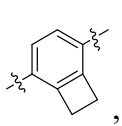
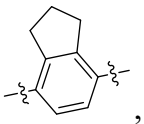
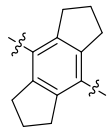
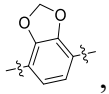
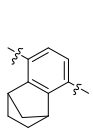
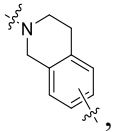
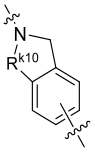
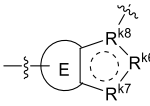
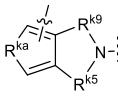
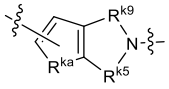
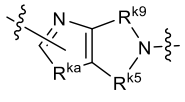
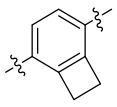
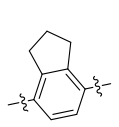
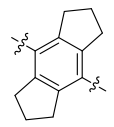
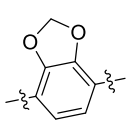
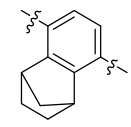
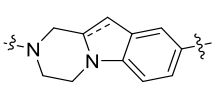
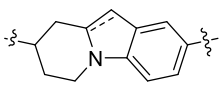
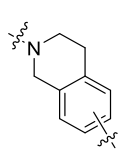
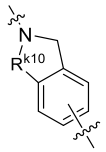
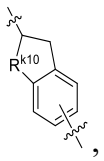
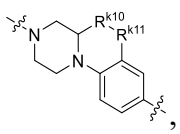
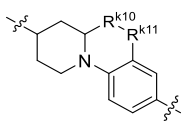
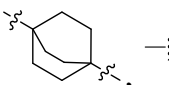
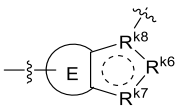
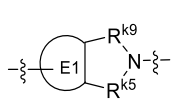
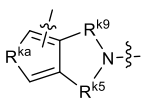
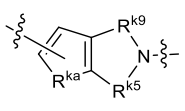
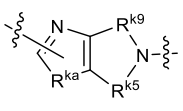
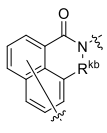
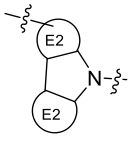
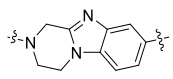
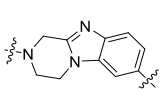
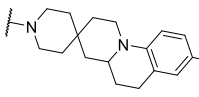
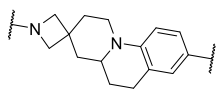
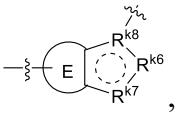
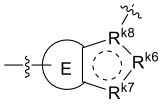
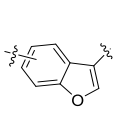
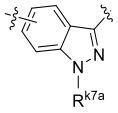
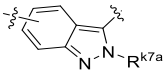
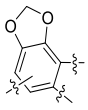
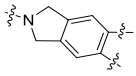
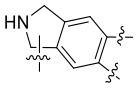
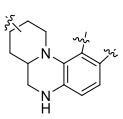
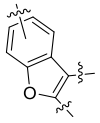
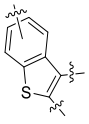
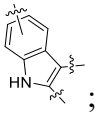
10 bridged ring carbocycle, C_{6-14} aryl, a 6- to 7-membered non-aromatic mono-heterocyclic ring, a 5- to 14-membered bridged-heterocyclic ring, 5- to 6-membered heteroaryl, a 11- to 20-membered fused-heterocyclic ring, phthalazin-1(2*H*)-onyl, benzo[d][1,2,3]triazin-4(*3*H)-onyl, benzothienyl,  ,  ,  ,  ,  ,  ,  ,  ,  ,  , or  , wherein the mono-heterocyclic ring, fused-heterocyclic ring, spiro-heterocyclic ring, bridged-heterocyclic ring or heteroaryl contains 1 to 4 heteroatoms selected from O, S or N, provided that when F1 is selected from 6-membered heteroaryl, the right connection site on the ring is a carbon atom;

in certain embodiments,  represents a ring selected from an aromatic ring or a non-aromatic ring;

in certain embodiments, each F1 is independently selected from cyclobutyl, cyclopentyl, cyclohexyl, piperidyl, piperazinyl, phenyl, naphthyl, pyridyl, pyrazinyl, pyridazinyl, pyridazinonyl, pyrimidyl, phthalazin-1(2*H*)-onyl, benzo[d][1,2,3]triazin-4(*3*H)-onyl, thienyl, benzothienyl, triazolyl,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  , or  ;

----- is selected from a single bond or a double bond;

12 spiro ring carbocycle, C_{5-10} bridged ring carbocycle, C_{12-14} aryl, a 4- to 7-membered non-aromatic mono-heterocyclic ring, a 5- to 14-membered spiro-heterocyclic ring, a 5- to 14-membered bridged-heterocyclic ring, a 11- to 20-membered fused-heterocyclic ring or  , wherein the mono-heterocyclic ring, fused-heterocyclic ring, spiro-heterocyclic ring, bridged-heterocyclic ring or heteroaryl contains 1 to 4 heteroatoms selected from O, S or N; in certain embodiments, each F2 is independently selected from  ; in certain embodiments, each F2 is independently selected from  ,  or  ;

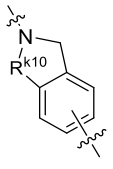
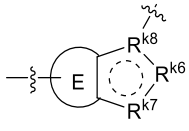
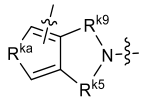
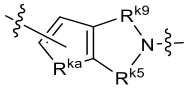
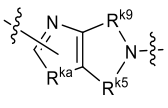
in certain embodiments, each E1 is independently selected from an 8- to 15-membered fused-heterocyclic ring; in certain embodiments, each E1 is independently selected from  ,  ,  ,  ,  ,  or  ;

in certain embodiments, each E2 is independently selected from a benzene ring or a 5- to 6-membered heteroaromatic ring;

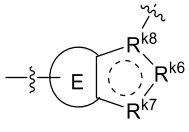
in certain embodiments, each E2 is independently selected from a benzene ring, a pyridine ring, a pyrimidine ring, a thiazole ring, a thiophene ring or a furan ring;

in certain embodiments, each F is independently selected from C_{3-7} monocyclic carbocycle, C_{4-20} fused ring carbocycle, C_{5-20} spiro ring carbocycle, C_{5-20} bridged ring carbocycle, a 4- to 7-membered mono-heterocyclic ring, a 4- to 20-membered fused-heterocyclic ring, a 5- to 20-membered spiro-heterocyclic ring or a 5- to 20-membered bridged-heterocyclic ring, wherein the mono-heterocyclic ring, fused-heterocyclic ring, spiro-heterocyclic ring, or bridged-heterocyclic ring contains 1 to 4 heteroatoms selected from O, S or N;

in certain embodiments, each F is independently selected from cyclobutyl, cyclopentyl, cyclohexyl, azetidinyl, pyrrolidyl, piperidyl, piperazinyl, pyridyl,

 ,  ,  ,  or  , wherein the mono-heterocyclic ring, fused-heterocyclic ring, spiro-heterocyclic ring, bridged-heterocyclic ring or heteroaryl contains 1 to 4 heteroatoms selected from O, S or N, provided that when F1 is selected from 6-membered heteroaryl, the right connection site on the ring is a carbon atom;

each E is independently selected from C_{5-12} carbocycle, 5- to 12-membered heterocycle or a 5- to 12-membered heteroaromatic ring, wherein the heterocycle or heteroaromatic ring contains 1 to 4 heteroatoms selected from O, S or N;

each F2 is independently selected from C_{3-7} monocyclic non-aromatic carbocycle, C_{4-10} fused ring non-aromatic carbocycle, C_{5-12} spiro ring carbocycle, C_{5-10} bridged ring carbocycle, C_{12-14} aryl, a 4- to 7-membered non-aromatic mono-heterocyclic ring, a 5- to 14-membered spiro-heterocyclic ring, a 5- to 14-membered bridged-heterocyclic ring, a 11- to 20-membered fused-heterocyclic ring or  , wherein the mono-heterocyclic ring, fused-heterocyclic ring, spiro-heterocyclic ring, or bridged-heterocyclic ring contains 1 to 4 heteroatoms selected from O, S or N;

 represents a ring selected from an aromatic ring or a non-aromatic ring;

each F is independently selected from C_{3-7} monocyclic carbocycle, C_{4-20} fused ring carbocycle, C_{5-20} spiro ring carbocycle, C_{5-20} bridged ring carbocycle, a 4- to 7-membered mono-heterocyclic ring, a 4- to 20-membered fused-heterocyclic ring, a 5- to 20-membered spiro-heterocyclic ring or a 5- to 20-membered bridged-heterocyclic ring, wherein the mono-heterocyclic ring, fused-heterocyclic ring, spiro-heterocyclic ring, or bridged-heterocyclic ring contains 1 to 4 heteroatoms selected from O, S or N;

A is selected from C_{3-8} carbocycle, a benzene ring, 4- to 7-membered heterocycle or a 5- to 6-membered heteroaromatic ring, wherein the heterocycle or heteroaromatic ring contains 1 to 4 heteroatoms selected from O, S or N;

each Q1 is independently selected from -O-, -S-, -CH_2-, -NR^q- or -CO-;

each Q is independently selected from a bond, -O-, -S-, -CH_2-, -NR^q-, -CO-, -NR^qCO-, -$CONR^q$- or 4- to 7-membered heterocycle, wherein the heterocycle is

