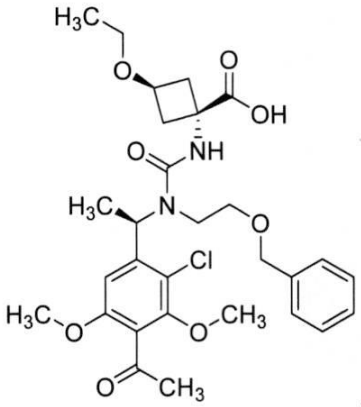
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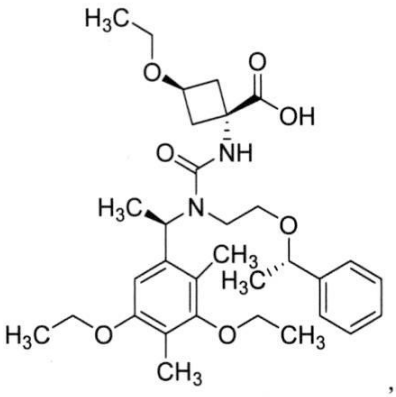
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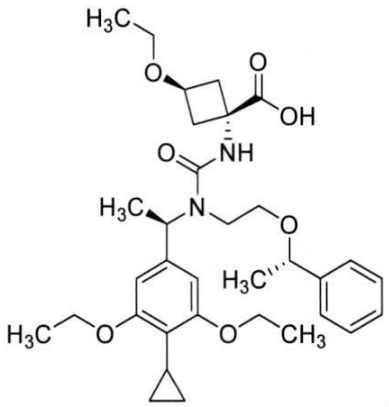
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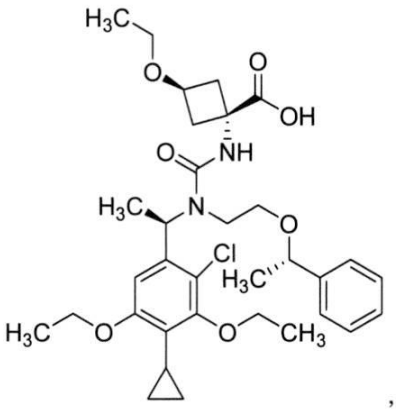
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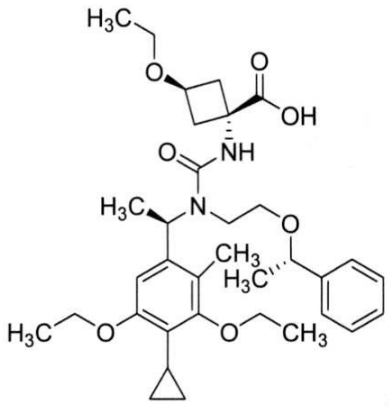
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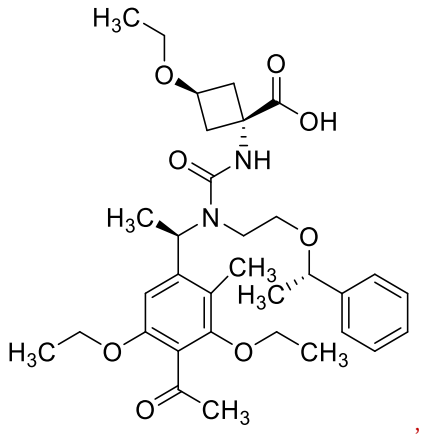
[Chemical Formula 47]



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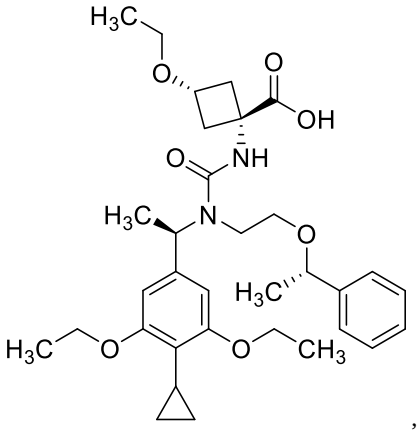


,

or a pharmaceutically acceptable salt thereof, or a hydrate thereof.

13. A medicament comprising the compound according to any one of claims 1 to 12 or a pharmaceutically acceptable salt thereof, or a hydrate thereof, as an active ingredient.

