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(71) Applicant: **DONG-A SOCIO HOLDINGS CO., LTD.**
[KR/KR]; 64, Cheonho-daero, Dongdaemun-gu, Seoul
02587 (KR).

(72) Inventors: **KIM, Myeong-Seop**; 5412-1104, 65,
Docheong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do
16509 (KR). **KIM, Sumin**; 301, 1963, Nambusunhwan-ro,
Gwanak-gu, Seoul 08802 (KR). **KIM, Jin Kwan**; 946-
1501, 20, Deogyong-daero 1555beon-gil, Yeongtong-gu,
Suwon-si, Gyeonggi-do 16700 (KR). **KIM, Hadong**; 101-
903, 133-15, Gaebong-ro 2-gil, Guro-gu, Seoul 08331
(KR). **RYU, Ki Moon**; 210-1303, 66, Yonggu-daero
2771beon-gil, Suji-gu, Yongin-si, Gyeonggi-do 16865
(KR). **PARK, Seong Jin**; 12, Sajik-ro 2-gil, Jongno-gu,
Seoul 03026 (KR). **PARK, Taesun**; 302, 16-1, Geumhwa-
ro 105beon-gil, Giheung-gu, Yongin-si, Gyeonggi-do
17073 (KR). **SHEEN, Joon-Ho**; 3-2, Daehak-ro 5-gil,
Jongno-gu, Seoul 03082 (KR). **YOON, Taeyoung**; 26-8,

Seochojungang-ro 6-gil, Seocho-gu, Seoul 06643 (KR).
JANG, Mi Yeon; 102-201, 10, Sinchon-ro 73beon-gil, Gi-
heung-gu, Yongin-si, Gyeonggi-do 16904 (KR).

(74) Agent: **AHN, So Young**; 4th Fl., 344, Seocho-daero,
Seocho-gu, Seoul 06632 (KR).

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(54) Title: HETEROARYL COMPOUNDS AND THEIR USE AS THERAPEUTIC DRUGS

(57) Abstract: The present invention provides heterocyclic compounds, the stereoisomer thereof, the enantiomer thereof, or the pharmaceutically acceptable salt, which are capable of modulating the activity of Mer receptor tyrosine kinase (MERTK). This invention also provides pharmaceutical compositions thereof, methods to prepare the said compounds, and the use of such compounds as a medicament. The present invention is directed to MERTK inhibitory compounds with marked potency, thereby having an outstanding potential for a pharmaceutical intervention of cancer and any other diseases related to MERTK dysregulation.



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Description

Title of Invention: HETEROARYL COMPOUNDS AND THEIR USE AS THERAPEUTIC DRUGS

Technical Field

- [1] This application claims the benefit of priority under U.S.C. §119(e) to U.S. Provisional patent application serial No. 62/212,520 filed August 31, 2015, which is incorporated herein by reference.
- [2] The present invention relates to novel heterocyclic compounds having Mer kinase inhibitory activity, a stereoisomer thereof, an enantiomer thereof, or a pharmaceutically acceptable salt thereof, the use for preparing pharmaceutical compositions, pharmaceutical compositions comprising the same, methods of treating diseases using these compositions.

Background Art

- [3] Transmembrane receptor tyrosine kinases (RTKs) comprise an evolutionarily conserved family of structurally related proteins. The gene Mer is a member of the Tyro3/Axl/Mer (TAM) receptor kinase family and a proto-oncogene. Its abnormal expression and activation is found in conjunction with human cancers such as pituitary adenomas, mantle cell lymphomas, and T-cell acute lymphoblastic leukemia.
- [4] The ATP-binding site is similar for all protein kinases. For this reason, it is challenging to find an inhibitor that is specific for the Mer. Compound-52, a 2,6,9-trisubstituted purine that occupies the ATP-binding site, was actually the first molecule that was found to be successful in inhibiting Mer (J Struct Biol. 2009 Feb; 165(2): 88-96). This inhibitor has, however, limited potency and lack of selectivity. Lately, several compounds have been unveiled mostly by modifying Compound-52 including UNC-569, UNC-1062, and UNC-2025 (ACS Med Chem Lett. 2012 Feb 9;3(2):129-134, Eur J Med Chem. 2013 Jul;65:83-93, J Med Chem. 2014 Aug 28;57(16):7031-41).
- [5] It is an object of the invention to provide reagents and methods of regulating a receptor tyrosine kinase Mer. This and other objects of the invention are provided by one or more of the embodiments described below.

Disclosure of Invention

Technical Problem

- [6] Several Mer kinase inhibitors have been previously described, but they have different moieties onto the scaffold from the present invention. Highly potent and selective Mer kinase inhibitors based on aminopyridine or aminopyrimidine scaffolds are described.
- [7] The present invention relates to compounds capable of inhibiting the activity of Mer,

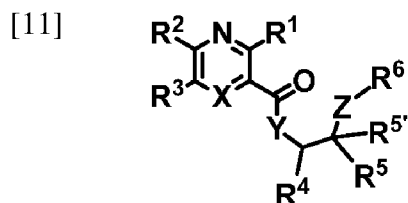
which compounds are useful for the prevention and/or the treatment of cancer and other immune-related diseases such as infection and sepsis.

Solution to Problem

[8] Novel Mer kinase inhibitors

[9] The present invention relates to a heterocyclic compound represented by the following Formula I, a stereoisomer thereof, an enantiomer thereof, or a pharmaceutically acceptable salt thereof:

[10] [Formula I]



[12] wherein:

[13] X is CR⁷, or N;

[14] Y is CHR⁸, NR⁸, or O;

[15] Z is CH₂, CH₂O, C(=O), C(=O)O, C(=O)NH, NR⁸, NHC(=O), O or O(C=O);

[16] R¹ is H, halogen, C₁₋₃ alkyl, NHR⁸ or OR⁸;

[17] R² is H, halogen, C₁₋₄ alkyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, C₁₋₂ alkylheterocyclyl or -L-aryl, which C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, C₁₋₂ alkylheterocyclyl or -L-aryl may optionally be substituted with one or more R⁹;

[18] R³ is H, halogen, CN, C₁₋₃ alkyl, cycloalkenyl, C₂₋₆ alkenyl, aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, or C₁₋₂ alkylheterocyclyl which aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, or C₁₋₂ alkylheterocyclyl may optionally be substituted with one or more R⁹;

[19] R⁴ and R⁵ each independently is H, C₁₋₆ alkyl, C₁₋₆ alkoxy, C₃₋₁₀ cycloalkyl, C(=O) R⁶, C₁₋₂ alkylaryl, aryl; or

[20] R⁴ and R⁵ may be combined with each other to form a 3-7 membered cyclic ring or heterocyclic ring containing 1 or 2 of NR⁸, O or S, and the cyclic or heterocyclic ring may optionally be substituted with 1 or 2 halogen(s), C₁₋₄ alkyl or C₁₋₄ alkoxy;

[21] R^{5'} is H or R⁵ and R^{5'} may be combined with each other to form carbonyl;

[22] R⁶ is H, C₁₋₄ alkyl, C₁₋₆ alkoxy, -NR¹⁵R¹⁶, aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, C₁₋₂ alkylheterocyclyl, C₁₋₂ alkylbiaryl, -L-aryl or -L-biaryl, which C₁₋₄ alkyl, aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, C₁₋₂ alkylheterocyclyl, C₁₋₂ alkylbiaryl, -L-aryl or -L-biaryl, may optionally be substituted with one or more R⁹;

[23] R⁷ is H, halogen or C₁₋₃ alkyl;

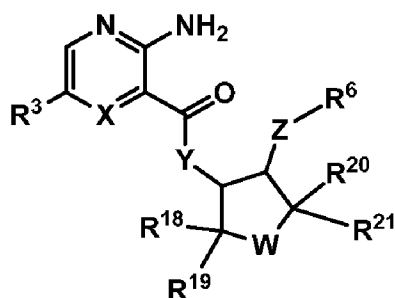
[24] R⁸ is H, C₁₋₆ alkyl, C₁₋₄ fluoroalkyl, C₁₋₄ hydroxyalkyl, C₁₋₃ alkylaryl or C(=O)R¹⁰

- which C₁₋₆ alkyl or C₁₋₃ alkylaryl may optionally be substituted with one or more R⁹;
- [25] when Z is NR⁸, R⁸ and R⁶ may be combined with each other to form a 3-7 membered heterocyclic ring comprising 1 to 2 N or 0 to 2 O heteroatoms;
- [26] R⁹ is halogen, hydroxyl, -CN, -NO₂, -COOH, -(C=O)H, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, C₁₋₄ hydroxyalkyl, C₁₋₆ alkoxy, cycloalkenyl, aryl, heterocyclyl, heteroaryl, -NR¹⁵R¹⁶, -L-NR¹⁵R¹⁶, -L-COOR¹⁷, -L-alkyl, -L-C₃₋₁₀ cycloalkyl, -L-heterocyclyl, -L-heteroaryl, or -L-aryl which C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, C₁₋₄ hydroxyalkyl, C₁₋₆ alkoxy, cycloalkenyl, aryl, heterocyclyl, heteroaryl, -L-alkyl, -L-C₃₋₁₀ cycloalkyl, -L-heterocyclyl, -L-heteroaryl, or -L-aryl may substituted with halogen, hydroxyl, -CN, -NR¹⁵R¹⁶, C₁₋₆ alkyl, C₃₋₁₀ cycloalkyl, C₁₋₄ hydroxyalkyl, C₂₋₆ alkenyl, aryl, heterocyclyl, -L-heterocyclyl, or -(CH₂)_l-C(=O)-NR¹⁵R¹⁶ ;
- [27] R¹⁰ is C₁₋₃ alkyl or C₁₋₃ alkylaryl;
- [28] R¹⁵ and R¹⁶ each independently is H, C₁₋₆ alkyl, C₃₋₁₀ cycloalkyl or SO₂R¹⁷;
- [29] R¹⁷ is H, C₁₋₃ alkyl or C₁₋₃ alkylaryl;
- [30] L is C₁₋₃ alkyl, C₁₋₃ alkylO, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, -(CH₂)_l-C(=O)-(CH₂)_m-, C(=O)O, -(CH₂)_l-C(=O)NH-(CH₂)_m-, -(CH₂)_l-NHC(=O)-(CH₂)_m-, -(CH₂)_l-NH-(CH₂)_m-, NR⁸, -NH-C(=O)-CR¹⁵R¹⁶-NH-C(=O)-, NHC(=O), O, O(C=O) S, S(=O), or SO₂; and
- [31] l and m each independently is an integer of 0 to 2.
- [32] In accordance with a second embodiment of the present invention, there are provided the heterocyclic compound represented formula I is represented by the following

Formula Ia:

[33] [Formula Ia]

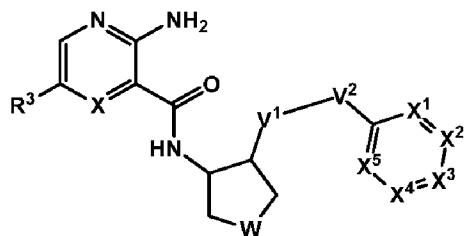
[34]



- [35] wherein
- [36] X is CH, or N;
- [37] Y is NR⁸, or O;
- [38] W is CH₂, (CH₂)₂, NR¹¹, or O;
- [39] Z is CH₂, CH₂O, C(=O), C(=O)O, C(=O)NH, NR⁸, NHC(=O), O or O(C=O);
- [40] R³ is H, halogen, CN, C₁₋₃ alkyl, cycloalkenyl, C₂₋₆ alkenyl, aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, or C₁₋₂ alkylheterocyclyl which aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkyl-

- heteroaryl, or C₁₋₂ alkylheterocyclyl may optionally be substituted with one or more R⁹;
- [41] R⁶ is H, C₁₋₄ alkyl, C₁₋₆ alkoxy, -NR¹⁵R¹⁶, aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, C₁₋₂ alkylheterocyclyl, C₁₋₂ alkylbiaryl, -L-aryl or -L-biaryl, which C₁₋₄ alkyl, aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, C₁₋₂ alkylheterocyclyl, C₁₋₂ alkylbiaryl, -L-aryl or -L-biaryl, may optionally be substituted with one or more R⁹;
- [42] R⁸ is H, C₁₋₆ alkyl, C₁₋₄ fluoroalkyl, C₁₋₄ hydroxyalkyl, C₁₋₃ alkylaryl or C(=O)R¹⁰ which C₁₋₆ alkyl or C₁₋₃ alkylaryl may optionally be substituted with one or more R⁹;
- [43] when Z is NR⁸, R⁸ and R⁶ may be combined with each other to form a 3-7 membered heterocyclic ring comprising 1 to 2 N or 0 to 2 O heteroatoms;
- [44] R⁹ is halogen, hydroxyl, -CN, -NO₂, -COOH, -(C=O)H, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, C₁₋₄ hydroxyalkyl, C₁₋₆ alkoxy, cycloalkenyl, aryl, heterocyclyl, heteroaryl, -NR¹⁵R¹⁶, -L-NR¹⁵R¹⁶, -L-COOR¹⁷, -L-alkyl, -L-C₃₋₁₀ cycloalkyl, -L-heterocyclyl, -L-heteroaryl, or -L-aryl which C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, C₁₋₄ hydroxyalkyl, C₁₋₆ alkoxy, cycloalkenyl, aryl, heterocyclyl, heteroaryl, -L-alkyl, -L-C₃₋₁₀ cycloalkyl, -L-heterocyclyl, -L-heteroaryl, or -L-aryl may substituted with halogen, hydroxyl, -CN, -NR¹⁵R¹⁶, C₁₋₆ alkyl, C₃₋₁₀ cycloalkyl, C₁₋₄ hydroxyalkyl, C₂₋₆ alkenyl, aryl, heterocyclyl, -L-heterocyclyl, or -(CH₂)_l-C(=O)-NR¹⁵R¹⁶ ;
- [45] R¹⁰ is C₁₋₃ alkyl or C₁₋₃ alkylaryl;
- [46] R¹¹ is H, C₁₋₆ alkyl, C₁₋₄ fluoroalkyl, C₁₋₄ hydroxyalkyl, C₁₋₃ alkylaryl or C(=O)R¹⁰ which C₁₋₆ alkyl or C₁₋₃ alkylaryl may optionally be substituted with one or more R⁹;
- [47] R¹⁵ and R¹⁶ each independently is H, C₁₋₆ alkyl, C₃₋₁₀ cycloalkyl or SO₂R¹⁷;
- [48] R¹⁷ is H, C₁₋₃ alkyl or C₁₋₃ alkylaryl;
- [49] R¹⁸ to R²¹ are the same as or different from each other, and are each independently H or halogen; or
- [50] R¹⁸ and R¹⁹; or R²⁰ and R²¹ may be combined with each other to form a 3-7 membered cyclic ring or heterocyclic ring containing 1 or 2 of NR⁸, O or S, and the cyclic or heterocyclic ring may optionally be substituted with 1 or 2 halogen(s), C₁₋₄ alkyl or C₁₋₄ alkoxy;
- [51] L is C₁₋₃ alkyl, C₁₋₃ alkylO, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, -(CH₂)_l-C(=O)-(CH₂)_m-, C(=O)O, -(CH₂)_l-C(=O)NH-(CH₂)_m-, -(CH₂)_l-NHC(=O)-(CH₂)_m-, -(CH₂)_l-NH-(CH₂)_m-, NR⁸, -NH-C(=O)-CR¹⁵R¹⁶-NH-C(=O)-NHC(=O), O, O(C=O) S, S, S(=O), or SO₂; and
- [52] l and m each independently is an integer of 0 to 2.
- [53] In accordance with a third embodiment of the present invention, there are provided the heterocyclic compound represented formula I is represented by the following Formula Ib:
- [54] [Formula Ib]