CLAIMS

1. A compound or a stereoisomer, a tautomer, a deuterated form, a solvate, a prodrug, a metabolite, a pharmaceutically acceptable salt or a eutectic thereof, characterized in that the compound is selected from a compound represented by general formula (I),

B-L-K (I);

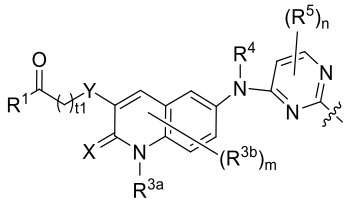
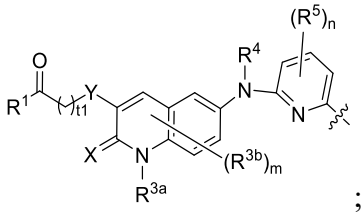
L is selected from a bond or -C_{1-50} hydrocarbyl-, wherein the hydrocarbyl has 1 to 20 methylene units optionally replaced by -Ak- or -Cy-;

each -Ak- is independently selected from -$(CH_2)_q$-, -$(CH_2)_q$-O-, -O-$(CH_2)_q$-, -$(CH_2)_q$-NR^L-, -NR^L-$(CH_2)_q$-, -$(CH_2)_q$-NR^LC(=O)-, -$NR^L(CH_2)_q$C(=O)-, -$(CH_2)_q$-C(=O)NR^L-, -C(=O)-, -C(=O)-$(CH_2)_q$-NR^L-, -$(C\equiv C)_q$-, -CH=CH-, -$Si(R^L)_2$-, -Si(OH)(R^L)-, -$Si(OH)_2$-, -P(=O)(OR^L)-, -P(=O)(R^L)-, -S-, -S(=O)-, -$S(=O)_2$- or a bond, wherein the -CH_2- is optionally substituted with 1 to 2 substituents selected from halogen, OH, CN, NH_2, C_{1-6} alkyl, C_{1-6} alkoxy, halogen-substituted C_{1-6} alkyl, hydroxyl-substituted C_{1-6} alkyl or cyano-substituted C_{1-6} alkyl;

each q is independently selected from 0, 1, 2, 3, 4, 5 or 6;

each R^L is independently selected from H, C_{1-6} alkyl, 3- to 7-membered heterocyclyl, 3- to 7-membered cycloalkyl, phenyl or 5- to 6-membered heteroaryl, wherein the heterocyclyl or heteroaryl contains 1 to 4 heteroatoms selected from O, S or N;

each -Cy- is independently selected from a bond, a 4- to 8-membered mono-heterocyclic ring, a 4- to 10-membered fused-heterocyclic ring, a 5- to 12-membered spiro-heterocyclic ring, a 7- to 10-membered bridged-heterocyclic ring, C_{3-7} monocycloalkyl, C_{4-10} fused cycloalkyl, C_{5-12} spirocycloalkyl, C_{7-10} bridged cycloalkyl, 5- to 10-membered heteroaryl or 6- to 10-membered aryl, wherein the aryl, heteroaryl, cycloalkyl, mono-heterocyclic ring, fused-heterocyclic ring, spiro-heterocyclic ring or bridged-heterocyclic ring is optionally substituted with 1 to 2 substituents selected from halogen, OH, COOH, CN, NH_2, =O, C_{1-4} alkyl, halogen-substituted C_{1-4} alkyl, hydroxyl-substituted C_{1-4} alkyl or C_{1-4} alkoxy, and the heteroaryl, mono-heterocyclic ring, fused-heterocyclic ring, spiro-heterocyclic ring or bridged-heterocyclic ring contains 1 to 4 heteroatoms selected from O, S or N, and is optionally substituted with 1 or 2 =O when the heteroatom is selected from S;

B is selected from  or  ;

X is selected from O, S or CH_2;

Y is selected from NR^Y or O;

R^Y is selected from H, C_{1-6} alkyl, C_{3-10} carbocycle or 3- to 10-membered heterocycle, wherein the alkyl, carbocycle or heterocycle is optionally substituted with 1 to 3 substituents selected from halogen, OH, cyano, NH_2, C_{1-6} alkyl, halogen-substituted C_{1-6} alkyl, hydroxyl-substituted C_{1-6} alkyl, cyano-substituted C_{1-6} alkyl, C_{1-6} alkoxy, C_{3-6} carbocycle or 3- to 8-membered heterocycle, and the heterocycle contains 1 to 3 heteroatoms selected from O, S or N;

R^1 is selected from H, OH, $-(CH_2)_{t2}NR^{1a}R^{1b}$, C_{1-6} alkyl or C_{1-6} alkoxy, wherein the alkyl or alkoxy is optionally substituted with 1 to 4 substituents selected from halogen, OH, cyano, NH_2, C_{1-6} alkyl, halogen-substituted C_{1-6} alkyl, hydroxyl-substituted C_{1-6} alkyl, cyano-substituted C_{1-6} alkyl or C_{1-6} alkoxy;

R^{1a} and R^{1b} are each independently selected from H, OH, NH_2, C_{1-4} alkyl, C_{2-6} alkynyl or C_{1-4} alkoxy, wherein the alkyl, alkynyl or alkoxy is optionally substituted with 1 to 4 substituents selected from halogen, OH, cyano, NH_2, C_{1-6} alkyl, halogen-substituted C_{1-6} alkyl, hydroxyl-substituted C_{1-6} alkyl, cyano-substituted C_{1-6} alkyl, C_{1-6} alkoxy or C_{2-6} alkynyl;

or R^{1a} and R^{1b} together with the atom to which they are attached form a 3- to 10-membered ring;

each R^{3a} or R^4 is independently selected from H, OH, NH_2, C_{1-6} alkyl, C_{2-6} alkynyl, C_{1-6} alkoxy, C_{3-10} carbocycle or 3- to 10-membered heterocycle, wherein the alkyl, alkoxy, alkynyl, carbocycle or heterocycle is optionally substituted with 1 to 4 substituents selected from halogen, OH, cyano, $NH(CH_3)$, $N(CH_3)_2$, $NH(CH_2CH_3)$, $N(CH_2CH_3)_2$, NH_2, C_{1-6} alkyl, halogen-substituted C_{1-6} alkyl, hydroxyl-substituted C_{1-6} alkyl, cyano-substituted C_{1-6} alkyl, C_{1-6} alkoxy, C_{2-6} alkynyl, C_{3-6} cycloalkyloxy, C_{3-6} carbocycle or 3- to 8-membered heterocycle, and the heterocycle contains 1 to 3 heteroatoms selected from O, S or N;

each R^{3b} or R^5 is independently selected from H, halogen, cyano, NH_2, NO_2, OH, C_{1-6} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl, C_{1-6} alkoxy, C_{3-10} carbocycle or 3- to 10-membered heterocycle, wherein the alkyl, alkoxy, carbocycle or heterocycle is

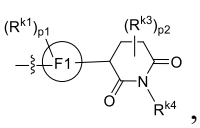
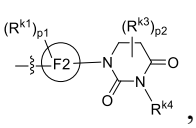
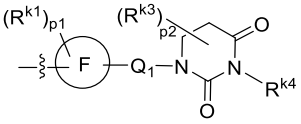
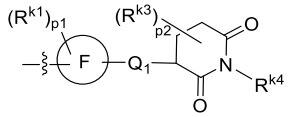
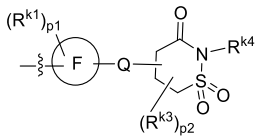
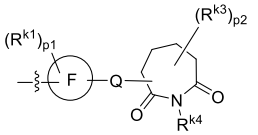
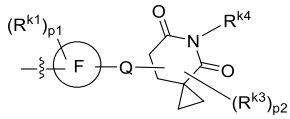
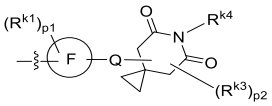
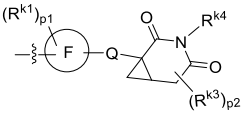
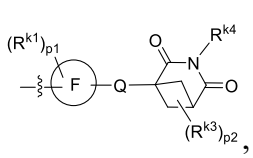
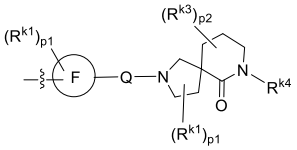
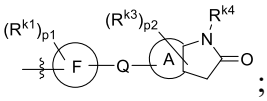
optionally substituted with 1 to 4 substituents selected from halogen, OH, cyano, NH_2, C_{1-6} alkyl, halogen-substituted C_{1-6} alkyl, hydroxyl-substituted C_{1-6} alkyl, cyano-substituted C_{1-6} alkyl, C_{1-6} alkoxy, C_{3-6} carbocycle or 3- to 8-membered heterocycle, and the heterocycle contains 1 to 3 heteroatoms selected from O, S or N;