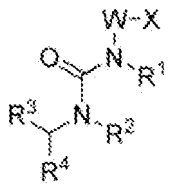
14. An LPA1 receptor antagonist comprising the compound according to any one of claims 1 to 12 or a pharmaceutically acceptable salt thereof, or a hydrate thereof, as an active ingredient.

15. A drug for use in preventing or treating systemic scleroderma, comprising the compound according to any one of claims 1 to 12 or a pharmaceutically acceptable salt thereof, or a hydrate thereof, as an active ingredient.

16. Use of the compound of any one of claims 1 to 12 or a pharmaceutically acceptable sale thereof, or a hydrate thereof, as an active ingredient, in the manufacture of a medicament for preventing or treating systemic scleroderma.

~~16. An LPA1 receptor antagonist comprising, as an active ingredient, a compound represented by formula [Ia]:~~

~~[Chemical Formula 48]~~



[Ia]

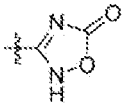
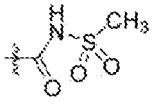
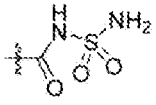
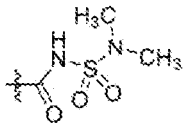
,

~~or a pharmaceutically acceptable salt thereof, or a hydrate thereof;~~

~~wherein~~

~~X represents carboxy, C_{1-4} alkoxycarbonyl, carbamoyl, tetrazolyl, or a structure selected from formula group [IIa]:~~

[Chemical Formula 49]


[II－1a],

[II－2a],

[II－3a],

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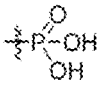
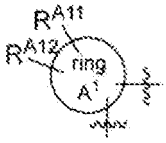
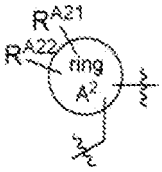
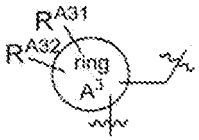

[II－5a] [IIa]

;

W represents linear C_{1-3} alkanediyl or a structure selected from formula group [IIIa]:

[Chemical Formula 50]


[III－1a],

[III－2a],

[III－3a] [IIIa]

;

where

the linear C_{1-3} alkanediyl is optionally substituted with one group selected from the group consisting of C_{1-6} alkyl (the C_{1-6} alkyl is optionally substituted with one group selected from the group consisting of hydroxy and carboxy), halo-C_{1-6} alkyl, C_{3-8} cycloalkyl, phenyl-C_{1-3} alkyl, and pyridyl-C_{1-3} alkyl, and

when the linear C_{1-3} alkanediyl is substituted with one methyl, it is optionally further substituted with one methyl,

ring A^1, ring A^2, and ring A^3 each represent C_{3-8} cycloalkane, a partially saturated 9- to 10-membered fused hydrocarbon aromatic ring, an oxygen atom-containing 4- to 8-membered saturated heterocycle, a partially saturated oxygen atom-containing 9- to 10-membered fused saturated heterocycle, a sulfur atom-containing 4- to 8-membered saturated heterocycle, a partially saturated nitrogen atom-containing 9- to 10-membered fused saturated heterocycle, a nitrogen atom-containing 4- to 8-membered saturated

heterocycle, or a partially saturated sulfur atom-containing 9- to 10-membered fused saturated heterocycle,

where

the sulfur atom in each of the sulfur atom-containing 4- to 8-membered saturated heterocycle and partially saturated sulfur atom-containing 9- to 10-membered fused saturated heterocycle is optionally substituted with one to two oxo, and

the nitrogen atom in each of the nitrogen atom-containing 4- to 8-membered saturated heterocycle and partially saturated nitrogen atom-containing 9- to 10-membered fused saturated heterocycle is optionally substituted with one group selected from the group consisting of C_{1-4} alkylcarbonyl and C_{1-4} alkoxycarbonyl,

R^{A11}, R^{A21}, and R^{A31} each independently represent a hydrogen atom, hydroxy, carboxy, a halogen atom, C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkylcarbonyl, or nitrogen atom-containing 4- to 6-membered saturated heterocyclyl (the nitrogen atom-containing 4- to 6-membered saturated heterocyclyl is optionally substituted with one C_{1-3} alkyl), and