[55]



[56] wherein

[57] X is CH, or N;

[58] W is CH₂, NR¹¹, or O;[59] V¹ and V² each independently is CR¹³R^{13'}, NR¹³, or O;[60] at least one of V₁ and V₂ is CR¹³R^{13'};[61] X¹ to X⁵ are the same as or different from each other, and are each independently CR¹⁴ or N;[62] at least one of X¹ to X⁵ is CR¹⁴;[63] R³ is H, halogen, CN, C₁₋₃ alkyl, cycloalkenyl, C₂₋₆ alkenyl, aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, or C₁₋₂ alkylheterocyclyl which aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, or C₁₋₂ alkylheterocyclyl may optionally be substituted with one or more R⁹;[64] R⁹ is halogen, hydroxyl, -CN, -NO₂, -COOH, -(C=O)H, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, C₁₋₄ hydroxyalkyl, C₁₋₆ alkoxy, cycloalkenyl, aryl, heterocyclyl, heteroaryl, -NR¹⁵R¹⁶, -L-NR¹⁵R¹⁶, -L-COOR¹⁷, -L-alkyl, -L-C₃₋₁₀ cycloalkyl, -L-heterocyclyl, -L-heteroaryl, or -L-aryl which C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, C₁₋₄ hydroxyalkyl, C₁₋₆ alkoxy, cycloalkenyl, aryl, heterocyclyl, heteroaryl, -L-alkyl, -L-C₃₋₁₀ cycloalkyl, -L-heterocyclyl, -L-heteroaryl, or -L-aryl may substituted with halogen, hydroxyl, -CN, -NR¹⁵R¹⁶, C₁₋₆ alkyl, C₃₋₁₀ cycloalkyl, C₁₋₄ hydroxyalkyl, C₂₋₆ alkenyl, aryl, heterocyclyl, -L-heterocyclyl, or -(CH₂)₁-C(=O)-NR¹⁵R¹⁶ ;[65] R¹⁰ is C₁₋₃ alkyl or C₁₋₃ alkylaryl;[66] R¹¹ is H, C₁₋₆ alkyl, C₁₋₄ fluoroalkyl, C₁₋₄ hydroxyalkyl, C₁₋₃ alkylaryl or C(=O)R¹⁰ which C₁₋₆ alkyl or C₁₋₃ alkylaryl may optionally be substituted with one or more R⁹;[67] R¹³ and R^{13'} each independently is H, C₁₋₃ alkyl, C₂₋₃ hydroxyalkyl;[68] each R¹⁴ is independently selected from H, halogen, hydroxyl, -CN, -NO₂, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, cycloalkenyl, aryl, heterocyclyl, heteroaryl, -NR¹⁵R¹⁶, -L-alkyl, -L-heterocyclyl, -L-heteroaryl, or -L-aryl which C₁₋₆ alkyl, aryl, heteroaryl, heterocyclyl may optionally be substituted with one or more R⁹; or adjacent groups among a plurality of R¹⁴s are bonded to each other to form a 3-7 membered cyclic ring or heterocyclic ring containing 1 or 2 of NR¹¹ O or S, and the cyclic or heterocyclic ring may optionally be substituted with 1 or 2 halogen(s), C₁₋₄ alkyl or C₁₋₄

alkoxy;

- [69] R^{15} and R^{16} each independently is H, C_{1-6} alkyl, C_{3-10} cycloalkyl or SO_2R^{17} ;
- [70] R^{17} is H, C_{1-3} alkyl or C_{1-3} alkylaryl;
- [71] L is C_{1-3} alkyl, C_{1-3} alkylO, C_{2-6} alkynyl, C_{3-10} cycloalkyl, $-(CH_2)_l-C(=O)-(CH_2)_m-$, $C(=O)O$, $-(CH_2)_l-C(=O)NH-(CH_2)_m-$, $-(CH_2)_l-NHC(=O)-(CH_2)_m-$, $-(CH_2)_l-NH-(CH_2)_m-$, NR^8 , $-NH-C(=O)-CR^{15}R^{16}-NH-C(=O)-$, $NHC(=O)$, O, $O(C=O)$ S, S, $S(=O)$, or SO_2 ; and
- [72] l and m each independently is an integer of 0 to 2.
- [73] In the present disclosure, a halogen may be fluorine, chlorine, bromine or iodine.
- [74] In the present disclosure, the alkyl may be straight or branched, and the number of carbon atoms thereof is not particularly limited, but is preferably 1 to 6. Specific examples thereof include a methyl group, an ethyl group, a propyl group, an isopropyl group, a butyl group, a pentyl group, a hexyl group, and the like, or a branched chain thereof, but are not limited thereto.
- [75] In the present disclosure, the cycloalkyl is not particularly limited, but has preferably 3 to 10 carbon atoms. Specific examples thereof include cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl, cyclooctyl, a norbornyl group, an adamantyl group, and the like, but are not limited thereto.
- [76] In the present disclosure, the alkoxy may be straight, branched, or cyclic. The number of carbon atoms of the alkoxy group is not particularly limited, but is preferably 1 to 6. Specific examples thereof include methoxy, ethoxy, n-propoxy, isopropoxy, n-butoxy, isobutoxy, and the like, but are not limited thereto.
- [77] In the present disclosure, the alkenyl may be straight or branched, and the number of carbon atoms thereof is not particularly limited, but is preferably 2 to 6. Specific examples thereof include vinyl, 1-propenyl, isopropenyl, 1-butenyl, 2-butenyl, 3-butenyl, 1-pentenyl, 2-pentenyl, 3-pentenyl, 3-methyl-1-butenyl, 1,3-butadienyl, and the like, but are not limited thereto.
- [78] In the present disclosure, the aryl may be monocyclic, or polycyclic and the number of carbon atoms is not particularly limited, but is preferably 6 to 60. Specific examples of the aryl group include a monocyclic aromatic group, such as a phenyl group and a polycyclic aromatic group, such as a naphthyl group, an anthracenyl group, a phenanthrenyl group, a pyrenyl group, a perylenyl group, a tetracenyl group, a chrysenyl group, a fluorenyl group, an acenaphthacenyl group, a triphenylene group, and a fluoranthene group, and the like, but are not limited thereto.
- [79] In the present disclosure, the biaryl may two or more monocyclics and/or polycyclics linked each other.
- [80] In the present disclosure, the aryl in the alkylaryl and biaryl is the same as the above-described examples of the aryl group.

- [81] In the present disclosure, a heterocyclic or a heteroaryl including one or more hetero atom, for example, a heterocyclic group including one or more of O, N, S, Si, Se and the like. Examples of the heterocyclic group include a thiophene group, a furan group, a pyrrole group, an imidazole group, a thiazole group, an oxazole group, an oxadiazole group, a triazole group, a pyridyl group, a bipyridyl group, a triazine group, an acridyl group, a pyridazine group, a pyrrolidine group, a morpholine group, a piperazin group, a piperidine group, a tetrahydrofuran group, a pyrazole group, a quinolinyl group, an isoquinoline group, an indole group, a carbazole group, a benzoxazole group, a benzimidazole group, a benzothiazole group, a benzocarbazole group, a benzothiophene group, a dibenzothiophene group, a benzofuranyl group, a phenanthroline group, a dibenzofuranyl group, and the like, but are not limited thereto.
- [82] In the present disclosure, the "adjacent" group may mean a substituent substituted with an atom directly linked to an atom in which the corresponding substituent is substituted, a substituent disposed sterically closest to the corresponding substituent, or another substituent substituted with an atom in which the corresponding substituent is substituted. For example, two substituents substituted at the ortho position in a benzene ring and two substituents substituted with the same carbon in an aliphatic ring may be interpreted as groups "adjacent" to each other.
- [83] In the present disclosure, the cyclic ring or heterocyclic ring formed by binding two or more R¹⁴s comprises cycloalkyl, cycloalkenyl, aryl, heterocycle, heteroaryl. In accordance with a forth embodiment of the present invention, there are provided the heterocyclic compound represented formula I is represented by any one of the following compounds.

[84]

Example 1	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 2	2-amino-N-((1R,2R)-2-(benzyloxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 3	2-amino-N-(trans-2-(benzyloxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 4	2-amino-N-((1R,2S)-2-(benzyloxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 5	2-amino-N-(cis-2-(benzyloxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 6	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((2-methylbenzyl)oxy)cyclopentyl)nicotinamide
Example 7	2-amino-N-((1S,2S)-2-((3-ethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 8	2-amino-N-((1S,2S)-2-((4-ethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 9	2-amino-N-(trans-2-((4-ethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 10	2-amino-N-((1S,2S)-2-((4-isopropylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 11	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 12	2-amino-N-((1R,2R)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

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Example 13	2-amino-N-(trans-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 14	2-amino-N-((1S,2S)-2-((2,3-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 15	2-amino-N-((1S,2S)-2-((2,6-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 16	2-amino-N-((1S,2S)-2-((2,5-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 17	2-amino-N-((1S,2S)-2-((3,5-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 18	2-amino-N-((1S,2S)-2-((2,4-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 19	2-amino-N-((1S,2S)-2-((4-ethyl-3-methylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 20	2-amino-N-((1S,2S)-2-((3,4-diethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 21	2-amino-N-((1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 22	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3-propylbenzyl)oxy)cyclopentyl)nicotinamide
Example 23	2-amino-N-((1S,2S)-2-((3-cyclopentylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 24	2-amino-N-((1S,2S)-2-((3-isopropylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

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Example 25	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3-(prop-1-en-2-yl)benzyl)oxy)cyclopentyl)nicotinamide
Example 26	2-amino-N-((1S,2S)-2-((3-cyclopropylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 27	2-amino-N-((1S,2S)-2-((3-cyclobutylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 28	2-amino-N-((1S,2S)-2-((3-ethynylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 29	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(trifluoromethyl)benzyl)oxy)cyclopentyl)nicotinamide
Example 30	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3-nitrobenzyl)oxy)cyclopentyl)nicotinamide
Example 31	2-amino-N-((1S,2S)-2-((3-cyanobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 32	2-amino-N-((1S,2S)-2-((3-hydroxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 33	2-amino-N-((1S,2S)-2-((3-methoxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 34	2-amino-N-((1R,2R)-2-((3-methoxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 35	2-amino-N-((1S,2S)-2-((4-methoxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 36	2-amino-N-((1R,2R)-2-((4-methoxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

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Example 37	2-amino-N-(trans-2-((3,5-dimethoxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 38	2-amino-N-((1S,2S)-2-((2,3-dimethoxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 39	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3-phenoxybenzyl)oxy)cyclopentyl)nicotinamide
Example 40	2-amino-N-((1S,2S)-2-(benzo[d][1,3]dioxol-5-ylmethoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 41	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(methylthio)benzyl)oxy)cyclopentyl)nicotinamide
Example 42	methyl 3-(((1S,2S)-2-(2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamido)cyclopentyl)oxy)methyl)benzoate
Example 43	2-amino-N-((1S,2S)-2-((3-chlorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 44	2-amino-N-(trans-2-((3-chlorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 45	2-amino-N-(trans-2-((4-chlorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 46	2-amino-N-(trans-2-((3,4-dichlorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamid
Example 47	2-amino-N-(trans-2-((2-fluorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 48	2-amino-N-((1S,2S)-2-((3-fluorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

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Example 49	2-amino-N-(trans-2-((4-bromo-2-fluorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 50	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-(trans-2-((2,4,5-trifluorobenzyl)oxy)cyclopentyl)nicotinamide
Example 51	2-amino-N-((1S,2S)-2-((3-bromobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 52	2-amino-N-(trans-2-((3-bromo-4-fluorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 53	2-amino-N-((1R,2R)-2-((3-bromo-4-fluorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 54	2-amino-N-((1S,2S)-2-(1-(4-bromophenyl)ethoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 55	methyl (3-(((1S,2S)-2-(2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamido)cyclopentyl)oxy)methyl)benzoyl)glycinate
Example 56	2-amino-N-((1S,2S)-2-((3-((2-hydroxyethyl)carbamoyl)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 57	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3-(piperidine-4-carboxamido)benzyl)oxy)cyclopentyl)nicotinamide
Example 58	2-amino-N-((1S,2S)-2-((3-((S)-2-aminopropanamido)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

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Example 59	N-((1S,2S)-2-((3-((S)-2-acetamidopropanamido)benzyl)oxy)cyclopentyl)-2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 60	2-amino-N-((1S,2S)-2-((3-(3-aminopropanamido)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 61	N-((1S,2S)-2-((3-(2H-1,2,3-triazol-2-yl)benzyl)oxy)cyclopentyl)-2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 62	N-((1S,2S)-2-((4-(2H-1,2,3-triazol-2-yl)benzyl)oxy)cyclopentyl)-2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 63	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-(naphthalen-2-ylmethoxy)cyclopentyl)nicotinamide
Example 64	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-(quinolin-8-ylmethoxy)cyclopentyl)nicotinamide
Example 65	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((2',3',4',5'-tetrahydro-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 66	N-(trans-2-([1,1'-biphenyl]-2-ylmethoxy)cyclopentyl)-2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 67	N-((1S,2S)-2-([1,1'-biphenyl]-3-ylmethoxy)cyclopentyl)-2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 68	N-((1S,2S)-2-([1,1'-biphenyl]-4-ylmethoxy)cyclopentyl)-2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 69	2-amino-N-((1S,2S)-2-hydroxycyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

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Example 70	2-amino-N-(cis-2-hydroxycyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 71	N-((1S,2S)-2-(benzyloxy)cyclopentyl)-2-(ethylamino)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 72	N-((1S,2S)-2-(benzyloxy)cyclopentyl)-2-((3,4-dimethylbenzyl)amino)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 73	2-amino-N-((6R,7S)-6-(benzyloxy)-1,4-dioxaspiro[4.4]nonan-7-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 74	2-amino-N-(trans-2-(benzyloxy)cyclohexyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 75	2-amino-N-((1S,2S)-2-(benzyloxy)cyclohexyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 76	2-amino-N-(trans-2-(benzyl(methyl)amino)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 77	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-(phenoxymethyl)cyclopentyl)nicotinamide
Example 78	2-amino-N-((1S,2S)-2-((3,4-dimethylphenoxy)methyl)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 79	2-amino-N-(trans-2,2-difluoro-5-(phenoxymethyl)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 80	2-amino-N-((1S,2S)-2-(((2,3-dihydro-1H-inden-5-yl)oxy)methyl)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