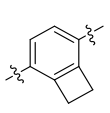
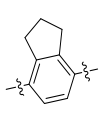
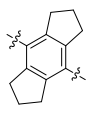
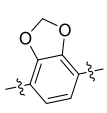
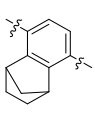
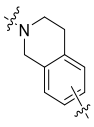
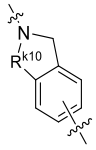
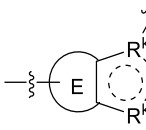
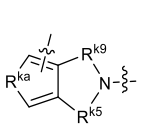
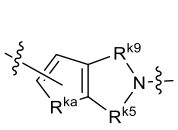
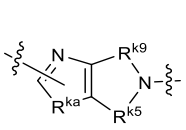
t1 is selected from 1, 2, 3, 4 or 5;

t2 is selected from 0, 1, 2, 3, 4 or 5;

m is selected from 0, 1, 2, 3 or 4;

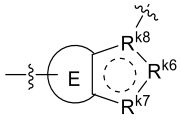
n is selected from 0, 1 or 2;

K is selected from  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  , or  ;

each F1 is independently selected from C_{3-7} monocyclic carbocycle, C_{4-14} fused ring carbocycle, C_{5-12} spiro ring carbocycle, C_{5-10} bridged ring carbocycle, C_{6-14} aryl, a 6- to 7-membered non-aromatic mono-heterocyclic ring, a 5- to 14-membered bridged-heterocyclic ring, 5- to 6-membered heteroaryl, a 11- to 20-membered fused-heterocyclic ring, phthalazin-1(2*H*)-onyl, benzo[d][1,2,3]triazin-4(3H)-onyl, benzothienyl,  ,  ,  ,  ,  ,  ,  ,  ,  ,  , or  , wherein the mono-heterocyclic ring, fused-heterocyclic ring, spiro-heterocyclic ring, bridged-heterocyclic ring or heteroaryl contains 1 to 4 heteroatoms selected from O, S or N,

provided that when F1 is selected from 6-membered heteroaryl, the right connection site on the ring is a carbon atom;

each E is independently selected from C_{5-12} carbocycle, 5- to 12-membered heterocycle or a 5- to 12-membered heteroaromatic ring, wherein the heterocycle or heteroaromatic ring contains 1 to 4 heteroatoms selected from O, S or N;

each F2 is independently selected from C_{3-7} monocyclic non-aromatic carbocycle, C_{4-10} fused ring non-aromatic carbocycle, C_{5-12} spiro ring carbocycle, C_{5-10} bridged ring carbocycle, C_{12-14} aryl, a 4- to 7-membered non-aromatic mono-heterocyclic ring, a 5- to 14-membered spiro-heterocyclic ring, a 5- to 14-membered bridged-heterocyclic ring, a 11- to 20-membered fused-heterocyclic ring or 

, wherein the mono-heterocyclic ring, fused-heterocyclic ring, spiro-heterocyclic ring, or bridged-heterocyclic ring contains 1 to 4 heteroatoms selected from O, S or N;

 represents a ring selected from an aromatic ring or a non-aromatic ring;

each F is independently selected from C_{3-7} monocyclic carbocycle, C_{4-20} fused ring carbocycle, C_{5-20} spiro ring carbocycle, C_{5-20} bridged ring carbocycle, a 4- to 7-membered mono-heterocyclic ring, a 4- to 20-membered fused-heterocyclic ring, a 5- to 20-membered spiro-heterocyclic ring or a 5- to 20-membered bridged-heterocyclic ring, wherein the mono-heterocyclic ring, fused-heterocyclic ring, spiro-heterocyclic ring, or bridged-heterocyclic ring contains 1 to 4 heteroatoms selected from O, S or N;

A is selected from C_{3-8} carbocycle, a benzene ring, 4- to 7-membered heterocycle or a 5- to 6-membered heteroaromatic ring, wherein the heterocycle or heteroaromatic ring contains 1 to 4 heteroatoms selected from O, S or N;

each Q1 is independently selected from -O-, -S-, -CH_2-, -NR^q- or -CO-;

each Q is independently selected from a bond, -O-, -S-, -CH_2-, -NR^q-, -CO-, -NR^qCO-, -$CONR^q$- or 4- to 7-membered heterocycle, wherein the heterocycle is optionally substituted with 1 to 4 substituents selected from F, Cl, Br, I, OH, =O, NH_2, CN, COOH, $CONH_2$, C_{1-4} alkyl or C_{1-4} alkoxy, and the heterocycle contains 1 to 4 heteroatoms selected from O, S or N;

R^q is selected from H or C_{1-4} alkyl;

each R^{k1} is independently selected from H, D, F, Cl, Br, I, OH, =O, NH_2, CN, COOH, $CONH_2$, C_{1-6} alkyl, C_{1-6} alkoxy, C_{3-6} cycloalkyl or R^{k7a}, wherein the alkyl, alkoxy or cycloalkyl is optionally substituted with 1 to 4 substituents selected from D, F, Cl, Br, I, OH, =O, NH_2, CN, COOH, $CONH_2$, C_{1-4} alkyl, C_{1-4} alkoxy or C_{3-6} cycloalkyl;

each R^{k3} is independently selected from H, D, F, Cl, Br, I, OH, =O, NH_2, CN, COOH, $CONH_2$, C_{1-6} alkyl, C_{1-6} alkoxy, C_{3-8} cycloalkyl or 3- to 8-membered heterocyclyl, wherein the alkyl, alkoxy, cycloalkyl or heterocyclyl is optionally substituted with 1 to 4 substituents selected from D, F, Cl, Br, I, OH, =O, NH_2, CN, COOH, $CONH_2$, C_{1-4} alkyl or C_{1-4} alkoxy, and the heterocyclyl contains 1 to 4 heteroatoms selected from O, S or N;

or two R^{k3} together with the carbon atom or ring backbone to which they are directly attached form C_{3-8} carbocycle or 3- to 8-membered heterocycle, or two R^{k1} together with the carbon atom or ring backbone to which they are directly attached form C_{3-8} carbocycle or 3- to 8-membered heterocycle, wherein the carbocycle or heterocycle is optionally substituted with 1 to 4 substituents selected from F, Cl, Br, I, OH, =O, NH_2, CN, COOH, $CONH_2$, C_{1-4} alkyl or C_{1-4} alkoxy, and the heterocycle contains 1 to 4 heteroatoms selected from O, S or N;

each R^{k4} is independently selected from H or C_{1-4} alkyl;

each R^{k5} is independently selected from  , $C(CH_3)_2$, CO, CH_2, SO_2,  ,  or  ;

each R^{k6} is independently selected from CO, CH, SO, SO_2, CH_2, N or NR^{k7a};

each R^{k7} is independently selected from  , $C(CH_3)_2$, CO, CH, N, CH_2, O, S or NR^{k7a};

R^{k7a} is selected from H, C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl, C_{3-6} cycloalkyl or 3- to 6-membered heterocycloalkyl, wherein the alkyl, cycloalkyl or heterocycloalkyl is optionally substituted with 1 to 4 substituents selected from F, Cl, Br, I, OH, NH_2, CN, CF_3, C_{1-4} alkyl, C_{1-4} alkoxy, C_{2-4} alkenyl, C_{2-4} alkynyl or C_{3-6} cycloalkyl;

each R^{k8} is independently selected from C, N or CH;

each R^{k9} is independently selected from a bond,  , $C(CH_3)_2$, CO, CH_2, CH_2CH_2 or SO_2;

R^{ka} is selected from O, S or NH;

R^{k10} is selected from CH_2 or CO;

each p1 or p2 is independently selected from 0, 1, 2, 3, 4 or 5;

the compound is optionally substituted with 1-30 D.

2. The compound or the stereoisomer, tautomer, deuterated form, solvate, prodrug, metabolite, pharmaceutically acceptable salt or eutectic thereof according to claim 1, characterized in that