R^{A12}, R^{A22}, and R^{A32} each independently represent a hydrogen atom, a halogen atom, or methyl, or

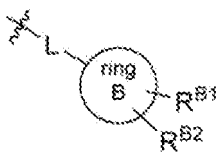
R^{A11} and R^{A12}, R^{A21} and R^{A22}, and R^{A31} and R^{A32} each optionally together form oxo, or

R^{A11} and R^{A12}, R^{A21} and R^{A22}, and R^{A31} and R^{A32} each optionally form C_{3-6} cycloalkane together with the carbon atom(s) in the adjacent ring A;

R^{1} represents a hydrogen atom or methyl;

R^{2} represents C_{1-10} alkyl, C_{2-10} alkenyl, C_{2-10} alkynyl, or a group represented by formula [IVa]:

[Chemical Formula 51]



[IVa],

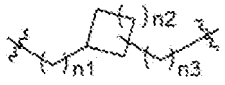
where

ring B represents C_{3-8} cycloalkyl, 4- to 8-membered saturated heterocyclyl, phenyl, 9- to 10-membered fused aryl, 5- to 6-membered heteroaryl, or 9- to 10-membered fused heteroaryl,

R^{B1} and R^{B2} each independently represent a hydrogen atom, a halogen atom, C_{1-6} alkyl, or C_{1-6} alkoxy, and

L represents C_{1-2} alkanediyl (the C_{1-2} alkanediyl is optionally substituted with 1 to 4 fluorine atoms), C_{3-8} alkanediyl (the C_{3-8} alkanediyl is optionally substituted with 1 to 5 fluorine atoms), a structure represented by formula [V-6]: $-CH_2CH_2CH=C(CH_3)-$, or a structure represented by formula [V-1a]:

[Chemical Formula 52]



[V-1a],

where

n1 represents an integer of 0 to 3,

n2 represents an integer of 0 to 5,

n3 represents an integer of 0 to 3, and

one carbon atom in the C_{3-8} alkanediyl, that is two or more atoms away from the nitrogen atom to which R^2 is bonded, is optionally replaced with formula -O-, formula -S-, or formula $-N(R^{L1})-$, and furthermore,

two consecutive carbon atoms in the C_{3-8} alkanediyl, that are one or more atoms away from the nitrogen atom to which R^2 is bonded, are optionally replaced with formula $-C(=O)N(R^{L2})-$,

R^{L1} represents a hydrogen atom or C_{1-3} alkyl, and

R^{L2} represents a hydrogen atom or C_{1-3} alkyl;

R^3 represents a hydrogen atom or C_{1-3} alkyl (the C_{1-3} alkyl is optionally substituted with one group selected from the group consisting of hydroxy and methoxy); and

R^4 represents a group represented by formula [VIa]:

[Chemical Formula 53]



[VIa]

where

ring C represents phenyl, 9- to 10-membered fused aryl, 5- to 6-membered heteroaryl, or 9- to 10-membered fused heteroaryl,

the phenyl is optionally substituted with one to four groups that are the same or different, selected from the group consisting of hydroxy, carboxy, carbamoyl, cyano, a halogen atom, C_{1-6} alkyl (the C_{1-6} alkyl is optionally substituted with one group selected from the group consisting of hydroxy and C_{1-6} alkoxy), halo-C_{1-6} alkyl (the halo-C_{1-6} alkyl is optionally substituted with one group selected from the group consisting of hydroxy and C_{1-6} alkoxy), C_{2-6} alkenyl, C_{2-6} alkynyl, C_{3-8} cycloalkyl (the C_{3-8} cycloalkyl is optionally substituted with one group selected from the group consisting of hydroxy and C_{1-6} alkoxy), C_{1-6} alkoxy, halo-C_{1-6} alkoxy (the C_{1-6} alkoxy and halo-C_{1-6} alkoxy are optionally substituted with one group selected from the group consisting of hydroxy and C_{1-6} alkoxy), C_{3-8} cycloalkoxy (the C_{3-8} cycloalkoxy is optionally substituted with one group selected from the group consisting of hydroxy and C_{1-6} alkoxy), C_{1-6} alkylsulfanyl, C_{1-6} alkylsulfinyl, C_{1-6} alkylsulfonyl (the C_{1-6} alkylsulfanyl, C_{1-6} alkylsulfinyl, and C_{1-6} alkylsulfonyl are optionally substituted with one group selected from the group consisting of hydroxy and C_{1-6} alkoxy), mono-C_{1-6} alkylamino, di-C_{1-6} alkylamino (the mono-C_{1-6} alkylamino and di-C_{1-6} alkylamino are optionally substituted with one group selected from the group consisting of hydroxy and C_{1-6} alkoxy), C_{1-6} alkylcarbonyl, halo-C_{1-6} alkylcarbonyl, C_{1-6} alkoxycarbonyl, mono-C_{1-6} alkylaminocarbonyl, and di-C_{1-6} alkylaminocarbonyl (the C_{1-6} alkylcarbonyl, halo-C_{1-6} alkylcarbonyl, C_{1-6} alkoxycarbonyl, mono-C_{1-6} alkylaminocarbonyl, and di-C_{1-6} alkylaminocarbonyl are optionally substituted