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Example 81	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3,4,5-trimethylphenoxy)methyl)cyclopentyl)nicotinamide
Example 82	2-amino-N-((1S,2S)-2-((3-(dimethylamino)phenoxy)methyl)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 83	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3-(piperidine-1-carbonyl)phenoxy)methyl)cyclopentyl)nicotinamide
Example 84	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-phenoxyphenoxy)methyl)cyclopentyl)nicotinamide
Example 85	2-amino-N-((1S,2S)-2-((benzyloxy)methyl)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 86	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-(((4'-(4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)oxy)methyl)cyclopentyl)nicotinamide
Example 87	(1S,2S)-2-(benzyloxy)cyclopentyl 2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinate
Example 88	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2R)-2-phenethylcyclopentyl)nicotinamide
Example 89	2-amino-N-(trans-4-(benzyloxy)tetrahydrofuran-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 90	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-(trans-4-morpholinotetrahydrofuran-3-yl)nicotinamide
Example 91	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-(trans-4-(pyrrolidin-1-yl)tetrahydrofuran-3-yl)nicotinamide

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Example 92	2-amino-N-(cis-4-hydroxytetrahydrofuran-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 93	2-amino-N-(4-(benzyloxy)-1-methylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 94	2-amino-N-(trans-4-(benzyloxy)-1-isopropylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 95	(R)-2-amino-N-(2-(benzyloxy)propyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 96	(S)-2-amino-N-(2-(benzyloxy)propyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 97	(S)-2-amino-N-(1-(benzyloxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 98	(R)-2-amino-N-(1-(benzyloxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 99	2-amino-N-(1-(benzyloxy)-2-methylpropan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 100	(R)-2-amino-N-(1-((3,4-dimethylbenzyl)oxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 101	(S)-2-amino-N-(2-((3,4-dimethylbenzyl)oxy)propyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 102	(R)-2-amino-N-(1-((4-chlorobenzyl)oxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 103	(S)-2-amino-N-(2-((4-chlorobenzyl)oxy)propyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

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Example 104	(R)-2-amino-N-((3,4-dichlorobenzyl)oxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 105	(S)-2-amino-N-(2-((3,4-dichlorobenzyl)oxy)propyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 106	(R)-2-amino-N-(1-((3-methoxybenzyl)oxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 107	(S)-2-amino-N-(2-((3-methoxybenzyl)oxy)propyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 108	(R)-2-amino-N-(1-(benzyloxy)butan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 109	(S)-2-amino-N-(1-(benzyloxy)-3-methylbutan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 110	(R)-2-amino-N-(1-(benzyloxy)-3-methylbutan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 111	(S)-2-amino-N-(1-(benzyloxy)-4-methylpentan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 112	(R)-2-amino-N-(1-(benzyloxy)-4-methylpentan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 113	(R)-2-amino-N-(2-(benzyloxy)-1-cyclohexylethyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 114	(R)-2-amino-N-(1-cyclohexyl-2-hydroxyethyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 115	(S)-2-amino-N-(2-(benzyloxy)-1-phenylethyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

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Example 116	(R)-2-amino-N-(2-(benzyloxy)-1-phenylethyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 117	(S)-2-amino-N-(1-(benzyloxy)-3-phenylpropan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 118	(R)-2-amino-N-(1-(benzyloxy)-3-phenylpropan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 119	(R)-2-amino-N-(1-(cyclobutylmethoxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 120	methyl N-(2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinoyl)-O-benzyl-L-serinate
Example 121	methyl N-(2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinoyl)-O-benzyl-L-threoninate
Example 122	2-amino-N-((2S,3R)-3-(benzyloxy)-1-(methylamino)-1-oxobutan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 123	2-amino-N-((2S,3R)-3-(benzyloxy)-1-oxo-1-(propylamino)butan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 124	2-amino-N-((2S,3R)-3-(benzyloxy)-1-(cyclopentylamino)-1-oxobutan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 125	2-amino-N-((2S,3R)-3-(benzyloxy)-1-oxo-1-(pyrrolidin-1-yl)butan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 126	benzyl (2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinoyl)-L-alaninate
Example 127	benzyl (2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinoyl)-L-valinate
Example 128	benzyl (2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinoyl)-L-serinate

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Example 129	3-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-6-(1-methyl-1H-pyrazol-4-yl)pyrazine-2-carboxamide
Example 130	3-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-6-(1-methyl-1H-pyrazol-4-yl)pyrazine-2-carboxamide
Example 131	(S)-3-amino-6-(1-methyl-1H-pyrazol-4-yl)-N-(1,2,3,4-tetrahydronaphthalen-1-yl)pyrazine-2-carboxamide
Example 132	3-amino-N-(trans-4-(benzyloxy)tetrahydrofuran-3-yl)-6-(1-methyl-1H-pyrazol-4-yl)pyrazine-2-carboxamide
Example 133	3-amino-N-(cis-4-(benzyloxy)tetrahydrofuran-3-yl)-6-(1-methyl-1H-pyrazol-4-yl)pyrazine-2-carboxamide
Example 134	2-amino-N-((1S,2S)-2-((3'-amino-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 135	2-amino-N-((1S,2S)-2-((4'-amino-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 136	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(methylamino)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 137	2-amino-N-((1S,2S)-2-((4'-(dimethylamino)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 138	2-amino-N-((1S,2S)-2-((4'-(dimethylamino)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 139	2-amino-N-((1S,2S)-2-((3'-amino-2'-methyl-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

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Example 140	2-amino-N-((1S,2S)-2-((3'-hydroxy-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 141	2-amino-N-((1S,2S)-2-((3'-(hydroxymethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 142	2-amino-N-((1S,2S)-2-((4'-(hydroxymethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 143	2-amino-N-((1S,2S)-2-((3'-(aminomethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 144	2-amino-N-((1S,2S)-2-((4'-(aminomethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 145	2-amino-N-((1S,2S)-2-((4'-(2-aminoethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 146	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(4-methylpiperazin-1-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 147	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(6-(piperazin-1-yl)pyridin-3-yl)benzyl)oxy)cyclopentyl)nicotinamide
Example 148	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(6-(4-methylpiperazin-1-yl)pyridin-3-yl)benzyl)oxy)cyclopentyl)nicotinamide
Example 149	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3'-(piperazin-1-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

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Example 150	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3'-(4-methylpiperazin-1-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 151	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 152	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(morpholine-4-carbonyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 153	2-amino-N-((1S,2S)-2-((4'-ethyl-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 154	2-amino-N-((1S,2S)-2-((4'-(cyanomethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 155	2-amino-N-((1S,2S)-2-((4'-carbamoyl-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 156	2-amino-N-((1S,2S)-2-((3-fluoro-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 157	2-amino-N-((1S,2S)-2-((3-fluoro-4'-((cis-3,4,5-trimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 158	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-3-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

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Example 159	2-amino-N-((1S,2S)-2-((2-chloro-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 160	2-amino-N-((1S,2S)-2-((3-fluoro-4'-((cis-4-(2-hydroxyethyl)-3,5-dimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 161	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(2-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 162	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)benzyl)oxy)cyclopentyl)nicotinamide
Example 163	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)benzyl)oxy)cyclopentyl)nicotinamide
Example 164	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2R)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 165	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1R,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 166	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclohexyl)nicotinamide

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Example 167	2-amino-N-((1S,2S)-2-((4'-(2-(4-methylpiperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 168	2-amino-N-((1S,2S)-2-((4'-(4-methylpiperazin-1-yl)methyl)-3-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 169	2-amino-N-((1S,2S)-2-((3'-hydroxy-[1,1'-biphenyl]-3-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 170	2-amino-N-((1S,2S)-2-((3'-amino-[1,1'-biphenyl]-3-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 171	2-amino-N-((1S,2S)-2-((3'-(hydroxymethyl)-[1,1'-biphenyl]-3-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 172	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 173	2-amino-N-((1S,2S)-2-((4'-(((2-hydroxyethyl)amino)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 174	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(morpholinomethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 175	2-amino-N-((1S,2S)-2-((4'-((3,3-difluoropiperidin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

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Example 176	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperidin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 177	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(piperazin-1-ylmethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 178	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-phenylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 179	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-(pyrrolidin-1-yl)piperidin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 180	2-amino-N-((1S,2S)-2-((4'-((4-hydroxypiperidin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 181	2-amino-N-((1S,2S)-2-((4'-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 182	2-amino-N-((1S,2S)-2-((4'-((4-(2-hydroxy-2-methylpropyl)piperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 183	2-amino-N-((1S,2S)-2-((4'-((4-ethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

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Example 184	2-amino-N-((1S,2S)-2-((4'-((4-cyclopropylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 185	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((R)-3-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 186	2-amino-N-((1S,2S)-2-((4'-((R)-3,4-dimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 187	2-amino-N-((1S,2S)-2-((4'-((R)-2,4-dimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 188	2-amino-N-((1S,2S)-2-((4'-((3-ethyl-4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 189	2-amino-N-((1S,2S)-2-((4'-((cis-3,5-dimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 190	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((cis-3,4,5-trimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 191	2-amino-N-((1S,2S)-2-((4'-((trans-2,5-dimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

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Example 192	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((2R,5S)-2,4,5-trimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 193	2-amino-N-((1S,2S)-2-((4'-((3-(dimethylamino)pyrrolidin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 194	3-amino-6-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)pyrazine-2-carboxamide
Example 195	2-amino-N-((1S,2S)-2-((3'-fluoro-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 196	2-amino-N-((1S,2S)-2-((3',5'-difluoro-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 197	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 198	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3'-methyl-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 199	2-amino-N-((1S,2S)-2-((3'-hydroxy-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

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Example 200	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-3'-nitro-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 201	2-amino-N-((1S,2S)-2-((3'-methoxy-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 202	2-amino-N-((1S,2S)-2-((2'-chloro-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 203	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(6-((4-methylpiperazin-1-yl)methyl)pyridin-3-yl)benzyl)oxy)cyclopentyl)nicotinamide
Example 204	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(5-((4-methylpiperazin-1-yl)methyl)pyridin-2-yl)benzyl)oxy)cyclopentyl)nicotinamide
Example 205	2-amino-N-((1S,2S)-2-((4'-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 206	2-amino-N-((1S,2S)-2-((2'-chloro-4'-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 207	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

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Example 208	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 209	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(1-((3S,5R)-3,4,5-trimethylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 210	2-amino-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 211	2-amino-N-((1S,2S)-2-((4'-(1-((3S,5R)-4-(2-hydroxyethyl)-3,5-dimethylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 212	2-amino-N-((1S,2S)-2-((3',5'-difluoro-4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 213	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((R)-1-(piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 214	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((R)-1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 215	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((S)-1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

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Example 216	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)cyclopropyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 217	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(2-(4-methylpiperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 218	2-amino-N-((1S,2S)-2-((4'-((R)-1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 219	2-amino-N-((1S,2S)-2-((4'-((S)-1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 220	2-amino-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)cyclopropyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 221	2-amino-N-((1S,2S)-2-((4'-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 222	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-((S)-1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 223	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-((R)-1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

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Example 224	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)cyclopropyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 225	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(2-(4-methylpiperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 226	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(S)-1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 227	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(R)-1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 228	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)cyclopropyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 229	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 230	6-amino-5'-fluoro-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 231	2-amino-5-chloro-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

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Example 232	2-amino-5-fluoro-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 233	2-amino-5-cyano-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 234	2-amino-6-chloro-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 235	2-amino-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 236	6-amino-5'-fluoro-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 237	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 238	6-amino-2'-fluoro-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 239	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(1-(4-methylpiperidin-4-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 240	2-amino-N-((1S,2S)-2-((4'-(1-(2-hydroxyethyl)piperidin-4-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

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Example 241	methyl 2-(4-((4'-(((1S,2S)-2-(2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamido)cyclopentyl)oxy)methyl)-[1,1'-biphenyl]-4-yl)methyl)piperidin-1-yl)acetate
Example 242	2-amino-N-((1S,2S)-2-((4'-((1-(2-amino-2-oxoethyl)piperidin-4-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 243	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(3-(4-methylpiperazin-1-yl)propyl)benzyl)oxy)cyclopentyl)nicotinamide
Example 244	2-amino-N-((1S,2S)-2-((4-(3-(dimethylamino)propyl)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 245	2-amino-N-((1S,2S)-2-((4'-(2-(dimethylamino)ethoxy)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 246	2-amino-N-((1S,2S)-2-((4'-(3-(dimethylamino)propoxy)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 247	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((1-methylpiperidin-4-yl)oxy)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 248	2-amino-N-((1S,2S)-2-((4-(3-(dimethylamino)prop-1-yn-1-yl)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

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Example 249	2-amino-N-((1S,2S)-2-((4-(4-hydroxybut-1-yn-1-yl)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 250	2-amino-N-((1S,2S)-2-((4-(5-hydroxypent-1-yn-1-yl)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 251	2-amino-N-((1S,2S)-2-((4-(6-hydroxyhex-1-yn-1-yl)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 252	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(4-methylpiperazin-1-yl)but-1-yn-1-yl)benzyl)oxy)cyclopentyl)nicotinamide
Example 253	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-((4-(4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide
Example 254	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 255	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 256	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(1-(1-ethylpiperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 257	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(1-(1-isopropylpiperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 258	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(1-(1-(pyrrolidin-3-yl)methyl)piperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide

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Example 259	2-amino-N-((1R,2R)-2-(benzyloxy)cyclopentyl)-5-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 260	2-amino-N-((1S,2S)-2-((3,4-dichlorobenzyl)oxy)cyclopentyl)-5-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 261	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(3-(hydroxymethyl)-1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 262	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(3-((2-hydroxyethyl)amino)methyl)-1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 263	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(3-((3-hydroxypiperidin-1-yl)methyl)-1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 264	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(4-cyanophenyl)nicotinamide
Example 265	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(3-cyanophenyl)nicotinamide
Example 266	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(4-(cyanomethyl)phenyl)nicotinamide
Example 267	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(4-phenoxyphenyl)nicotinamide
Example 268	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(3-((1-methylpiperidin-4-yl)carbamoyl)phenyl)nicotinamide
Example 269	6-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-6'-(hydroxymethyl)-[3,3'-bipyridine]-5-carboxamide