L is selected from -Cy1-Ak1-Cy2-Ak2-Cy3-Ak3-Cy4-Ak4-Cy5-Ak5-, -Cy1-Cy2-Cy3-Cy4-Ak1-Ak2-Ak3-Ak4-Ak5-, -Cy1-Ak1-Cy2-Ak2-Cy3-Ak3-Cy4-Ak4-Ak5-, -Ak1-Cy1-Ak2-Cy2-Ak3-Cy3-Ak4-Cy4-Ak5-, -Cy1-Ak1-Cy2-Ak2-Cy3-Cy4-Ak3-Ak4-Ak5-, -Cy1-Ak1-Cy2-Ak2-Ak3-Cy3-Cy4-Ak4-Ak5-, -Cy1-Ak1-Ak2-Ak3-Ak4-Ak5-Cy2-Cy3-Cy4-, -Cy1-Cy2-Ak1-Ak2-Ak3-Ak4-Ak5-Cy3-Cy4-, -Cy1-Cy2-Cy3-Ak1-Ak2-Ak3-Ak4-Ak5-Cy4-, -Cy1-Cy2-Cy3-Cy4-Ak1-Ak2-Ak3-Ak4-Ak5-, -Cy1-Ak1-Cy2-Cy3-Cy4-Ak2-Ak3-Ak4-Ak5-, -Cy1-Cy2-Ak1-Cy3-Cy4-Ak2-Ak3-Ak4-Ak5-, -Cy1-Cy2-Cy3-Ak1-Cy4-Ak2-Ak3-Ak4-Ak5-, -Cy1-Ak1-Ak2-Cy2-Cy3-Cy4-Ak3-Ak4-Ak5-, -Cy1-Cy2-Ak1-Ak2-Cy3-Cy4-Ak3-Ak4-Ak5-, -Cy1-Cy2-Cy3-Ak1-Ak2-Cy4-Ak3-Ak4-Ak5-, -Cy1-Ak1-Ak2-Ak3-Cy2-Cy3-Cy4-Ak4-Ak5-, -Cy1-Cy2-Ak1-Ak2-Ak3-Cy3-Cy4-Ak4-Ak5-, -Cy1-Cy2-Cy3-Ak1-Ak2-Ak3-Cy4-Ak4-Ak5-, -Cy1-Ak1-Ak2-Ak3-Ak4-Cy2-Cy3-Cy4-Ak5-, -Cy1-Cy2-Ak1-Ak2-Ak3-Ak4-Cy3-Cy4-Ak5-, -Cy1-Cy2-Cy3-Ak1-Ak2-Ak3-Ak4-Cy4-Ak5-, -Ak1-Ak2-Ak3-Ak4-Ak5-Cy1-Cy2-Cy3-Cy4-, -Ak1-Cy1-Cy2-Cy3-Cy4-Ak2-Ak3-Ak4-Ak5-, -Ak1-Ak2-Cy1-Cy2-Cy3-Cy4-Ak3-Ak4-Ak5-, -Ak1-Ak2-Ak3-Cy1-Cy2-Cy3-Cy4-Ak4-Ak5-, -Ak1-Ak2-Ak3-Ak4-Cy1-Cy2-Cy3-Cy4-Ak5-, -Ak1-Cy1-Ak2-Ak3-Ak4-Ak5-Cy2-Cy3-Cy4-, -Ak1-Cy1-Cy2-Ak2-Ak3-Ak4-Ak5-Cy3-Cy4-, -Ak1-Cy1-Cy2-Cy3-Ak2-Ak3-Ak4-Ak5-Cy4-, -Ak1-Ak2-Cy1-Ak3-Ak4-Ak5-Cy2-Cy3-Cy4-, -Ak1-Ak2-Cy1-Cy2-Ak3-Ak4-Ak5-Cy3-Cy4-, -Ak1-Ak2-Cy1-Cy2-Cy3-Ak3-Ak4-Ak5-Cy4-, -Ak1-Ak2-Ak3-Cy1-Ak4-Ak5-Cy2-Cy3-Cy4-, -Ak1-Ak2-Ak3-Cy1-Cy2-Ak4-Ak5-Cy3-Cy4-, -Ak1-Ak2-Ak3-Cy1-Cy2-Cy3-Ak4-Ak5-Cy4-, -Ak1-Ak2-Ak3-Ak4-Cy1-Ak5-Cy2-Cy3-Cy4-, -Ak1-Ak2-Ak3-Ak4-Cy1-Cy2-Ak5-Cy3-Cy4-, -Ak1-Ak2-Ak3-Ak4-Cy1-

Cy2-Cy3-Ak5-Cy4-, -Ak1-, -Ak1-Ak2-, -Ak1-Ak2-Ak3-, -Ak1-Ak2-Ak3-Ak4-, -Ak1-Ak2-Ak3-Ak4-Ak5-, -Ak1-Ak2-Ak3-Ak4-Ak5-Ak6-, -Ak1-Ak2-Ak3-Ak4-Ak5-Ak6-Ak7-, -Ak1-Ak2-Ak3-Ak4-Ak5-Ak6-Ak7-Ak8-, or -Ak1-Ak2-Ak3-Ak4-Ak5-Ak6-Ak7-Ak8-Ak9;

Ak1, Ak2, Ak3, Ak4, Ak5, Ak6, Ak7, Ak8 and Ak9 are each independently selected from $-(CH_2)_q-$, $-(CH_2)_q-O-$, $-O-(CH_2)_q-$, $-(CH_2)_q-NR^L-$, $-NR^L-(CH_2)_q-$, $-(CH_2)_q-NR^LC(=O)-$, $-(CH_2)_q-C(=O)NR^L-$, $-C(=O)-$, $-C(=O)-(CH_2)_q-NR^L-$, $-(C\equiv C)_q-$ or a bond, wherein the $-CH_2-$ is optionally substituted with 1 to 2 substituents selected from halogen, OH, CN, NH_2, C_{1-4} alkyl, C_{1-4} alkoxy, halogen-substituted C_{1-4} alkyl, hydroxyl-substituted C_{1-4} alkyl or cyano-substituted C_{1-4} alkyl;

each Cy1, Cy2, Cy3, Cy4 or Cy5 is independently selected from a bond, a 4- to 7-membered mono-heterocyclic ring, a 4- to 10-membered fused-heterocyclic ring, a 5- to 12-membered spiro-heterocyclic ring, a 7- to 10-membered bridged-heterocyclic ring, C_{3-7} monocycloalkyl, C_{4-10} fused cycloalkyl, C_{5-12}-membered spirocycloalkyl, C_{7-10}-membered bridged cycloalkyl, 5- to 10-membered heteroaryl or 6- to 10-membered aryl, wherein the aryl, heteroaryl, cycloalkyl, mono-heterocyclic ring, fused-heterocyclic ring, spiro-heterocyclic ring or bridged-heterocyclic ring is optionally substituted with 1 to 2 substituents selected from F, Cl, Br, I, OH, COOH, CN, NH_2, =O, C_{1-4} alkyl, halogen-substituted C_{1-4} alkyl, hydroxyl-substituted C_{1-4} alkyl or C_{1-4} alkoxy, and the heteroaryl, mono-heterocyclic ring, fused-heterocyclic ring, spiro-heterocyclic ring or bridged-heterocyclic ring contains 1 to 4 heteroatoms selected from O, S or N, and is optionally substituted with 1 or 2 =O when the heteroatom is selected from S;

each q is independently selected from 0, 1, 2, 3 or 4;

each R^L is independently selected from H or C_{1-6} alkyl.

3. The compound or the stereoisomer, tautomer, deuterated form, solvate, prodrug, metabolite, pharmaceutically acceptable salt or eutectic thereof according to claim 2, characterized in that

Ak1, Ak2, Ak3, Ak4, Ak5, Ak6, Ak7, Ak8 and Ak9 are each independently selected from $-(CH_2)_q-$, $-(CH_2)_q-O-$, $-O-(CH_2)_q-$, $-(CH_2)_q-NR^L-$, $-NR^L-(CH_2)_q-$, $-(CH_2)_q-NR^LC(=O)-$, $-(CH_2)_q-C(=O)NR^L-$, $-C(=O)-$, $-C(=O)-(CH_2)_q-NR^L-$, $-(C\equiv C)_q-$ or a bond, wherein the $-CH_2-$ is optionally substituted with 1 to 2 substituents

selected from F, Cl, Br, I, OH, CN, NH_2, CF_3, hydroxymethyl, C_{1-4} alkyl or C_{1-4} alkoxy;

each R^L is independently selected from H or C_{1-4} alkyl;

each Cy1, Cy2, Cy3, Cy4 or Cy5 is independently selected from a bond, a 4- to 7-membered nitrogen-containing mono-heterocyclic ring, a 4- to 10-membered nitrogen-containing fused-heterocyclic ring, a 5- to 12-membered nitrogen-containing spiro-heterocyclic ring, a 7- to 10-membered nitrogen-containing bridged-heterocyclic ring, C_{3-7} monocycloalkyl, C_{4-10} fused cycloalkyl, C_{5-12} spirocycloalkyl, C_{7-10} bridged cycloalkyl, 5- to 10-membered heteroaryl or 6- to 10-membered aryl, wherein the mono-heterocyclic ring, fused-heterocyclic ring, bridged-heterocyclic ring, spiro-heterocyclic ring, cycloalkyl, aryl or heteroaryl is optionally substituted with 1 to 2 substituents selected from F, Cl, Br, I, OH, COOH, CN, NH_2, =O, C_{1-4} alkyl, halogen-substituted C_{1-4} alkyl, hydroxyl-substituted C_{1-4} alkyl or C_{1-4} alkoxy, and the mono-heterocyclic ring, fused-heterocyclic ring, bridged-heterocyclic ring, spiro-heterocyclic ring or heteroaryl contains 1 to 4 heteroatoms selected from O, S or N, and is optionally substituted with 1 or 2 =O when the heteroatom is selected from S;

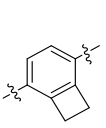
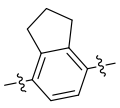
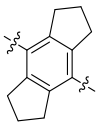
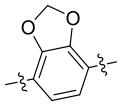
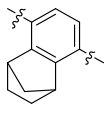
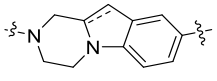
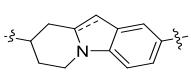
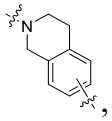
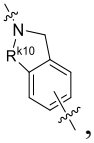
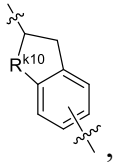
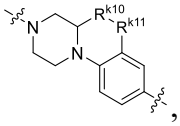
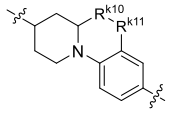
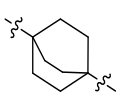
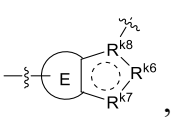
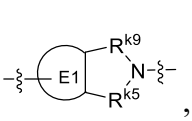
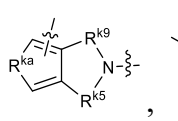
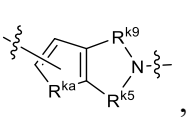
R^Y is selected from H, methyl, ethyl, propyl, isopropyl or cyclopropyl, wherein the methyl, ethyl, propyl, isopropyl, cyclopropyl is optionally substituted with 1 to 3 substituents selected from halogen, OH, cyano, NH_2, C_{1-4} alkyl, halogen-substituted C_{1-4} alkyl, hydroxyl-substituted C_{1-4} alkyl, cyano-substituted C_{1-4} alkyl, C_{1-4} alkoxy, C_{3-6} carbocycle or 3- to 6-membered heterocycle, and the heterocycle contains 1 to 3 heteroatoms selected from O, S or N;