with one group selected from the group consisting of hydroxy and C_{1-6} alkoxy),

the 9- to 10-membered fused aryl is optionally substituted with one to three groups that are the same or different, selected from the group consisting of a halogen atom, C_{1-6} alkyl, and C_{1-6} alkoxy,

the 5- to 6-membered heteroaryl is optionally substituted with one to three groups that are the same or different, selected from the group consisting of a halogen atom, cyano, C_{1-6} alkyl, C_{1-6} alkoxy, and oxo, and

the 9- to 10-membered fused heteroaryl is optionally substituted with one to four groups that are the same or different, selected from the group consisting of C_{1-6} alkyl, C_{1-6} alkoxy, and oxo; or

R^3 and R^4, together with their adjacent carbon atom, optionally form a partially saturated 9- to 10-membered fused hydrocarbon aromatic ring or a partially saturated 9- to 10-membered fused heteroaromatic ring,

where

the partially saturated 9- to 10-membered fused hydrocarbon aromatic ring is optionally substituted with one to two halogen atoms, and

the partially saturated 9- to 10-membered fused heteroaromatic ring is optionally substituted with one to two halogen atoms.

17. The LPA1 receptor antagonist according to claim 16,

wherein, in formula group [IIIa] for W,

R^{A11}, R^{A21}, and R^{A31} each independently represent a hydrogen atom, hydroxy, carboxy, a halogen atom, C_{1-6} alkyl, C_{1-6} alkoxy, or nitrogen atom-containing 4- to 6-membered saturated heterocyclyl (the nitrogen atom-containing 4- to 6-membered saturated heterocyclyl is optionally substituted with one C_{1-3} alkyl), and

R^{A12}, R^{A22}, and R^{A32} each independently represent a hydrogen atom, a halogen atom, or methyl, or

R^{A11} and R^{A12}, R^{A21} and R^{A22}, and R^{A31} and R^{A32} each optionally together form oxo, or

R^{A11} and R^{A12}, R^{A21} and R^{A22}, and R^{A31} and R^{A32} each optionally form C_{3-6} cycloalkane

~~together with the carbon atom(s) in the adjacent ring A, and~~

~~wherein, in formula [IVa] for R^2,~~

~~L represents C_{1-2} alkanediyl (the C_{1-2} alkanediyl is optionally substituted with 1 to 4 fluorine atoms), C_{3-8} alkanediyl (the C_{3-8} alkanediyl is optionally substituted with 1 to 5 fluorine atoms), or a structure represented by formula [V-1a], where~~

~~one carbon atom in the C_{3-8} alkanediyl, that is two or more atoms away from the nitrogen atom to which R^2 is bonded, is optionally replaced with formula -O-, formula -S-, or formula -N(R^{L1})-, and furthermore,~~

~~two consecutive carbon atoms in the C_{3-8} alkanediyl, that are one or more atoms away from the nitrogen atom to which R^2 is bonded, are optionally replaced with formula -C(=O)N(R^{L2})-,~~

~~R^{L1} represents a hydrogen atom or C_{1-3} alkyl, and~~

~~R^{L2} represents a hydrogen atom or C_{1-3} alkyl.~~