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Example 270	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-((4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide
Example 271	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(3-(4-methylpiperazine-1-carbonyl)phenyl)nicotinamide
Example 272	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(3-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)nicotinamide
Example 273	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(3-((4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide
Example 274	2-amino-5-(3-fluoro-4-((4-methylpiperazin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)nicotinamide
Example 275	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-((4-(pyrrolidin-1-yl)piperidin-1-yl)methyl)phenyl)nicotinamide
Example 276	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(4-methylpiperazine-1-carbonyl)phenyl)nicotinamide
Example 277	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)nicotinamide
Example 278	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(2-((1-methylpiperidin-4-yl)amino)-2-oxoethyl)phenyl)nicotinamide
Example 279	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(2-(4-methylpiperazin-1-yl)acetyl)phenyl)nicotinamide
Example 280	2-amino-5-(3-fluoro-4-((4-(pyrrolidin-1-yl)piperidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)nicotinamide

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Example 281	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(4-methylpiperazin-1-yl)piperidine-1-carbonyl)phenyl)nicotinamide
Example 282	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(piperazin-1-ylmethyl)phenyl)nicotinamide
Example 283	2-amino-N-((1S,2S)-2-((4-methylbenzyl)oxy)cyclopentyl)-5-(4-(4-methylpiperazine-1-carbonyl)phenyl)nicotinamide
Example 284	2-amino-N-((1S,2S)-2-((4-methylbenzyl)oxy)cyclopentyl)-5-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)nicotinamide
Example 285	2-amino-5-(1,5-dimethyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 286	2-amino-5-(1,3-dimethyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 287	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(2-(2-hydroxypropan-2-yl)-4-methylthiazol-5-yl)nicotinamide
Example 288	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(2-(3-hydroxytetrahydrofuran-3-yl)-4-methylthiazol-5-yl)nicotinamide
Example 289	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide
Example 290	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(2-(4-methylpiperazin-1-yl)-2-oxoethyl)phenyl)nicotinamide
Example 291	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(morpholinomethyl)phenyl)nicotinamide
Example 292	2-amino-5-(4-((dimethylamino)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

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Example 293	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)phenyl)nicotinamide
Example 294	6-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-2'-methoxy-[3,3'-bipyridine]-5-carboxamide
Example 295	2-amino-5-(4-(dimethylamino)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 296	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-hydroxyphenyl)nicotinamide
Example 297	2-amino-5-(3-aminophenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 298	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(methylsulfonamido)phenyl)nicotinamide
Example 299	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(hydroxymethyl)phenyl)nicotinamide
Example 300	2-amino-5-(3-(aminomethyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 301	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(3-hydroxypropyl)phenyl)nicotinamide
Example 302	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(((1R,4S)-4-hydroxycyclohexyl)amino)methyl)phenyl)nicotinamide
Example 303	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(((1-methylpiperidin-4-yl)amino)methyl)phenyl)nicotinamide
Example 304	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(((S)-piperidin-3-yl)amino)methyl)phenyl)nicotinamide

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Example 305	3-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)-5-hydroxybenzoic acid
Example 306	4-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)-2-methylbenzoic acid
Example 307	2-amino-5-(4-aminophenyl)-N-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 308	3-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)benzoic acid
Example 309	3-amino-5-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)benzoic acid
Example 310	2-amino-N-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(2-methyl-5-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)nicotinamide
Example 311	2-amino-N-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-methyl-4-(4-methylpiperazine-1-carbonyl)phenyl)nicotinamide
Example 312	2-amino-5-(3-amino-5-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)-N-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 313	2-amino-N-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(hydroxymethyl)phenyl)nicotinamide

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Example 314	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-formylphenyl)nicotinamide
Example 315	4-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)benzoic acid
Example 316	3-(4-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)phenyl)propanoic acid
Example 317	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(2-hydroxyphenyl)nicotinamide
Example 318	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((1-methylpiperidin-4-yl)carbamoyl)phenyl)nicotinamide
Example 319	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(dimethylcarbamoyl)phenyl)nicotinamide
Example 320	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(((1-methylpiperidin-4-yl)amino)methyl)phenyl)nicotinamide
Example 321	6-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-6'-(hydroxymethyl)-[3,3'-bipyridine]-5-carboxamide
Example 322	2-amino-4-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)benzoic acid
Example 323	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(hydroxymethyl)-3-methoxyphenyl)nicotinamide

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Example 324	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-fluoro-4-(hydroxymethyl)phenyl)nicotinamide
Example 325	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-fluoro-4-((4-(pyrrolidin-1-yl)piperidin-1-yl)methyl)phenyl)nicotinamide
Example 326	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(1-hydroxyethyl)phenyl)nicotinamide
Example 327	2-amino-5-(4-((3-(dimethylamino)pyrrolidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 328	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((4-hydroxypiperidin-1-yl)methyl)phenyl)nicotinamide
Example 329	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(((1-methylpiperidin-4-yl)methyl)amino)methyl)phenyl)nicotinamide
Example 330	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-methyl-4-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)nicotinamide
Example 331	2-amino-5-(3-amino-4-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 332	2-amino-5-(3-amino-4-((4-(pyrrolidin-1-yl)piperidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

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Example 333	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(hydroxymethyl)-3-methylphenyl)nicotinamide
Example 334	2-amino-5-(3-chlorophenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 335	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(m-tolyl)nicotinamide
Example 336	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3,5-dimethylphenyl)nicotinamide
Example 337	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((3-morpholinopyrrolidin-1-yl)methyl)phenyl)nicotinamide
Example 338	2-amino-5-(4-((4-aminopiperidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 339	2-amino-5-(4-((3-aminopiperidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 340	2-amino-5-(4-((3-aminopyrrolidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 341	2-amino-5-(4-((3-aminopyrrolidin-1-yl)methyl)-3-fluorophenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 342	2-amino-5-(4-((3-aminopyrrolidin-1-yl)methyl)-3-fluorophenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 343	2-amino-5-(3-((3-(dimethylamino)pyrrolidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

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Example 344	2-amino-5-(3-((3-(dimethylamino)pyrrolidin-1-yl)methyl)-4-methoxyphenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 345	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((3-hydroxyazetidin-1-yl)methyl)phenyl)nicotinamide
Example 346	2-amino-5-(4-((R)-3-(dimethylamino)pyrrolidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 347	2-amino-5-(4-((S)-3-(dimethylamino)pyrrolidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 348	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(((R)-3-hydroxypyrrolidin-1-yl)methyl)phenyl)nicotinamide
Example 349	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(((S)-3-hydroxypyrrolidin-1-yl)methyl)phenyl)nicotinamide
Example 350	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((3-hydroxypiperidin-1-yl)methyl)phenyl)nicotinamide
Example 351	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-hydroxyphenyl)nicotinamide
Example 352	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-hydroxy-3-methoxyphenyl)nicotinamide
Example 353	2-amino-5-(3,4-dimethoxyphenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

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Example 354	amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(pyrrolidin-1-yl)phenyl)nicotinamide
Example 355	2-amino-5-(5-amino-1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 356	2-amino-N-((1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentyl)-5-(4-(hydroxymethyl)phenyl)nicotinamide
Example 357	2-amino-5-(4-((3-(dimethylamino)pyrrolidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentyl)nicotinamide
Example 358	2-amino-N-((1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentyl)-5-(4-((3-hydroxypyrrolidin-1-yl)methyl)phenyl)nicotinamide
Example 359	2-amino-N-((1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentyl)-5-(4-(2-(piperazin-1-yl)propan-2-yl)phenyl)nicotinamide
Example 360	2-amino-N-((1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentyl)-5-(4-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)phenyl)nicotinamide
Example 361	3-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-6-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)pyrazine-2-carboxamide
Example 362	(S)-3-amino-6-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)-N-(1,2,3,4-tetrahydronaphthalen-1-yl)pyrazine-2-carboxamide
Example 363	2-amino-5-(4-fluorophenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 364	2-amino-5-(3,4-difluorophenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

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Example 365	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-(trifluoromethyl)phenyl)nicotinamide
Example 366	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 367	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-(4-methylpiperazin-1-yl)phenyl)nicotinamide
Example 368	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-((4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide
Example 369	2-amino-5-(4-(hydroxymethyl)phenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 370	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(m-tolyl)nicotinamide
Example 371	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-phenylnicotinamide
Example 372	2-amino-5-(4-hydroxyphenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 373	2-amino-5-(4-chloro-3-fluorophenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

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Example 374	2-amino-5-methyl-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 375	6-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 376	2-amino-5-(4-methoxyphenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 377	6-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,4'-bipyridine]-5-carboxamide
Example 378	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-((4-methylpiperidin-1-yl)methyl)phenyl)nicotinamide
Example 379	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-(morpholinomethyl)phenyl)nicotinamide
Example 380	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-(tetrahydro-2H-pyran-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 381	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-morpholinophenyl)nicotinamide

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Example 382	2-amino-5-(cyclohex-1-en-1-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 383	2-amino-5-(3,4-dimethoxyphenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 384	6-amino-2',6'-difluoro-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,4'-bipyridine]-5-carboxamide
Example 385	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-methylthiophen-3-yl)nicotinamide
Example 386	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 387	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-(1,1,2,2-tetrafluoroethyl)-1H-pyrazol-4-yl)nicotinamide
Example 388	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 389	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-(hydroxymethyl)phenyl)nicotinamide
Example 390	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-((4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide

[123]

Example 391	2-amino-5-(4-carbamoylphenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide
Example 392	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(m-tolyl)nicotinamide
Example 393	4-(6-amino-5-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)carbamoyl)pyridin-3-yl)benzoic acid
Example 394	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-phenylnicotinamide
Example 395	6-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-[3,4'-bipyridine]-5-carboxamide
Example 396	6-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-[3,3'-bipyridine]-5-carboxamide
Example 397	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-vinylnicotinamide
Example 398	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-fluorophenyl)nicotinamide
Example 399	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-formylphenyl)nicotinamide
Example 400	2-amino-5-(4-cyanophenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide
Example 401	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-(methylsulfonamido)phenyl)nicotinamide
Example 402	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-phenoxyphenyl)nicotinamide

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Example 403	5-([1,1'-biphenyl]-4-yl)-2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide
Example 404	2-amino-5-(4-(benzyloxy)phenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide
Example 405	2-amino-5-(4-(dimethylamino)phenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide
Example 406	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(quinolin-3-yl)nicotinamide
Example 407	2-amino-5-(benzofuran-2-yl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide
Example 408	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(naphthalen-1-yl)nicotinamide
Example 409	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-(trifluoromethyl)phenyl)nicotinamide
Example 410	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(2,4,5-trifluorophenyl)nicotinamide
Example 411	2-amino-5-(4-(cyanomethyl)phenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide
Example 412	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 413	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 414	2-amino-N-((3S,4S)-4-(benzyloxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

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Example 415	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-4-((4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide
Example 416	2-amino-N-((3S,4S)-4-((3-ethylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 417	2-amino-N-((3S,4S)-4-((3-ethyl-4-fluorobenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 418	2-amino-N-((3S,4S)-4-((4-chloro-3-ethylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 419	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-((1-methylpiperidin-4-yl)carbamoyl)phenyl)nicotinamide
Example 420	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-((4-methylcyclohexyl)carbamoyl)phenyl)nicotinamide
Example 421	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-(4-methylpiperidine-1-carbonyl)phenyl)nicotinamide
Example 422	2-amino-5-(4-(dimethylcarbamoyl)phenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide
Example 423	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-((4-methylpiperidin-1-yl)methyl)phenyl)nicotinamide
Example 424	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-(morpholinomethyl)phenyl)nicotinamide
Example 425	2-amino-5-(4-((3,3-difluoropiperidin-1-yl)methyl)phenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide

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Example 426	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)-1-methylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 427	2-amino-N-((3S,4S)-1-benzyl-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 428	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)-1-(3-phenylpropyl)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 429	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)-1-phenethylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 430	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)-1-isobutylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 431	2-amino-N-((3S,4S)-1-butyl-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 432	2-amino-N-((3S,4S)-1-ethyl-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 433	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)-1-methylpyrrolidin-3-yl)-5-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 434	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-4-((4'-(4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)nicotinamide

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Example 435	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-1-methyl-4-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)nicotinamide
Example 436	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-4-((4'-((4-methylpiperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)nicotinamid
Example 437	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-1-methyl-4-((4'-((4-methylpiperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)nicotinamide
Example 438	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-4-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)nicotinamide
Example 439	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-1-methyl-4-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)nicotinamide
Example 440	2-amino-N-((3S,4S)-4-((4'-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 441	2-amino-N-((3S,4S)-4-((4'-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)-1-methylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 442	2-amino-N-((3S,4S)-4-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

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Example 443	2-amino-N-((3S,4S)-4-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)-1-methylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 444	2-amino-N-((3S,4S)-4-((4'-(4-(2-hydroxyethyl)piperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 445	2-amino-N-((3S,4S)-4-((4'-(4-(2-hydroxyethyl)piperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)-1-methylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 446	2-amino-N-((3S,4S)-4-((4'-(4-(2-hydroxyethyl)piperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 447	2-amino-N-((3S,4S)-4-((4'-(4-(2-hydroxyethyl)piperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)-1-methylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 448	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4R)-4-((4'-(4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)nicotinamide
Example 449	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4R)-4-((4'-(4-methylpiperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)nicotinamide

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Example 450	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4R)-4-((4'-(2-(4-methylpiperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)nicotinamide
Example 451	2-amino-N-((3S,4R)-4-((4'-(4-(2-hydroxyethyl)piperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 452	2-amino-N-((3S,4R)-4-((4'-(4-(2-hydroxyethyl)piperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 453	2-amino-N-((3S,4R)-4-((4'-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 454	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-(trans-4-((4'-(4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)nicotinamide
Example 455	2-amino-N-(trans-4-((4'-(4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)nicotinamide
Example 456	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-6-((4-(4-methylpiperazin-1-yl)methyl)phenyl)amino)nicotinamide
Example 457	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-6-(phenylamino)nicotinamide
Example 458	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-6-((4-(4-methylpiperazin-1-yl)phenyl)amino)nicotinamide

[130] Pharmaceutical compositions comprising of novel Mer kinase inhibitors

[131] The present invention provides pharmaceutical compositions comprising the heterocyclic compounds, the stereoisomer thereof, the enantiomer thereof, or the pharmaceutically acceptable salt thereof together with pharmaceutically acceptable carriers.

[132] The carriers that are used in the present invention may be those that are conventionally used in the art, and examples thereof include, but are not limited to, sugar, starch, microcrystalline cellulose, lactose (lactose hydrate), glucose, di-mannitol, alginate, alkaline earth metal salts, clay, polyethylene glycol, anhydrous dibasic calcium phosphate, or mixtures thereof.

[133] Further, according to another embodiment of the present invention, the pharmaceutical compositions may contain additives such as binders, disintegrants, lubricants, pH-adjusting agents, antioxidants, and the like.

[134] Examples of the binders that may be used in the present invention include, but are

not limited to, starch, microcrystalline cellulose, highly dispersed silica, mannitol, di-mannitol, sucrose, lactose hydrate, polyethylene glycol, polyvinylpyrrolidone (povidone), polyvinylpyrrolidone copolymer (copovidone), hypromellose, hydroxypropyl cellulose, natural gum, synthetic gum, copovidone, gelatin, or mixtures thereof.