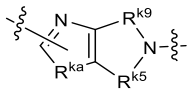
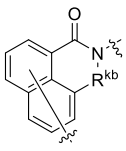
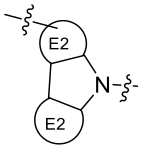
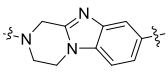
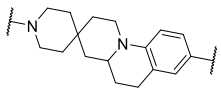
R^1 is selected from H, OH, $NR^{1a}R^{1b}$, methyl, ethyl, propyl, isopropyl or methoxy, wherein the methyl, ethyl, propyl, isopropyl or methoxy is optionally substituted with 1 to 3 substituents selected from halogen, OH, cyano, NH_2, C_{1-4} alkyl, halogen-substituted C_{1-4} alkyl, hydroxyl-substituted C_{1-4} alkyl, cyano-substituted C_{1-4} alkyl or C_{1-4} alkoxy;

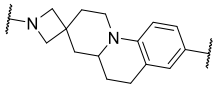
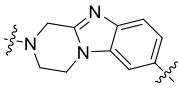
R^{1a} and R^{1b} are each independently selected from H, OH, NH_2, methyl, ethyl, propyl, isopropyl, methoxy, propargyl or propynyl, wherein the methyl, ethyl, propyl, isopropyl, methoxy, propargyl or propynyl is optionally substituted with 1 to 3 substituents selected from halogen, OH, cyano, NH_2, C_{1-4} alkyl, halogen-substituted C_{1-4} alkyl, hydroxyl-substituted C_{1-4} alkyl, cyano-substituted C_{1-4} alkyl, C_{1-4} alkoxy or C_{2-4} alkynyl;

each R^{3a} or R^4 is independently selected from H, OH, NH_2, methyl, ethyl, propyl, propargyl, propynyl, isopropyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, phenyl, azetidinyl, pyrrolidyl or piperidyl, wherein the methyl, ethyl, propyl, isopropyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, phenyl, azetidinyl, pyrrolidyl, piperidyl, propargyl or propynyl is optionally substituted with 1 to 3 substituents selected from halogen, OH, cyano, NH_2, C_{1-4} alkyl, halogen-substituted C_{1-4} alkyl, hydroxyl-substituted C_{1-4} alkyl, cyano-substituted C_{1-4} alkyl, C_{1-4} alkoxy, C_{3-6} cycloalkyloxy, C_{2-4} alkynyl, C_{3-6} carbocycle or 3- to 6-membered heterocycle, and the heterocycle contains 1 to 3 heteroatoms selected from O, S or N;

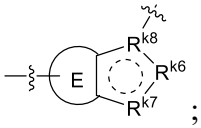
each R^{3b} or R^5 is independently selected from H, F, Cl, Br, I, cyano, NH_2, OH, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy, isopropoxy, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, phenyl, azetidinyl, pyrrolidyl, piperidyl or ethynyl, wherein the methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy, isopropoxy, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, phenyl, azetidinyl, pyrrolidyl, piperidyl or ethynyl is optionally substituted with 1 to 3 substituents selected from halogen, OH, cyano, NH_2, C_{1-4} alkyl, halogen-substituted C_{1-4} alkyl, hydroxyl-substituted C_{1-4} alkyl, cyano-substituted C_{1-4} alkyl, C_{1-4} alkoxy, C_{3-6} carbocycle or 3- to 6-membered heterocycle, and the heterocycle contains 1 to 3 heteroatoms selected from O, S or N;

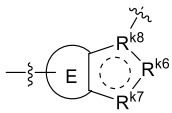
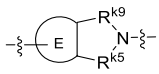
each F1 is independently selected from cyclobutyl, cyclopentyl, cyclohexyl, piperidyl, piperazinyl, phenyl, naphthyl, pyridyl, pyrazinyl, pyridazinyl, pyridazinonyl, pyrimidyl, phthalazin-1(2*H*)-onyl, benzo[d][1,2,3]triazin-4(*3*H)-onyl, thienyl, benzothienyl, triazolyl,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  .

 ,  ,  ,  ,  ,

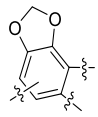
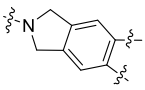
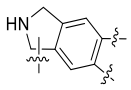
 or  ;

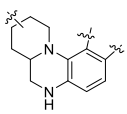
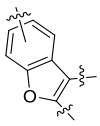
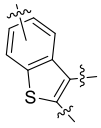
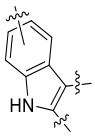
----- is selected from a single bond or a double bond;

each F2 is independently selected from  ;

each F is independently selected from cyclobutyl, cyclopentyl, cyclohexyl, azetidinyl, pyrrolidyl, piperidyl, piperazinyl, pyridyl, pyrimidyl, pyridazinyl, pyrazinyl, triazinyl, pyrrolyl, imidazolyl, triazolyl, oxazolyl, furyl, thienyl, thiazolyl, 2-pyridonyl, pyrazolyl, phenyl, naphthyl, anthryl, phenanthryl, benzothiazolyl, indolyl,  or  ;

each E or A is independently selected from a benzene ring, a naphthalene ring or a pyridine ring;

each E1 is independently selected from  ,  ,  ,

 ,  ,  or  ;

each E2 is independently selected from a benzene ring, a pyridine ring, a pyrimidine ring, a thiazole ring, a thiophene ring or a furan ring;

R^q is selected from H, methyl or ethyl;

R^{k1} and R^{k3} are each independently selected from H, D, F, Cl, Br, I, OH, =O, NH_2, CF_3, CN, COOH, $CONH_2$, C_{1-4} alkyl, C_{1-4} alkoxy or R^{k7a}, wherein the alkyl or alkoxy is optionally substituted with 1 to 4 substituents selected from D, F, Cl, Br, I, OH or NH_2;

or two R^{k3} together with the carbon atom or ring backbone to which they are directly attached form C_{3-7} carbocycle or 3- to 7-membered heterocycle, or two R^{k1} together with the carbon atom or ring backbone to which they are directly attached form C_{3-7} carbocycle or 3- to 7-membered heterocycle, wherein the carbocycle or

heterocycle is optionally substituted with 1 to 4 substituents selected from F, Cl, Br, I, OH, =O, NH_2, CN, COOH, $CONH_2$, C_{1-4} alkyl or C_{1-4} alkoxy, and the heterocycle contains 1 to 4 heteroatoms selected from O, S or N;

each R^{k4} is independently selected from H, methyl, ethyl or propyl;

each R^{k5} is independently selected from CO, CH_2, SO_2 or  ;

R^{k7a} is selected from H, C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl, C_{3-6} cycloalkyl or 3- to 6-membered heterocyclyl, wherein the alkyl, alkenyl, alkynyl, heterocyclyl or cycloalkyl is optionally substituted with 1 to 4 substituents selected from F, Cl, Br, I, OH, CN, CF_3, C_{1-4} alkyl, C_{1-4} alkoxy, C_{2-4} alkenyl, C_{2-4} alkynyl or C_{3-6} cycloalkyl;

each R^{k9} is independently selected from CO, SO_2 or CH_2;

R^{kb} is selected from a bond or CO;

R^{k10} is selected from CH_2 or CO;

R^{k11} is selected from NH, O or CH_2.

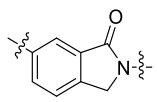
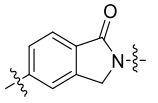
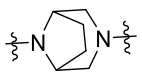
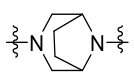
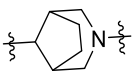
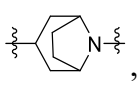
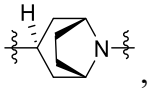
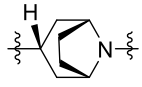
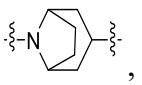
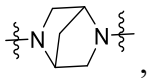
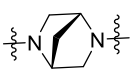
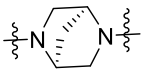
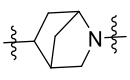
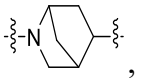
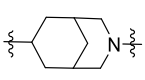
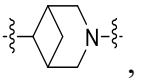
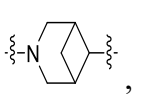
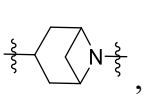
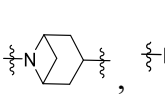
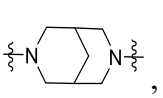
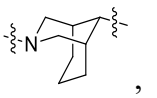
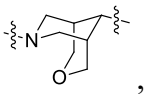
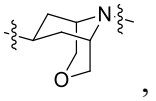
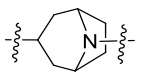
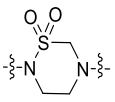
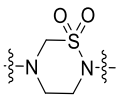
4. The compound or the stereoisomer, tautomer, deuterated form, solvate, prodrug, metabolite, pharmaceutically acceptable salt or eutectic thereof according to claim 3, characterized in that

Ak1, Ak2, Ak3, Ak4, Ak5, Ak6, Ak7, Ak8 and Ak9 are each independently selected from $-(CH_2)_q-$, $-(CH_2)_q-O-$, $-O-(CH_2)_q-$, $-(CH_2)_q-NR^L-$, $-NR^L-(CH_2)_q-$, $-(CH_2)_q-NR^LC(=O)-$, $-(CH_2)_q-C(=O)NR^L-$, $-C(=O)-$, $-C(=O)-(CH_2)_q-NR^L-$, $-(C\equiv C)_q-$ or a bond, wherein the $-CH_2-$ is optionally substituted with 1 to 2 substituents selected from F, Cl, Br, I, OH, CN, NH_2, CF_3, hydroxymethyl, methyl, ethyl, methoxy or ethoxy;

R^L is selected from H, methyl or ethyl;

each q is independently selected from 0, 1, 2 or 3;

each Cy1, Cy2, Cy3, Cy4 or Cy5 is independently selected from a bond or one of the following substituted or unsubstituted groups: cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, azetidinyl, pyrrolidyl, azacyclohexenyl, piperidyl, morpholinyl, piperazinyl, 1,4-diazepanyl, phenyl, pyridyl, cyclopropyl-fused-cyclopropyl, cyclopropyl-fused-cyclobutyl, cyclopropyl-fused-cyclopentyl, cyclopropyl-fused-cyclohexyl, cyclobutyl-fused-cyclobutyl, cyclobutyl-fused-cyclopentyl, cyclobutyl-fused-cyclohexyl, cyclopentyl-fused-cyclopentyl,

cyclopentyl-fused-cyclohexyl, cyclohexyl-fused-cyclohexyl, cyclopropyl-spiro-cyclopropyl, cyclopropyl-spiro-cyclobutyl, cyclopropyl-spiro-cyclopentyl, cyclopropyl-spiro-cyclohexyl, cyclobutyl-spiro-cyclobutyl, cyclobutyl-spiro-cyclopentyl, cyclobutyl-spiro-cyclohexyl, cyclopentyl-spiro-cyclopentyl, cyclopentyl-spiro-cyclohexyl, cyclohexyl-spiro-cyclohexyl, cyclopropyl-fused-azetidinyl, cyclopropyl-fused-pyrrolidyl, cyclopropyl-fused-piperidyl, cyclobutyl-fused-azetidinyl, cyclobutyl-fused-pyrrolidyl, cyclobutyl-fused-piperidyl, cyclopentyl-fused-azetidinyl, cyclopentyl-fused-pyrrolidyl, cyclopentyl-fused-piperidyl, cyclohexyl-fused-azetidinyl, cyclohexyl-fused-pyrrolidyl, cyclohexyl-fused-piperidyl, azetidinyl-fused-azetidinyl, azetidinyl-fused-pyrrolidyl, azetidinyl-fused-piperidyl, pyrrolidyl-fused-azetidinyl, pyrrolidyl-fused-pyrrolidyl, pyrrolidyl-fused-piperidyl, piperidyl-fused-azetidinyl, piperidyl-fused-pyrrolidyl, piperidyl-fused-piperidyl, cyclopropyl-spiro-azetidinyl, cyclopropyl-spiro-pyrrolidyl, cyclopropyl-spiro-piperidyl, cyclopropyl-spiro-piperazinyl, cyclobutyl-spiro-azetidinyl, cyclobutyl-spiro-pyrrolidyl, cyclobutyl-spiro-piperidyl, cyclopentyl-spiro-azetidinyl, cyclopentyl-spiro-pyrrolidyl, cyclopentyl-spiro-piperidyl, cyclohexyl-spiro-azetidinyl, cyclohexyl-spiro-pyrrolidyl, cyclohexyl-spiro-piperidyl, azetidinyl-spiro-azetidinyl, azetidinyl-spiro-pyrrolidyl, azetidinyl-spiro-piperidyl, pyrrolidyl-spiro-azetidinyl, pyrrolidyl-spiro-pyrrolidyl, pyrrolidyl-spiro-piperidyl, piperidyl-spiro-azetidinyl, piperidyl-spiro-pyrrolidyl, piperidyl-spiro-piperidyl, cyclopropyl-spiro-piperazinyl,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  , or  , which, when substituted, is optionally substituted with 1 to 4 substituents selected from F, Cl, Br, I, OH, NH_2, COOH, CN, =O, C_{1-4} alkyl, halogen-substituted C_{1-4} alkyl, hydroxyl-substituted C_{1-4} alkyl or C_{1-4} alkoxy;

X is selected from O or S;

Y is selected from NH or O;

R^1 is selected from H, OH, $NR^{1a}R^{1b}$, methyl, ethyl, propyl, isopropyl or methoxy, wherein the methyl, ethyl, propyl, isopropyl or methoxy is optionally substituted with 1 to 3 substituents selected from F, Cl, Br, I, OH, cyano, NH_2, methyl, ethyl or CF_3;

R^{1a} and R^{1b} are each independently selected from H, OH, NH_2, methyl, ethyl, propyl, isopropyl, methoxy, propargyl or propynyl, wherein the methyl, ethyl, propyl, isopropyl, methoxy, propargyl or propynyl is optionally substituted with 1 to 3 substituents selected from F, Cl, Br, I, OH, cyano, NH_2, methyl, ethyl, methoxy, ethynyl or CF_3;

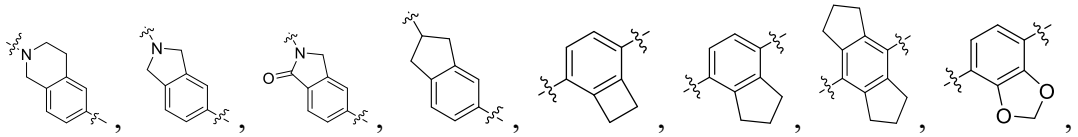
R^{3a} is selected from H, OH, NH_2, methyl, ethyl, propyl, isopropyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, phenyl, azetidinyl, pyrrolidyl, piperidyl, propargyl or propynyl, wherein the methyl, ethyl, propyl, isopropyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, phenyl, azetidinyl, pyrrolidyl, piperidyl, propargyl or propynyl is optionally substituted with 1 to 3 substituents selected from F, Cl, Br, I, OH, cyano, NH_2, methyl, ethyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, ethynyl, methoxy or cyclopropyloxy;

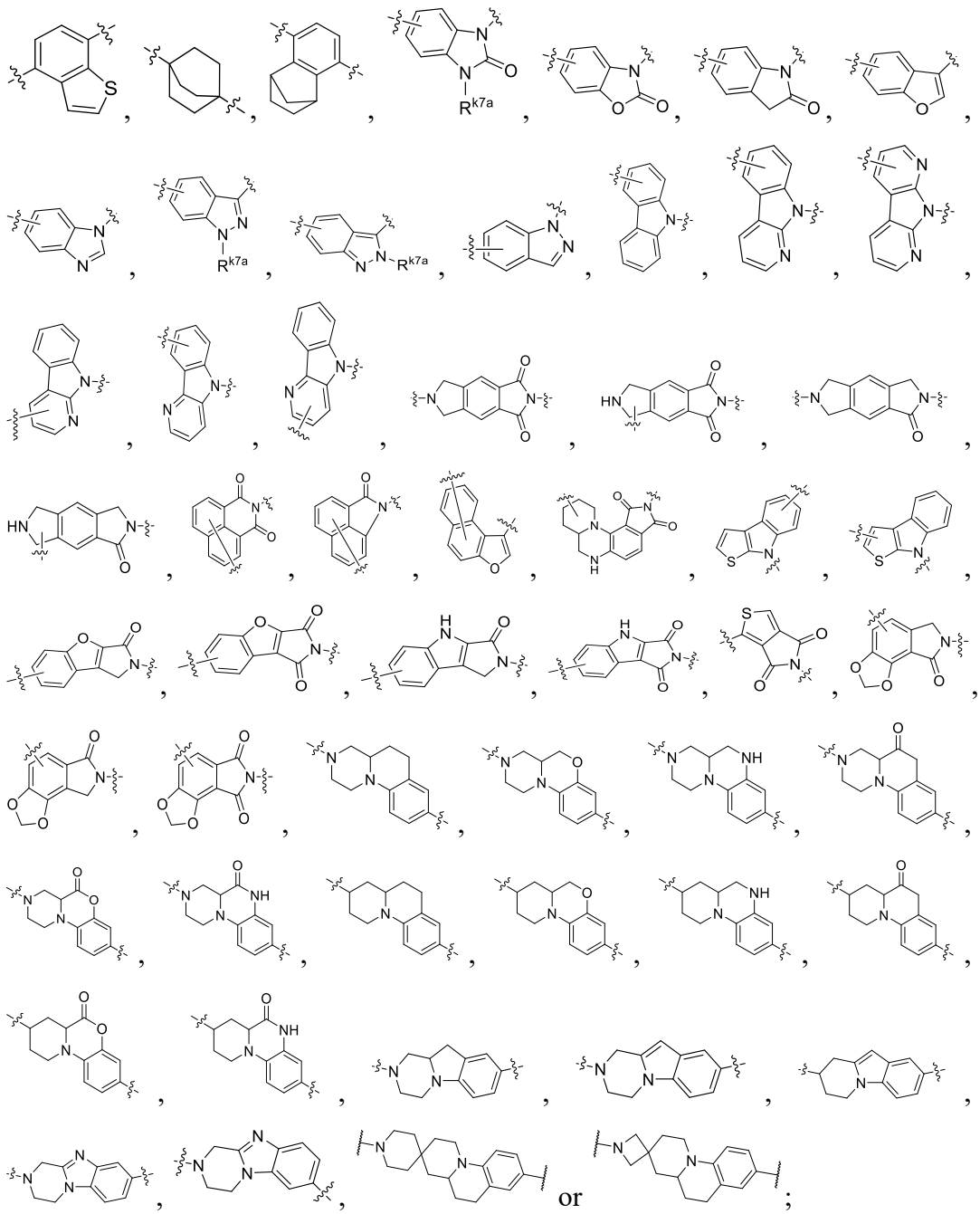
each R^4 is independently selected from H, methyl, ethyl or cyclopropyl;