- [135] Examples of the disintegrants that may be used in the present invention include, but are not limited to, starches or modified starches such as sodium starch glyconate, maize starch, potato starch or pregelatinized starch; clays such as bentonite, montmorillonite, or veegum; celluloses such as microcrystalline cellulose, hydroxypropyl-cellulose or carboxymethylcellulose; alginates such as sodium alginate or alginic acid; crosslinked celluloses such as croscarmellose sodium; gums such as guar gum or xanthan gum; crosslinked polymers such as crosslinked polyvinylpyrrolidone (crospovidone); effervescent formulations such as sodium bicarbonate or citric acid; or mixtures thereof.
- [136] Examples of the lubricants that may be used in the present invention include, but are not limited to, talc, stearic acid, magnesium stearate, calcium stearate, sodium lauryl sulfate, hydrogenated vegetable oil, sodium benzoate, sodium stearyl fumarate, glyceryl behenate, glyceryl monooleate, glyceryl monostearate, glyceryl palmitostearate, colloidal silicon dioxide, or mixtures thereof.
- [137] Examples of the pH-adjusting agents that may be used in the present invention include, but are not limited to, acidifying agents such as acetic acid, adipic acid, ascorbic acid, sodium ascorbate, sodium etherate, malic acid, succinic acid, tartaric acid, fumaric acid or citric acid, and basifying agents such as precipitated calcium carbonate, ammonia water, meglumine, sodium carbonate, magnesium oxide, magnesium carbonate, sodium citrate, or tribasic calcium phosphate.
- [138] Examples of the antioxidants that may be used in the present invention include, but are not limited to, dibutyl hydroxytoluene, butylated hydroxyanisole, tocopherol acetate, tocopherol, propyl gallate, sodium hydrogen sulfite, sodium pyrosulfite, and the like.
- [139] The present invention provides the pharmaceutical compositions comprise, as active ingredients, the heterocyclic compounds, the stereoisomer thereof, the enantiomer thereof, or the pharmaceutically acceptable salt thereof and are used for prevention or treatment of a disease which is influenced by inhibition of Mer kinase.
- [140] The present invention provides the disease which is influenced by inhibition of Mer kinase is cancer or immune-related diseases.
- [141] The cancer is selected from the group consisting of: glioma, gliosarcoma, anaplastic astrocytoma, medulloblastoma, lung cancer, small cell lung carcinoma, cervical carcinoma, colon cancer, rectal cancer, chordoma, throat cancer, Kaposi's sarcoma,

lymphangiosarcoma, lymphangioendotheliosarcoma, colorectal cancer, endometrium cancer, ovarian cancer, breast cancer, pancreatic cancer, prostate cancer, renal cell carcinoma, hepatic carcinoma, bile duct carcinoma, choriocarcinoma, seminoma, testicular tumor, Wilms' tumor, Ewing's tumor, bladder carcinoma, angiosarcoma, endotheliosarcoma, adenocarcinoma, sweat gland carcinoma, sebaceous gland sarcoma, papillary sarcoma, papillary adenocarcinoma, cystadenocarcinoma, bronchogenic carcinoma, medullary carcinoma, mastocytoma, mesothelioma, synovium, melanoma, leiomyosarcoma, rhabdomyosarcoma, neuroblastoma, retinoblastoma, oligodendroglioma, acoustic neuroma, hemangioblastoma, meningioma, pinealoma, ependymoma, craniopharyngioma, epithelial carcinoma, embryonal carcinoma, squamous cell carcinoma, basal cell carcinoma, fibrosarcoma, myxoma, myxosarcoma, liposarcoma, chondrosarcoma, osteogenic sarcoma, leukemia and metastatic lesions secondary to these primary tumors.

- [142] The immune-related disease is selected from the group consisting of infection and sepsis.
- [143] The term "treatment" is used to refer to both prevention of diseases and treatment of pre-existing conditions.
- [144] The therapeutic amount varies according to the specific disease and can be determined by the person skilled in the art without undue effort.
- [145] In addition, the subject in the prevention or treatment method of the present invention includes mammals, particularly humans.
- [146] The dose varies depending on the specific compound used, the specific disease, the patient status, etc. A therapeutic dose is typically sufficient considerably to reduce the undesired cell population in the target tissue while the viability of the patient is maintained. The treatment is generally continued until a considerable reduction has occurred, for example an at least about 50% reduction in the cell burden, and may be continued until essentially no more undesired cells are detected in the body.
- [147] Method for prevention or treatment of immune-related diseases or cancer
- [148] The present invention provides a method of treating or preventing immune-related diseases or cancer, the method comprising administering to a mammals including humans in need thereof compositions comprising, as active ingredients, the heterocyclic compounds, isomers thereof or pharmaceutically acceptable salts thereof.
- [149] The composition that is used in the inventive method for preventing or treating immune-related diseases or cancer includes the pharmaceutical composition described in the specification
- [150] The present invention provides use of compositions comprising, as active ingredients, the heterocyclic compounds, the stereoisomer thereof, the enantiomer thereof, or the pharmaceutically acceptable salt thereof for preparation of medicaments

for preventing or treating cancer or immune-related diseases.

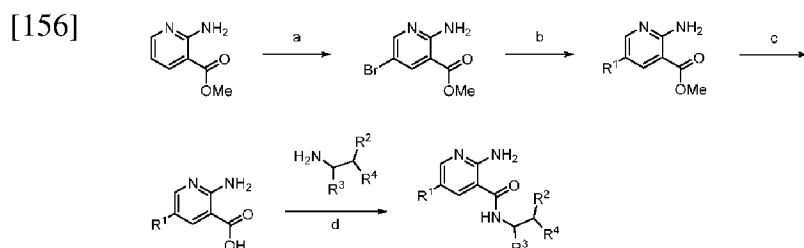
[151] Methods for preparing of novel Mer kinase inhibitors

[152] The compounds of this invention can be prepared in accordance with one or more of schemes discussed below.

[153] These methods can be used either directly or with obvious variations to trained chemists to prepare key intermediates and certain compounds of this invention.

[154] Suitable synthetic sequences are readily selected per specific structures of this invention, but within the art known to individuals practicing organic synthesis, such as methods summarized in available chemistry data bases, as in CAS Scifinder and Elsevier Reaxys. Based on these general methods, the enablement for making the compounds of this invention is straightforward and can be practiced within a common professional knowledge. Some general synthetic methods to prepare the compounds of this invention are illustrated below in Schemes 1-2 (non-limiting, for illustration only).

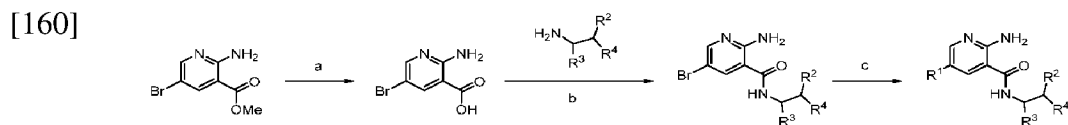
[155] One general approach to the compounds of this invention is illustrated in general Scheme 1.



[157] Scheme 1. General procedure A

[158] a) NBS, CH₃CN, H₂O; b) R¹-B(OH)₂ or its pinacol ester, Pd(PPh₃)₄, aq. K₃PO₄, Dioxane, heat; c) NaOH, MeOH, heat; d) HATU, TEA, DMF

[159] Another general approach to the compounds of this invention is illustrated in general Scheme 2.



[161] Scheme 2. General procedure B

[162] a) NaOH, MeOH, heat; b) HATU, TEA, DMF; c) R¹-B(OH)₂ or its pinacol ester, Pd(PPh₃)₄, aq. K₃PO₄, Dioxane, heat

Advantageous Effects of Invention

[163] Novel heterocyclic compounds according to the present invention, a stereoisomer thereof, an enantiomer thereof, or a pharmaceutically acceptable salt thereof exhibit the effect of effectively inhibiting Mer kinase.

[164] Novel heterocyclic compounds according to the present invention, a stereoisomer thereof, an enantiomer thereof, or a pharmaceutically acceptable salt can be used for

the prevention or treatment of cancer or immune-related disease.

Mode for the Invention

[165] Based on the studies conducted and the results obtained so far, it is believed that the following compounds (numbered 1 to 458), including isomers, mixtures of isomer as well as pharmaceutically acceptable salts and solvates thereof, are particularly interesting.

[166] **General Synthetic Methods**

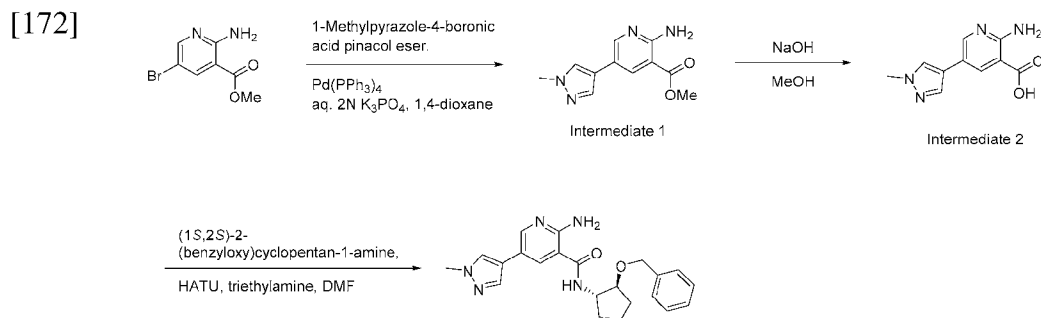
[167] **Examples**

[168] Embodiments of the present invention are described in the following examples, which are meant to illustrate and not limit the scope of this invention. Common abbreviations well known to those with ordinary skills in the synthetic art used throughout.

[169] All chemical reagents were commercially available. Flash column chromatography means silica gel chromatography unless specified otherwise, which was performed on Teledyne Combiflash-RF200 System. ¹H NMR spectra (δ, ppm) are recorded on 400 MHz or 600 MHz instrument. Mass spectroscopy data for a positive ionization method are provided. Preparative HPLC was performed on Agilent technologies G1361A.

[170] Example 1. 2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[171] Scheme for the preparation of the Compound of Example 1:



[173] **Intermediate 1.** To a mixture of methyl 2-amino-5-bromonicotinate (1.5 g, 6.5 mmol) and 1-Methylpyrazole-4-boronic acid pinacol ester (1.76 g, 8.5 mmol) in 24 ml of 1,4-dioxane was added 8 ml of aq. 2N K₃PO₄ followed by Pd(PPh₃)₄ (370 mg, 0.32 mmol). The reaction mixture was heated at 100 °C for 3 hrs, cooled to room temperature, and extracted with EtOAc, dried over anhydrous MgSO₄ and concentrated under vacuum. The crude product was purified by silicagel column chromatography to give 1.25 g of off-white solid.

[174] ¹H NMR (400 MHz, CD₃OD) δ 3.90(s, 3H), 3.91(s, 3H), 7.74(s, 1H), 7.91(s, 1H), 8.29(d, J = 2.4 Hz, 1H), 8.35(d, J = 2.4 Hz, 1H);

[175] MS (ESI, m/z): 233.1 [M+H]⁺

[176] **Intermediate 2.** To a suspension of intermediate 1 (1.2 g, 5.17 mmol) in 26 ml of MeOH was added 2N NaOH (4.3 ml, 8.63 mmol) and the mixture was heated at 65 °C

for 1 hr, cooled to room temperature, neutralized (4.3 ml of 2N HCl), and the resulting precipitate was filtered, washed with MeOH, and dried to give 0.97 g of off-white solid.

[177] ¹H NMR (600 MHz, DMSO-*d*₆) δ ppm 3.82(s, 3H), 5.73(s, 2H), 7.77(s, 1H), 8.05(s, 1H), 8.13(d, *J* = 2.4 Hz, 1H), 8.42(d, *J* = 2.4 Hz, 1H);

[178] MS (ESI, *m/z*): 219.1 [M+H]⁺

[179] Example 1. 2-amino-N-((1*S*,2*S*)-2-(benzyloxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[180] To a mixture of intermediate 2 (43 mg, 0.2 mmol) and triethylamine (24 mg, 0.24 mmol) in 2 ml of DMF was added HATU (91 mg, 0.24 mmol) followed by (1*S*,2*S*)-2-(benzyloxy)cyclopentan-1-amine(38 mg, 0.2 mmol). The mixture was stirred at room temperature for 1 hr and then saturated sodium bicarbonate solution was added. The mixture was extracted with EtOAc, washed with brine, dried over MgSO₄, and concentrated in vacuo. The crude residue was purified by preparative HPLC to afford 46 mg of the title compound.

[181] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.57 - 1.69 (m, 1 H) 1.72 - 1.86 (m, 3 H) 1.90 - 2.08 (m, 1 H) 2.11 - 2.21 (m, 1 H) 3.93 (s, 3 H) 3.96 (dt, *J*=6.75, 4.26 Hz, 1 H) 4.39 (td, *J*=7.34, 4.11 Hz, 1 H) 4.61 (s, 2 H) 7.13 - 7.24 (m, 1 H) 7.27 (t, *J*=7.46 Hz, 2 H) 7.32 (d, *J*=7.04 Hz, 2 H) 7.79 - 7.90 (m, 1 H) 8.00 (s, 1 H) 8.23 (d, *J*=1.76 Hz, 1 H) 8.46 (d, *J*=2.35 Hz, 1 H);

[182] MS (ESI, *m/z*): 392.2 [M+H]⁺

[183] Example 2. 2-amino-N-((1*R*,2*R*)-2-(benzyloxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[184] Using (1*R*,2*R*)-2-(benzyloxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[185] MS (ESI, *m/z*): 392.2 [M+H]⁺

[186] Example 3. 2-amino-N-(trans-2-(benzyloxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

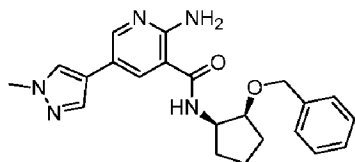
[187] Using trans-2-(benzyloxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[188] MS (ESI, *m/z*): 392.2 [M+H]⁺

[189] Example 4. 2-amino-N-((1*R*,2*S*)-2-(benzyloxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

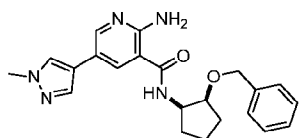
[190] Using (1*R*,2*S*)-2-(benzyloxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[191]

[192] MS (ESI, m/z): 392.2 [M+H]⁺[193] Example 5. 2-amino-N-(cis-2-(benzyloxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

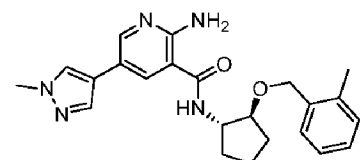
[194] Using cis-2-(benzyloxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[195]

[196] MS (ESI, m/z): 392.2 [M+H]⁺[197] Example 6. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((2-methylbenzyl)oxy)cyclopentyl)nicotinamide

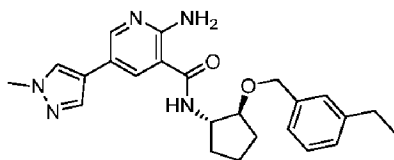
[198] Using (1S,2S)-2-((2-methylbenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[199]

[200] Example 7. 2-amino-N-((1S,2S)-2-((3-ethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

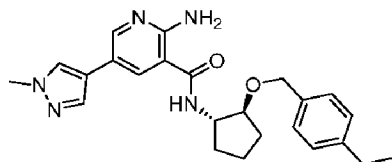
[201] Using (1S,2S)-2-((3-ethylbenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[202]

[203] MS (ESI, m/z): 420.2 [M+H]⁺[204] Example 8. 2-amino-N-((1S,2S)-2-((4-ethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

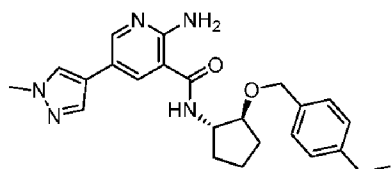
[205] Using (1S,2S)-2-((4-ethylbenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[206]

[207] MS (ESI, m/z): 420.2 [M+H]⁺[208] Example 9. 2-amino-N-((trans-2-((4-ethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

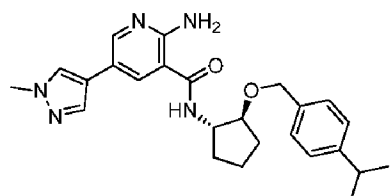
[209] Using trans-2-((4-ethylbenzyl)oxy)cyclopentylamine, the title compound was obtained as described for the example 1.