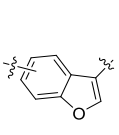
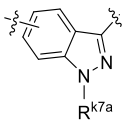
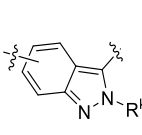
each R^{3b} is independently selected from H, F, Cl, Br, I, OH, CN, methoxy, methyl, ethyl or cyclopropyl;

each R^5 is independently selected from H, F, Cl, Br, I, cyano, NH_2, OH, methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy, isopropoxy, cyclopropyl or ethynyl, wherein the methyl, ethyl, propyl, isopropyl, methoxy, ethoxy, propoxy, isopropoxy, cyclopropyl or ethynyl is optionally substituted with 1 to 3 substituents selected from F, Cl, Br, I, OH, cyano, NH_2, methyl, ethyl or cyclopropyl;

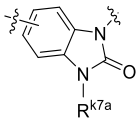
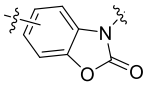
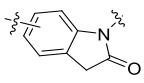
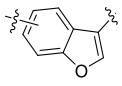
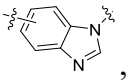
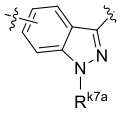
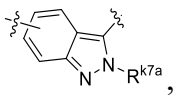
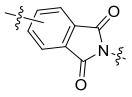
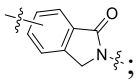
each F1 is independently selected from cyclohexyl, piperidyl, piperazinyl, phenyl, naphthyl, pyridyl, pyrimidyl, pyrazinyl, pyridazinyl, pyridazinonyl, phthalazin-1(2*H*)-onyl, benzo[d][1,2,3]triazin-4(*3*H)-onyl, thienyl, triazolyl,



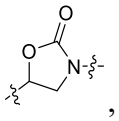
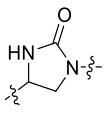
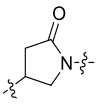


each F2 is independently selected from  ,  or  ;

each F is independently selected from cyclobutyl, cyclopentyl, cyclohexyl, azetidinyl, pyrrolidyl, piperidyl, piperazinyl, pyridyl, pyrimidyl, pyridazinyl, pyrazinyl, triazinyl, pyrrolyl, imidazolyl, triazolyl, oxazolyl, furyl, thienyl, thiazolyl, 2-pyridonyl, pyrazolyl, phenyl, naphthyl, anthryl, phenanthryl,

benzothiazolyl, indolyl,  ,  ,  ,  ,  ,  ,  ,  or  ;

Q1 is selected from -O-, -S-, -CH_2-, NH, N(CH_3) or -CO-;

Q is selected from a bond, C(=O), CH_2, NH, N(CH_3), O, S, NHC(=O), C(=O)NH, N(CH_3)C(=O), C(=O)N(CH_3),  ,  or  ;

R^{k7a} is selected from H, methyl, ethyl, propyl, isopropyl, ethenyl, propenyl, allyl, ethynyl, propynyl, propargyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, azetidinyl, pyrrolidyl, piperidyl, oxacyclobutyl, tetrahydrofuryl or tetrahydropyranyl, wherein the methyl, ethyl, propyl, isopropyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, azetidinyl, pyrrolidyl, piperidyl, oxacyclobutyl, tetrahydrofuryl or tetrahydropyranyl is optionally substituted with 1 to 4 substituents selected from F, Cl, Br, I, OH, CN, CF_3, C_{1-4} alkyl, C_{1-4} alkoxy, ethenyl, propenyl, allyl, ethynyl, propynyl, propargyl or C_{3-6} cycloalkyl;

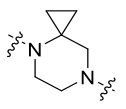
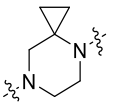
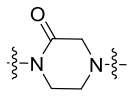
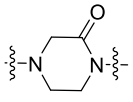
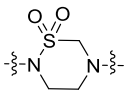
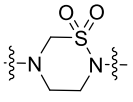
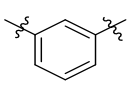
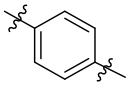
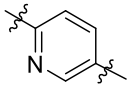
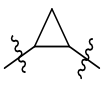
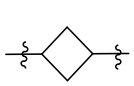
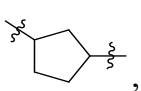
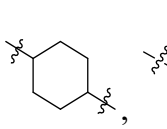
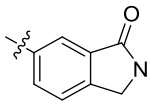
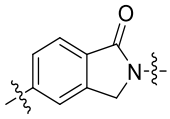
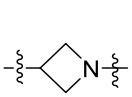
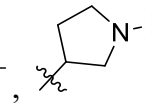
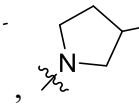
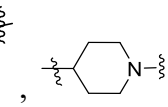
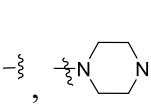
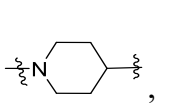
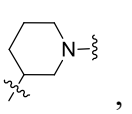
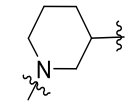
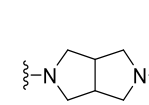
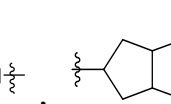
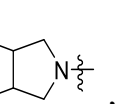
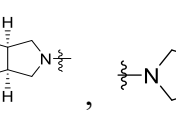
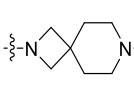
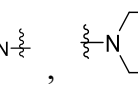
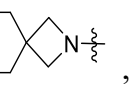
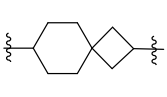
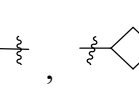
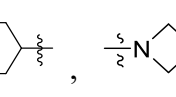
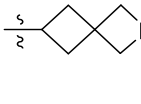
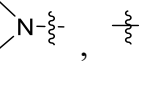
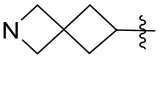
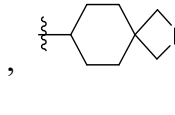
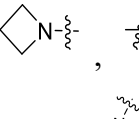
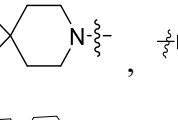
R^{k1} and R^{k3} are each independently selected from H, D, F, Cl, Br, I, OH, =O, NH_2, CF_3, CN, COOH, $CONH_2$, methyl, ethyl, isopropyl, methoxy, ethoxy, isopropoxy, ethynyl, cyclopropyl or azetidinyl, wherein the methyl, ethyl, isopropyl, methoxy, ethoxy, isopropoxy, ethynyl, cyclopropyl or azetidinyl is optionally substituted with 1 to 4 substituents selected from D, F, Cl, Br, I, OH, NH_2, CN, cyclopropyl or methoxy;

or two R^{k3} together with the carbon atom or ring backbone to which they are directly attached form C_{3-6} carbocycle or 3- to 7-membered heterocycle, or two R^{k1} together with the carbon atom or ring backbone to which they are directly attached form C_{3-6} carbocycle or 3- to 7-membered heterocycle, wherein the carbocycle or heterocycle is optionally substituted with 1 to 4 substituents selected from D, F, Cl, Br, I, OH, =O, NH_2, CN, COOH, $CONH_2$, C_{1-4} alkyl or C_{1-4} alkoxy, and the heterocycle contains 1 to 4 heteroatoms selected from O, S or N;

each p1 or p2 is independently selected from 0, 1, 2 or 3.

5. The compound or the stereoisomer, tautomer, deuterated form, solvate, prodrug, metabolite, pharmaceutically acceptable salt or eutectic thereof according to claim 4, characterized in that

Ak1, Ak2, Ak3, Ak4, Ak5, Ak6, Ak7, Ak8 and Ak9 are each independently selected from a bond, -O-, -OCH_2-, -CH_2O-, -OCH_2CH_2-, -CH_2CH_2O-, -C≡C-, -$C(CH_3)_2$-, -CF_2-, -CH_2-, -CH_2CH_2-, -$CH_2CH_2CH_2$-, -$N(CH_3)$-, -NH-, -$CH_2N(CH_3)$-, -CH_2NH-, -$NHCH_2$-, -$CH_2CH_2N(CH_3)$-, -CH_2CH_2NH-, -$NHCH_2CH_2$-, -C(=O)-, -$C(=O)CH_2NH$-, -$CH_2C(=O)NH$-, -C(=O)NH- or -NHC(=O)-;

each Cy1, Cy2, Cy3, Cy4 or Cy5 is independently selected from a bond or one of the following substituted or unsubstituted groups:  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  , ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  , or , which, when substituted, is substituted with 1 to 4 substituents selected from F, CF_3, OH, methyl, =O, hydroxymethyl, COOH, CN or NH_2;

B is selected from one of the structural fragments shown in Table B-1;

K is selected from one of the structural fragments shown in Table K-1 or Table K-2.