[210]

[211] MS (ESI, m/z): 420.2 [M+H]⁺[212] Example 10. 2-amino-N-((1S,2S)-2-((4-isopropylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

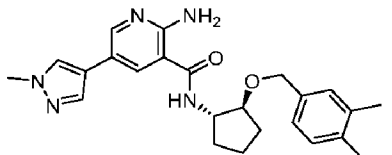
[213] Using (1S,2S)-2-((4-isopropylbenzyl)oxy)cyclopentylamine, the title compound was obtained as described for the example 1.

[214]

[215] MS (ESI, m/z): 434.3 [M+H]⁺[216] Example 11. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

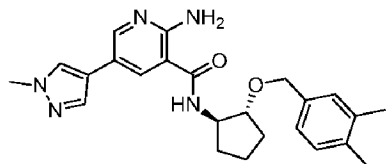
[217] Using (1S,2S)-2-((2,3-dimethylbenzyl)oxy)cyclopentylamine, the title compound was obtained as described for the example 1.

[218]

[219] MS (ESI, m/z): 420.2 [M+H]⁺[220] Example 12. 2-amino-N-((1R,2R)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

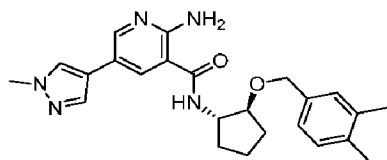
[221] Using (1R,2R)-2-((3,4-dimethylbenzyl)oxy)cyclopentylamine, the title compound was obtained as described for the example 1.

[222]

[223] MS (ESI, m/z): 420.2 [M+H]⁺[224] Example 13. 2-amino-N-((trans-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

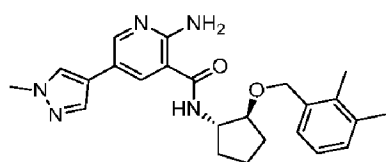
[225] Using trans-2-((3,4-dimethylbenzyl)oxy)cyclopentylamine, the title compound was obtained as described for the example 1.

[226]

[227] MS (ESI, m/z): 420.2 [M+H]⁺[228] Example 14. 2-amino-N-((1S,2S)-2-((2,3-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

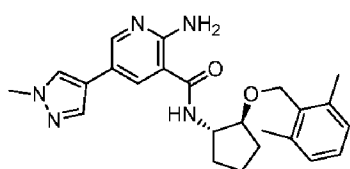
[229] Using (1S,2S)-2-((2,3-dimethylbenzyl)oxy)cyclopentylamine, the title compound was obtained as described for the example 1.

[230]

[231] MS (ESI, m/z): 420.2 [M+H]⁺[232] Example 15. 2-amino-N-((1S,2S)-2-((2,6-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

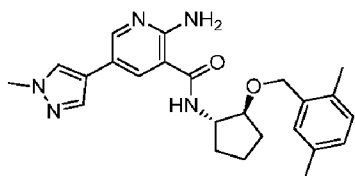
[233] Using (1S,2S)-2-((2,6-dimethylbenzyl)oxy)cyclopentylamine, the title compound was obtained as described for the example 1.

[234]

[235] MS (ESI, m/z): 420.2 [M+H]⁺[236] Example 16. 2-amino-N-((1S,2S)-2-((2,5-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

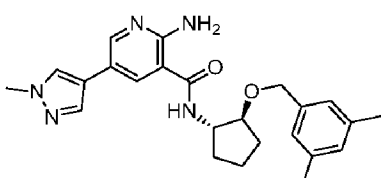
[237] Using (1S,2S)-2-((2,5-dimethylbenzyl)oxy)cyclopentylamine, the title compound was obtained as described for the example 1.

[238]

[239] MS (ESI, m/z): 420.2 [M+H]⁺[240] Example 17. 2-amino-N-((1S,2S)-2-((3,5-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

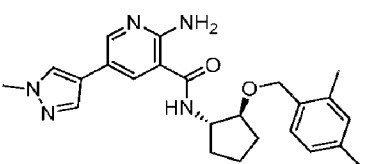
[241] Using (1S,2S)-2-((3,5-dimethylbenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[242]

[243] MS (ESI, m/z): 420.2 [M+H]⁺[244] Example 18. 2-amino-N-((1S,2S)-2-((2,4-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

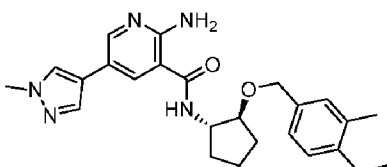
[245] Using (1S,2S)-2-((2,4-dimethylbenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[246]

[247] MS (ESI, m/z): 420.2 [M+H]⁺[248] Example 19. 2-amino-N-((1S,2S)-2-((4-ethyl-3-methylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

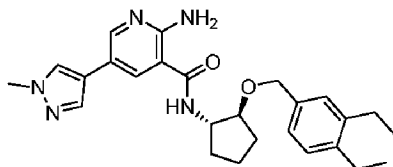
[249] Using (1S,2S)-2-((4-ethyl-3-methylbenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[250]

[251] MS (ESI, m/z): 434.3 [M+H]⁺[252] Example 20. 2-amino-N-((1S,2S)-2-((3,4-diethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[253] Using (1S,2S)-2-((3,4-diethylbenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

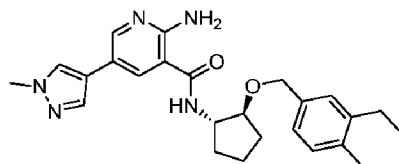
[254]

[255] MS (ESI, m/z): 448.3 [M+H]⁺

[256] Example 21. 2-amino-N-((1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[257] Using (1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

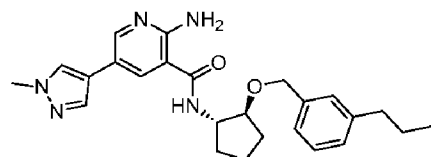
[258]

[259] MS (ESI, m/z): 434.3 [M+H]⁺

[260] Example 22. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3-propylbenzyl)oxy)cyclopentyl)nicotinamide

[261] Using (1S,2S)-2-((3-propylbenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[262]

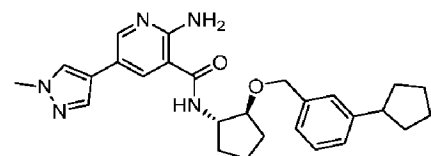
[263] MS (ESI, m/z): 434.3 [M+H]⁺

[264]

[265] Example 23. 2-amino-N-((1S,2S)-2-((3-cyclopentylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[266] Using (1S,2S)-2-((3-cyclopentylbenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

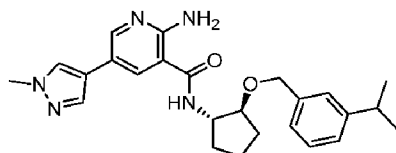
[267]

[268] MS (ESI, m/z): 460.3 [M+H]⁺

[269] Example 24. 2-amino-N-((1S,2S)-2-((3-isopropylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

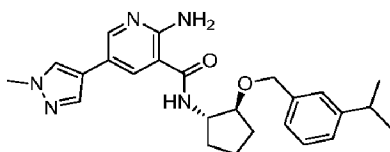
[270] Using (1S,2S)-2-((3-isopropylbenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[271]

[272] MS (ESI, m/z): 434.3 [M+H]⁺[273] Example 25. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3-(prop-1-en-2-yl)benzyl)oxy)cyclopentyl)nicotinamide

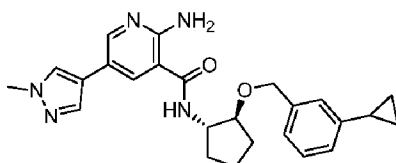
[274] Using (1S,2S)-2-((3-(prop-1-en-2-yl)benzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[275]

[276] MS (ESI, m/z): 432.2 [M+H]⁺[277] Example 26. 2-amino-N-((1S,2S)-2-((3-cyclopropylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

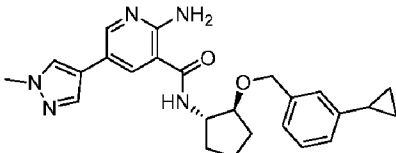
[278] Using (1S,2S)-2-((3-cyclopropylbenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[279]

[280] MS (ESI, m/z): 432.2 [M+H]⁺[281] Example 27. 2-amino-N-((1S,2S)-2-((3-cyclobutylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

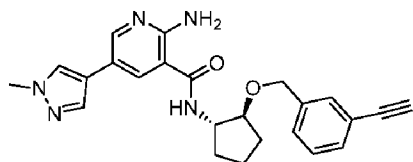
[282] Using (1S,2S)-2-((3-cyclobutylbenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[283]

[284] MS (ESI, m/z): 446.3 [M+H]⁺[285] Example 28. 2-amino-N-((1S,2S)-2-((3-ethynylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

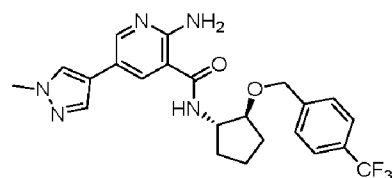
[286] Using (1S,2S)-2-((3-ethynylbenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[287]

[288] MS (ESI, m/z): 416.2 [M+H]⁺[289] Example 29. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(trifluoromethyl)benzyl)oxy)cyclopentyl)nicotinamide

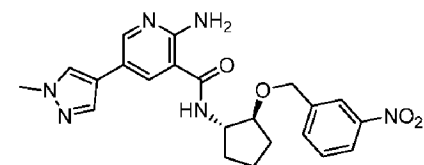
[290] Using (1S,2S)-2-((4-(trifluoromethyl)benzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[291]

[292] MS (ESI, m/z): 460.2 [M+H]⁺[293] Example 30. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3-nitrobenzyl)oxy)cyclopentyl)nicotinamide

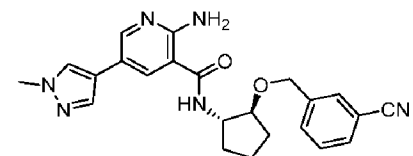
[294] Using (1S,2S)-2-((3-nitrobenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[295]

[296] MS (ESI, m/z): 437.2 [M+H]⁺[297] Example 31. 2-amino-N-((1S,2S)-2-((3-cyanobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[298] Using 3-(((1S,2S)-2-aminocyclopentyl)oxy)methyl)benzonitrile, the title compound was obtained as described for the example 1.

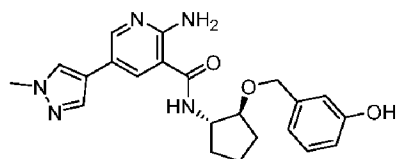
[299]

[300] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.58 - 1.70 (m, 1 H) 1.73 - 1.90 (m, 3 H) 1.95 - 2.07 (m, 1 H) 2.11 - 2.22 (m, 1 H) 3.88 - 3.98 (m, 4 H) 4.36 - 4.44 (m, 1 H) 4.61 - 4.72 (m, 2 H) 7.43 - 7.51 (m, 1 H) 7.57 (br d, J=7.43 Hz, 1 H) 7.63 (br d, J=7.43 Hz, 1 H) 7.70 (s, 1 H) 7.85 (s, 1 H) 7.99 (s, 1 H) 8.23 (d, J=1.96 Hz, 1 H) 8.45 (d, J=1.96 Hz, 1 H);[301] MS (ESI, m/z): 417.2 [M+H]⁺[302] Example 32. 2-amino-N-((1S,2S)-2-((3-hydroxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[303] Using (1S,2S)-2-((3-hydroxybenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[304]

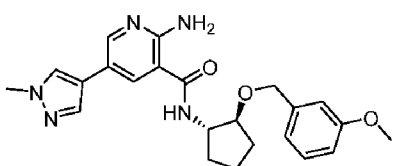


[305] MS (ESI, m/z): 408.2 [M+H]⁺

[306] Example 33. 2-amino-N-((1S,2S)-2-((3-methoxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[307] Using (1S,2S)-2-((3-methoxybenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[308]



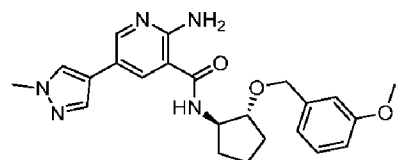
[309] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.54 - 1.65 (m, 1 H) 1.68 - 1.88 (m, 3 H) 1.95 - 2.07 (m, 1 H) 2.09 - 2.22 (m, 1 H) 3.65 - 3.74 (m, 3 H) 3.88 - 3.98 (m, 4 H) 4.33 - 4.43 (m, 1 H) 4.51 - 4.66 (m, 2 H) 6.74 (dd, J=8.41, 1.76 Hz, 1 H) 6.83 - 6.93 (m, 2 H) 7.12 - 7.22 (m, 1 H) 7.85 (s, 1 H) 7.99 (s, 1 H) 8.22 (d, J=1.96 Hz, 1 H) 8.45 (d, J=1.96 Hz, 1 H);

[310] MS (ESI, m/z): 422.2 [M+H]⁺

[311] Example 34. 2-amino-N-((1R,2R)-2-((3-methoxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[312] Using (1R,2R)-2-((3-methoxybenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[313]

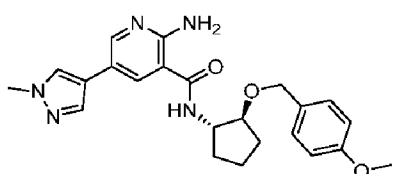


[314] MS (ESI, m/z): 422.2 [M+H]⁺

[315] Example 35. 2-amino-N-((1S,2S)-2-((4-methoxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[316] Using (1S,2S)-2-((4-methoxybenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

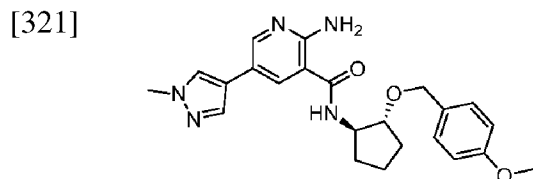
[317]



[318] MS (ESI, m/z): 422.2 [M+H]⁺

[319] Example 36. 2-amino-N-((1R,2R)-2-((4-methoxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

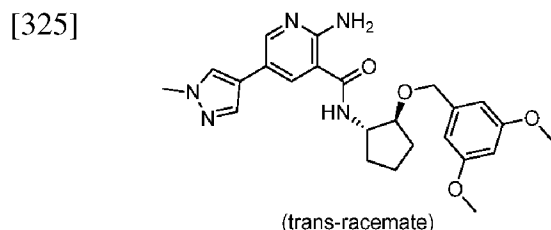
[320] Using (1R,2R)-2-((4-methoxybenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.



[322] MS (ESI, m/z): 422.2 [M+H]⁺

[323] Example 37. 2-amino-N-(trans-2-((3,5-dimethoxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

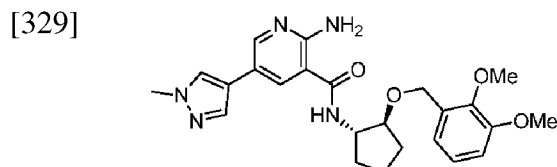
[324] Using trans-2-((3,5-dimethoxybenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.



[326] MS (ESI, m/z): 452.2 [M+H]⁺

[327] Example 38. 2-amino-N-((1S,2S)-2-((2,3-dimethoxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

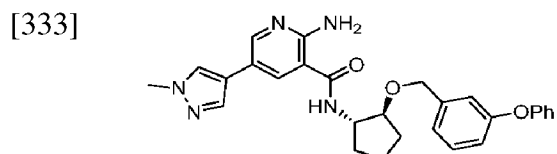
[328] Using (1S,2S)-2-((2,3-dimethoxybenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.



[330] MS (ESI, m/z): 452.2 [M+H]⁺

[331] Example 39. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3-phenoxybenzyl)oxy)cyclopentyl)nicotinamide

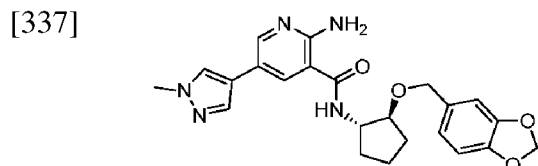
[332] Using (1S,2S)-2-((3-phenoxybenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.



[334] MS (ESI, m/z): 484.2 [M+H]⁺

[335] Example 40. 2-amino-N-((1S,2S)-2-(benzo[d][1,3]dioxol-5-ylmethoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

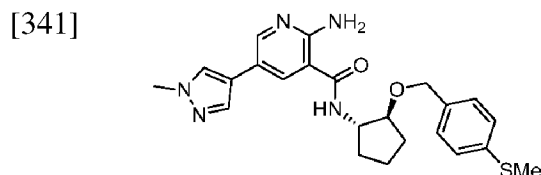
[336] Using (1S,2S)-2-(benzo[d][1,3]dioxol-5-ylmethoxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.



[338] MS (ESI, m/z): 436.2 [M+H]⁺

[339] Example 41. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(methylthio)benzyl)oxy)cyclopentyl)nicotinamide

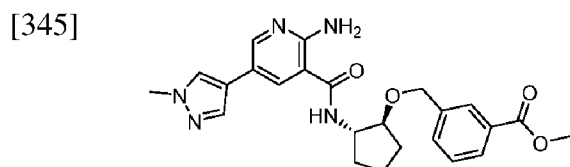
[340] Using (1S,2S)-2-((4-(methylthio)benzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.



[342] MS (ESI, m/z): 438.2 [M+H]⁺

[343] Example 42. methyl 3-((((1S,2S)-2-(2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamido)cyclopentyl)oxy)methyl)benzoate

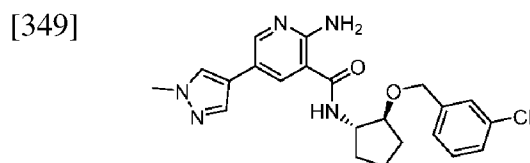
[344] Using methyl 3-((((1S,2S)-2-aminocyclopentyl)oxy)methyl)benzoate, the title compound was obtained as described for the example 1.



[346] MS (ESI, m/z): 450.2 [M+H]⁺

[347] Example 43. 2-amino-N-((1S,2S)-2-((3-chlorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[348] Using (1S,2S)-2-((3-chlorobenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.



[350] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.62 (br dd, J=13.50, 6.46 Hz, 1 H) 1.72 - 1.87 (m, 3 H) 1.94 - 2.05 (m, 1 H) 2.16 (br d, J=6.65 Hz, 1 H) 3.89 - 3.97 (m, 4 H) 4.38 (br

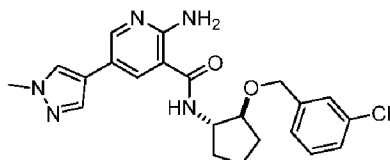
d, $J=4.70$ Hz, 1 H) 4.55 - 4.66 (m, 2 H) 7.20 (br s, 1 H) 7.22 - 7.28 (m, 2 H) 7.34 (s, 1 H) 7.85 (s, 1 H) 7.99 (s, 1 H) 8.22 (d, $J=2.35$ Hz, 1 H) 8.44 (br d, $J=2.35$ Hz, 1 H);

[351] MS (ESI, m/z): 426.2 $[M+H]^+$

[352] Example 44. 2-amino-N-(trans-2-((3-chlorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[353] Using trans-2-((3-chlorobenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[354]



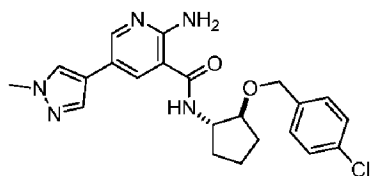
(trans-racemate)

[355] MS (ESI, m/z): 426.2 $[M+H]^+$

[356] Example 45. 2-amino-N-(trans-2-((4-chlorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[357] Using trans-2-((4-chlorobenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[358]

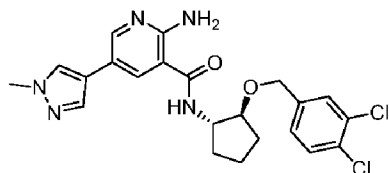


[359] MS (ESI, m/z): 426.2 $[M+H]^+$

[360] Example 46. 2-amino-N-(trans-2-((3,4-dichlorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[361] Using trans-2-((3,4-dichlorobenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[362]



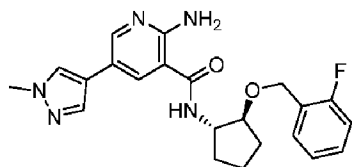
(trans-racemate)

[363] MS (ESI, m/z): 460.1 $[M+H]^+$

[364] Example 47. 2-amino-N-(trans-2-((2-fluorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[365] Using trans-2-((2-fluorobenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[366]

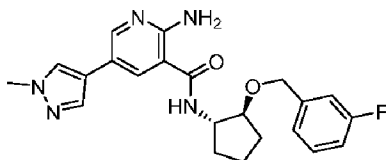


(trans-racemate)

[367] Example 48. 2-amino-N-((1S,2S)-2-((3-fluorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[368] Using (1S,2S)-2-((3-fluorobenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[369]

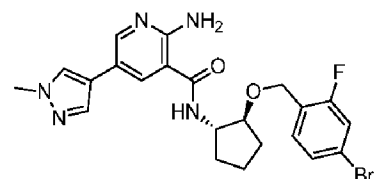


[370] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.63 (dq, $J=13.69$, 7.17 Hz, 1 H) 1.70 - 1.88 (m, 3 H) 1.93 - 2.06 (m, 1 H) 2.15 (dt, $J=13.69$, 6.85 Hz, 1 H) 3.87 - 4.00 (m, 4 H) 4.34 - 4.42 (m, 1 H) 4.62 (s, 2 H) 6.92 (td, $J=8.61$, 1.96 Hz, 1 H) 7.03 - 7.16 (m, 2 H) 7.27 (dd, $J=8.02$, 6.06 Hz, 1 H) 7.85 (s, 1 H) 8.00 (s, 1 H) 8.22 (d, $J=1.96$ Hz, 1 H) 8.49 (d, $J=1.96$ Hz, 1 H); MS (ESI, m/z): 410.2 $[\text{M}+\text{H}]^+$

[371] Example 49. 2-amino-N-(trans-2-((4-bromo-2-fluorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[372] Using trans-2-((4-bromo-2-fluorobenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[373]



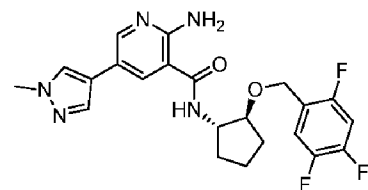
(trans-racemate)

[374] MS (ESI, m/z): 488.1/490.1 $[\text{M}+\text{H}]^+$

[375] Example 50. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-(trans-2-((2,4,5-trifluorobenzyl)oxy)cyclopentyl)nicotinamide

[376] Using trans-2-((2,4,5-trifluorobenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[377]



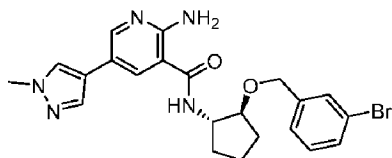
(trans-racemate)

[378] MS (ESI, m/z): 446.2 [M+H]⁺

[379] Example 51. 2-amino-N-((1S,2S)-2-((3-bromobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[380] Using (1S,2S)-2-((3-bromobenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[381]

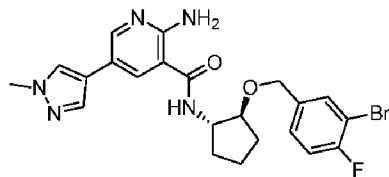


[382] MS (ESI, m/z): 470.1/472.1 [M+H]⁺

[383] Example 52. 2-amino-N-(trans-2-((3-bromo-4-fluorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[384] Using trans-2-((3-bromo-4-fluorobenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[385]



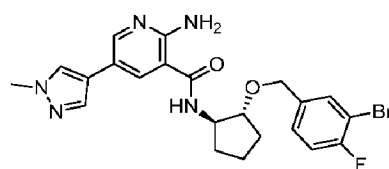
(trans-racemate)

[386] MS (ESI, m/z): 488.1/490.1 [M+H]⁺

[387] Example 53. 2-amino-N-((1R,2R)-2-((3-bromo-4-fluorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[388] Using (1R,2R)-2-((3-bromo-4-fluorobenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[389]

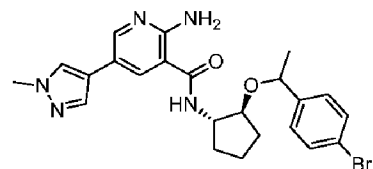


[390] MS (ESI, m/z): 488.1/490.1 [M+H]⁺

[391] Example 54. 2-amino-N-((1S,2S)-2-(1-(4-bromophenyl)ethoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[392] Using (1S,2S)-2-(1-(4-bromophenyl)ethoxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

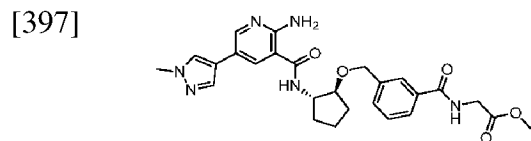
[393]



[394] MS (ESI, m/z): 484.1/486.1 [M+H]⁺

[395] Example 55. methyl (3-((((1S,2S)-2-(2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamido)cyclopentyl)oxy)methyl)benzoyl)glycinate

[396] Using methyl (3-((((1S,2S)-2-aminocyclopentyl)oxy)methyl)benzoyl)glycinate, the title compound was obtained as described for the example 1.

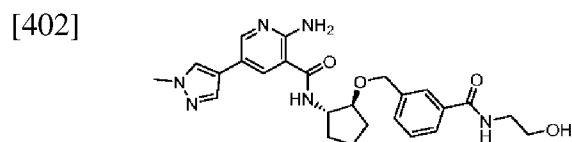


[398] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.58 - 1.70 (m, 1 H) 1.73 - 1.90 (m, 3 H) 1.95 - 2.07 (m, 1 H) 2.11 - 2.22 (m, 1 H) 3.88 - 3.98 (m, 4 H) 4.36 - 4.44 (m, 1 H) 4.61 - 4.72 (m, 2 H) 7.43 - 7.51 (m, 1 H) 7.57 (br d, *J*=7.43 Hz, 1 H) 7.63 (br d, *J*=7.43 Hz, 1 H) 7.70 (s, 1 H) 7.85 (s, 1 H) 7.99 (s, 1 H) 8.23 (d, *J*=1.96 Hz, 1 H) 8.45 (d, *J*=1.96 Hz, 1 H);

[399] MS (ESI, m/z): 507.2[M+H]⁺

[400] Example 56. 2-amino-N-((1S,2S)-2-((3-((2-hydroxyethyl)carbamoyl)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

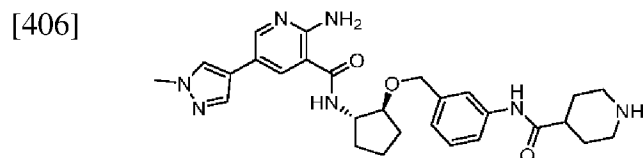
[401] Using methyl (3-((((1S,2S)-2-aminocyclopentyl)oxy)methyl)-N-(2-hydroxyethyl)benzamide, the title compound was obtained as described for the example 1.



[403] MS (ESI, m/z): 479.2[M+H]⁺

[404] Example 57. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3-(piperidine-4-carboxamido)benzyl)oxy)cyclopentyl)nicotinamide

[405] Using tert-butyl 4-((3-((((1S,2S)-2-aminocyclopentyl)oxy)methyl)phenyl)carbamoyl)piperidine-1-carboxylate, the title compound was obtained as described for the example 1 and following deprotection with TFA.



[407] MS (ESI, m/z): 518.3[M+H]⁺

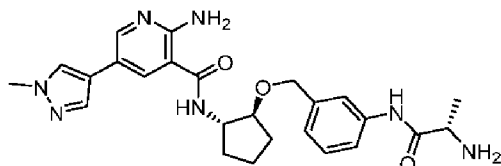
[408] Example 58. 2-amino-N-((1S,2S)-2-((3-((S)-2-aminopropanamido)benzyl)oxy)cyclopentyl)-5-(1-me

thyl-1H-pyrazol-4-yl)nicotinamide

[409] Using tert-butyl

((S)-1-((3-(((1S,2S)-2-aminocyclopentyl)oxy)methyl)phenyl)amino)-1-oxopropan-2-yl)carbamate, the title compound was obtained as described for the example 1 and following deprotection with TFA.