6. The compound or the stereoisomer, tautomer, deuterated form, solvate, prodrug, metabolite, pharmaceutically acceptable salt or eutectic thereof according to claim 5, characterized in that

L is selected from a bond, -Ak1-, -Ak1-Ak2-, -Ak1-Ak2-Ak3-, -Ak1-Ak2-Ak3-Ak4-, -Ak1-Ak2-Ak3-Ak4-Ak5-, -Ak1-Ak2-Ak3-Ak4-Ak5-Ak6-, -Cy1-, -Cy1-Ak1-, -Cy1-Ak1-Ak2-, -Cy1-Ak1-Ak2-Ak3-, -Cy1-Ak1-Ak2-Ak3-Ak4-, -Cy1-Cy2-, -Cy1-Ak1-Cy2-, -Cy1-Cy2-Ak2-, -Cy1-Ak1-Cy2-Ak2-, -Cy1-Ak1-Cy2-Ak2-Ak3-, -Cy1-Ak1-Cy2-Ak2-Ak3-Ak4-, -Cy1-Cy2-Ak2-Ak3-, -Cy1-Cy2-Ak2-Ak3-Ak4-, -Cy1-Ak1-Cy2-Ak2-Ak3-Ak4-, -Cy1-Ak1-Ak2-Cy3-, -Cy1-Ak1-Ak2-Cy3-Ak3-, -Cy1-Cy2-Cy3-, -Cy1-Ak1-Cy2-Cy3-, -Cy1-Cy2-Ak2-Cy3-, -Cy1-Cy2-Cy3-Ak3-, -Cy1-Ak1-Cy2-Cy3-Ak3-, -Cy1-Cy2-Ak2-Cy3-Ak3-, -Cy1-Ak1-Cy2-Ak2-Cy3-, -Cy1-Ak1-Cy2-Ak2-Cy3-Ak3-, -Cy1-Cy2-Cy3-Ak3-Ak4-, -Cy1-Cy2-Cy3-Ak3-Cy4-, -Cy1-Cy2-Cy3-Cy4-, -Cy1-Ak1-Cy2-Cy3-Cy4-, -Cy1-Cy2-Ak2-Cy3-Cy4-, -Cy1-Cy2-Cy3-Ak3-Cy4-, -Cy1-Cy2-Cy3-Cy4-Ak4-, -Cy1-Ak1-Cy2-Ak2-Cy3-Ak3-Cy4-, -Cy1-Ak1-Cy2-Ak2-Cy3-Cy4-, -Ak1-Cy2-, -Ak1-Cy2-Cy3-, -Ak1-Ak2-Cy3-, -Ak1-Ak2-Cy3-Cy4-, -Ak1-Cy2-Ak2-Cy3-, -Ak1-Cy2-Cy3-Ak3-Cy4-, -Ak1-Cy2-Cy3-Cy4-Ak4-Cy5-, -Ak1-Cy2-Ak2-, -Cy1-Cy2-Cy3-Ak3-Ak4-Ak5-, -Cy1-Cy2-Ak2-Cy3-Ak3-Ak4-Ak5-, -Cy1-Ak1-Cy2-Ak2-Ak3-Ak4-Ak5-, -Cy1-Cy2-Cy3-Cy4-Ak4-Ak5-, -Cy1-Ak1-Ak2-Ak3-Ak4-Ak5-, -Ak1-Cy2-Ak2-Ak3-Ak4-Ak5-, -Ak1-Cy2-Ak2-Ak3-Ak4- or -Ak1-Cy2-Ak2-Ak3-.

7. The compound or the stereoisomer, tautomer, deuterated form, solvate, prodrug, metabolite, pharmaceutically acceptable salt or eutectic thereof according to claim 6, characterized in that

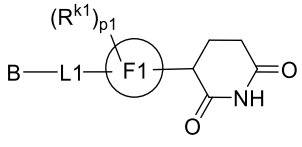
L is selected from a bond or one of the structural fragments shown in Table L-1, wherein the left side of the group is linked to B.

8. The compound or the stereoisomer, tautomer, deuterated form, solvate, prodrug, metabolite, pharmaceutically acceptable salt or eutectic thereof according to claim 6, characterized in that

L is selected from a bond or one of the structural fragments shown in Table L-2, wherein the left side of the group is linked to B;

K is selected from one of the structural fragments shown in Table K-2.

9. The compound or the stereoisomer, tautomer, deuterated form, solvate, prodrug, metabolite, pharmaceutically acceptable salt or eutectic thereof according to claim 1, characterized in that the compound represented by general formula (I) is selected from a compound represented by general formula (II),



(II)

L1 is selected from -Cy1-, -Cy1-Ak1-, -Cy1-Cy2-, -Cy1-Ak1-Cy2- or -Cy1-Ak1-Cy2-Cy3-;

Ak1 is selected from $-CH_2-$, -O- or $-CH_2-CH_2-$;

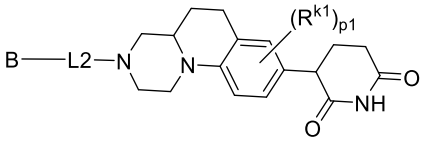
the definitions of Cy1, Cy2 and Cy3 are the same as those in claim 5;

F1 is selected from phenyl, 5- to 6-membered heteroaryl or a 13- to 14-membered fused heterotricyclic ring;

the definition of B is the same as that in claim 1;

the definitions of R^{k1} and p1 are the same as those in claim 4.

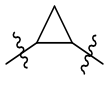
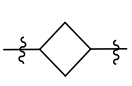
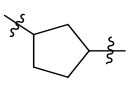
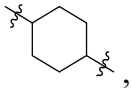
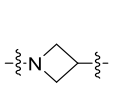
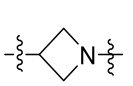
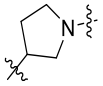
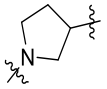
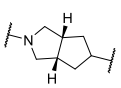
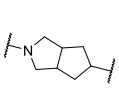
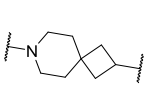
10. The compound or the stereoisomer, tautomer, deuterated form, solvate, prodrug, metabolite, pharmaceutically acceptable salt or eutectic thereof according to claim 1, characterized in that the compound represented by general formula (I) is selected from a compound represented by general formula (III),

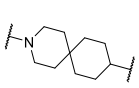
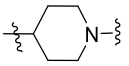
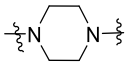
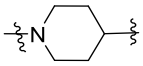
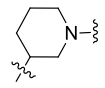
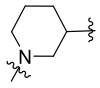


(III);

the definition of B is the same as that in claim 1;

L2 is selected from -Cy1-, -Cy1-Ak1- or -Cy1-Ak1-Cy2-;

each Cy1 or Cy2 is independently selected from one of the following substituted or unsubstituted groups:  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,  ,

 ,  ,  ,  ,  or  , which, when substituted, is substituted with 1 to 4 substituents selected from F, CF_3, OH, methyl, =O, hydroxymethyl, COOH, CN or NH_2;

Ak1 is selected from -CH_2-, -O- or -CH_2-CH_2-;

each R^{k1} is independently selected from H, D, F, Cl, Br, I, OH, =O, NH_2, CF_3, CN, COOH, $CONH_2$, methyl, ethyl, methoxy or ethoxy;

p1 is selected from 0, 1 or 2.

11. The compound or the stereoisomer, tautomer, deuterated form, solvate, prodrug, metabolite, pharmaceutically acceptable salt or eutectic thereof according to claim 1, characterized in that the compound is selected from one of the structures shown in Table S-1.

12. A pharmaceutical composition, characterized in that the pharmaceutical composition comprises the compound or the stereoisomer, tautomer, deuterated form, solvate, prodrug, metabolite, pharmaceutically acceptable salt or eutectic thereof according to any one of claims 1-11, and a pharmaceutically acceptable carrier.

13. A pharmaceutical composition or pharmaceutical preparation, characterized in that the pharmaceutical composition or pharmaceutical preparation comprises 1-1500 mg of the compound or the stereoisomer, tautomer, deuterated form, solvate, prodrug, metabolite, pharmaceutically acceptable salt or eutectic thereof according to any one of claims 1-11, and a pharmaceutical excipient.

14. Use of the compound or the stereoisomer, tautomer, deuterated form, solvate, prodrug, metabolite, pharmaceutically acceptable salt or eutectic thereof according to any one of claims 1-11, or the pharmaceutical composition according to claim 12 or 13 in the preparation of a drug for treating a disease related to the activity or expression level of Bcl6.

15. Use of the compound or the stereoisomer, tautomer, deuterated form, solvate, prodrug, metabolite, pharmaceutically acceptable salt or eutectic thereof

according to any one of claims 1-11, or the pharmaceutical composition according to claim 12 or 13 in the preparation of a drug for treating a disease related to the inhibition or degradation of Bcl6.

16. The use according to claim 14 or 15, characterized in that the disease is selected from cancer.