[410]



[411] MS (ESI, m/z): 478.3[M+H]⁺

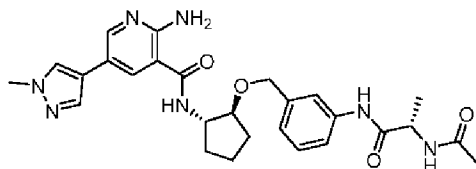
[412] Example 59. N-

((1S,2S)-2-((3-((S)-2-acetamidopropanamido)benzyl)oxy)cyclopentyl)-2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[413] Using

(S)-2-acetamido-N-(3-(((1S,2S)-2-aminocyclopentyl)oxy)methyl)phenyl)propanamide, the title compound was obtained as described for the example 1.

[414]



[415] MS (ESI, m/z): 520.3[M+H]⁺

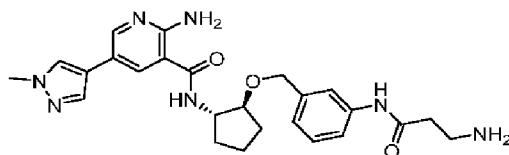
[416] Example 60.

2-amino-N-((1S,2S)-2-((3-(3-aminopropanamido)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[417] Using tert-butyl

(3-((3-(((1S,2S)-2-aminocyclopentyl)oxy)methyl)phenyl)amino)-3-oxopropyl)carbamate, the title compound was obtained as described for the example 1 and following deprotection with TFA.

[418]

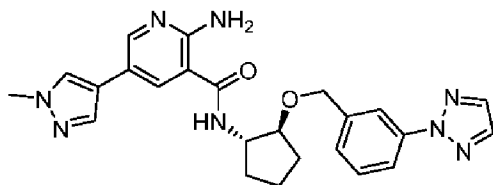


[419] MS (ESI, m/z): 478.3[M+H]⁺

[420] Example 61. N-((1S,2S)-2-((3-(2H-1,2,3-triazol-2-yl)benzyl)oxy)cyclopentyl)-2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

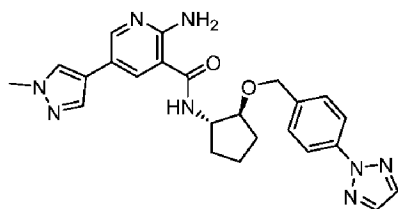
[421] Using (1S,2S)-2-((3-(2H-1,2,3-triazol-2-yl)benzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[422]

[423] MS (ESI, m/z): 459.2 [M+H]⁺[424] Example 62. N-((1S,2S)-2-((4-(2H-1,2,3-triazol-2-yl)benzyl)oxy)cyclopentyl)-2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

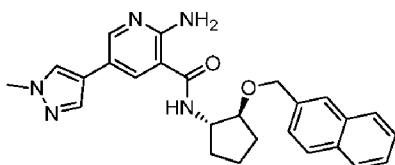
[425] Using (1S,2S)-2-((4-(2H-1,2,3-triazol-2-yl)benzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[426]

[427] MS (ESI, m/z): 459.2 [M+H]⁺[428] Example 63. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-(naphthalen-2-ylmethoxy)cyclopentyl)nicotinamide

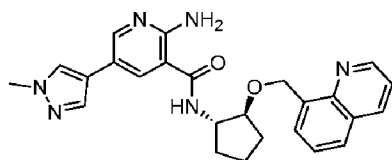
[429] Using (1S,2S)-2-(naphthalen-2-ylmethoxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[430]

[431] MS (ESI, m/z): 442.2 [M+H]⁺[432] Example 64. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-(quinolin-8-ylmethoxy)cyclopentyl)nicotinamide

[433] Using (1S,2S)-2-(quinolin-8-ylmethoxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

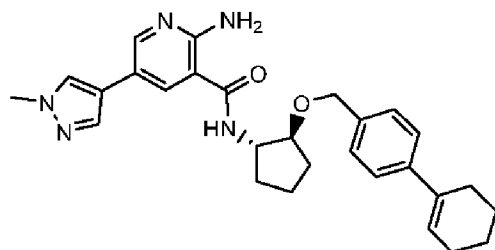
[434]

[435] MS (ESI, m/z): 443.2 [M+H]⁺[436] Example 65. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((2',3',4',5'-tetrahydro-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[437] Using (1S,2S)-2-((2',3',4',5'-tetrahydro-[1,1'-biphenyl]-4-yl)methoxy)cyclopentan-1-amine,

the title compound was obtained as described for the example 1.

[438]



[439] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.62 (br d, $J=5.87$ Hz, 2 H) 1.67 - 1.87 (m, 5 H) 1.93 - 2.09 (m, 2 H) 2.14 (br s, 3 H) 2.28 (br s, 2 H) 3.92 (s, 3 H) 4.37 (br d, $J=5.48$ Hz, 1 H) 4.49 - 4.65 (m, 2 H) 6.00 (br s, 1 H) 7.18 - 7.30 (m, 2 H) 7.54 (br s, 1 H) 7.59 - 7.69 (m, 1 H) 7.84 (s, 1 H) 7.98 (s, 1 H) 8.23 (s, 1 H) 8.38 (s, 1 H);

[440] MS (ESI, m/z): 472.3 $[\text{M}+\text{H}]^+$

[441] Example 66. N-(trans-2-((1,1'-biphenyl)-2-ylmethoxy)cyclopentyl)-2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[442] Using trans-2-((1,1'-biphenyl)-2-ylmethoxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[443]



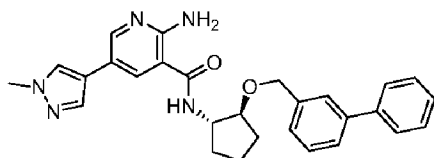
(trans-racemate)

[444] MS (ESI, m/z): 468.2 $[\text{M}+\text{H}]^+$

[445] Example 67. N-((1S,2S)-2-((1,1'-biphenyl)-3-ylmethoxy)cyclopentyl)-2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[446] Using (1S,2S)-2-((1,1'-biphenyl)-3-ylmethoxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[447]

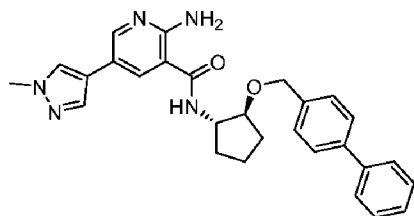


[448] MS (ESI, m/z): 468.2 $[\text{M}+\text{H}]^+$

[449] Example 68. N-((1S,2S)-2-((1,1'-biphenyl)-4-ylmethoxy)cyclopentyl)-2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[450] Using (1S,2S)-3-((1,1'-biphenyl)-4-ylmethoxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[451]



[452] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.59 (br d, $J=1.17$ Hz, 1 H) 1.79 (br s, 3 H) 1.97 (br s, 1 H) 2.11 - 2.21 (m, 1 H) 3.62 (s, 2 H) 3.87 (s, 3 H) 3.97 (br s, 1 H) 4.39 (br s, 1 H) 4.65 (br d, $J=13.69$ Hz, 2 H) 7.34 - 7.42 (m, 2 H) 7.50 (br t, $J=7.43$ Hz, 2 H) 7.80 (s, 1 H) 7.90 (s, 1 H) 8.17 (br s, 1 H) 8.29 - 8.34 (m, 1 H);

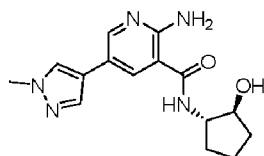
[453] MS (ESI, m/z): 468.2 $[\text{M}+\text{H}]^+$

[454] Example 69.

2-amino-N-((1S,2S)-2-hydroxycyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[455] Using (1S,2S)-2-aminocyclopentan-1-ol, the title compound was obtained as described for the example 1.

[456]

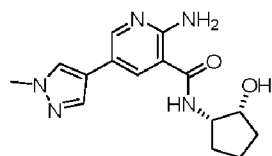


[457] MS (ESI, m/z): 302.2 $[\text{M}+\text{H}]^+$

[458] Example 70. 2-amino-N-(cis-2-hydroxycyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[459] Using cis-2-aminocyclopentan-1-ol, the title compound was obtained as described for the example 1.

[460]

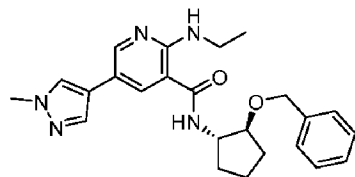


[461] MS (ESI, m/z): 302.2 $[\text{M}+\text{H}]^+$

[462] Example 71. N-((1S,2S)-2-(benzyloxy)cyclopentyl)-2-(ethylamino)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[463] Using 2-(ethylamino)-5-(1-methyl-1H-pyrazol-4-yl)nicotinic acid, the title compound was obtained as described for the example 1.

[464]

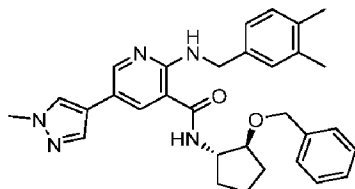


[465] MS (ESI, m/z): 420.2 [M+H]⁺

[466] Example 72. N-((1S,2S)-2-(benzyloxy)cyclopentyl)-2-((3,4-dimethylbenzyl)amino)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[467] Using 2-((3,4-dimethylbenzyl)amino)-5-(1-methyl-1H-pyrazol-4-yl)nicotinic acid, the title compound was obtained as described for the example 1.

[468]

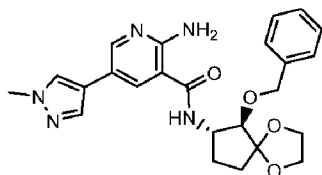


[469] MS (ESI, m/z): 510.3 [M+H]⁺

[470] Example 73. 2-amino-N-((6R,7S)-6-(benzyloxy)-1,4-dioxaspiro[4.4]nonan-7-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[471] Using (6R,7S)-6-(benzyloxy)-1,4-dioxaspiro[4.4]nonan-7-amine, the title compound was obtained as described for the example 1.

[472]

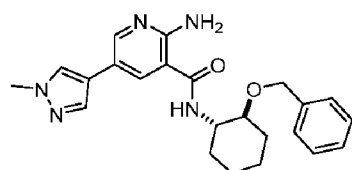


[473] MS (ESI, m/z): 450.2 [M+H]⁺

[474] Example 74. 2-amino-N-(trans-2-(benzyloxy)cyclohexyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[475] Using trans-2-(benzyloxy)cyclohexan-1-amine, the title compound was obtained as described for the example 1.

[476]

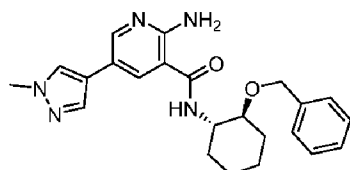


[477] MS (ESI, m/z): 406.2 [M+H]⁺

[478] Example 75. 2-amino-N-((1S,2S)-2-(benzyloxy)cyclohexyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[479] Using (1S,2S)-2-(benzyloxy)cyclohexan-1-amine, the title compound was obtained as described for the example 1.

[480]



[481] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.28 - 1.47 (m, 4 H) 1.77 (br s, 1 H) 1.83 (br s,

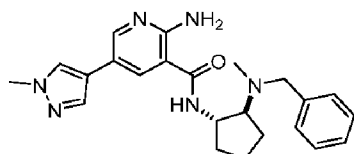
1 H) 1.97 (s, 1 H) 2.29 (br s, 1 H) 3.38 (br d, $J=9.39$ Hz, 1 H) 3.92 (s, 3 H) 3.99 (br d, $J=10.17$ Hz, 1 H) 4.41 - 4.47 (m, 1 H) 4.68 (br d, $J=12.13$ Hz, 1 H) 7.13 (dt, $J=14.57$, 6.99 Hz, 3 H) 7.25 (br d, $J=7.43$ Hz, 2 H) 7.77 (s, 1 H) 7.89 (s, 1 H) 8.21 (s, 1 H) 8.25 (br s, 1 H);

[482] MS (ESI, m/z): 406.2 $[M+H]^+$

[483] Example 76. 2-amino-N-(trans-2-(benzyl(methyl)amino)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[484] Using trans-N1-benzyl-N1-methylcyclopentane-1,2-diamine, the title compound was obtained as described for the example 1.

[485]

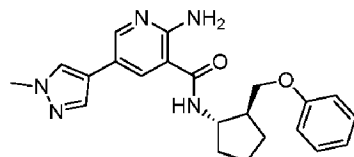


[486] MS (ESI, m/z): 405.2 $[M+H]^+$

[487] Example 77. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-(phenoxy)methyl)cyclopentyl)nicotinamide

[488] Using (1S,2S)-2-(phenoxy)methylcyclopentan-1-amine, the title compound was obtained as described for the example 1.

[489]

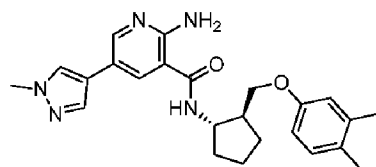


[490] MS (ESI, m/z): 392.2 $[M+H]^+$

[491] Example 78. 2-amino-N-((1S,2S)-2-((3,4-dimethylphenoxy)methyl)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[492] Using (1S,2S)-2-((3,4-dimethylphenoxy)methyl)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[493]

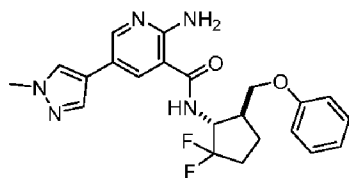


[494] MS (ESI, m/z): 420.2 $[M+H]^+$

[495] Example 79. 2-amino-N-(trans-2,2-difluoro-5-(phenoxy)methyl)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

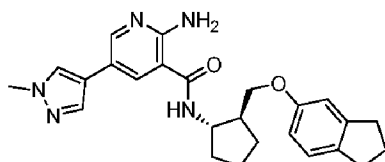
[496] Using (trans-2,2-difluoro-5-(phenoxy)methyl)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[497]

[498] MS (ESI, m/z): 428.2 [M+H]⁺[499] Example 80. 2-amino-N-((1S,2S)-2-(((2,3-dihydro-1H-inden-5-yl)oxy)methyl)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

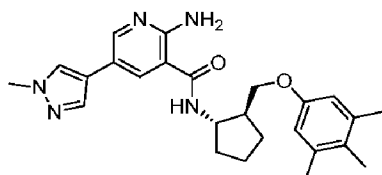
[500] Using (1S,2S)-2-(((2,3-dihydro-1H-inden-5-yl)oxy)methyl)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[501]

[502] MS (ESI, m/z): 432.2 [M+H]⁺[503] Example 81. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-(((3,4,5-trimethylphenoxy)methyl)cyclopentyl))nicotinamide

[504] Using (1S,2S)-2-(((3,4,5-trimethylphenoxy)methyl)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

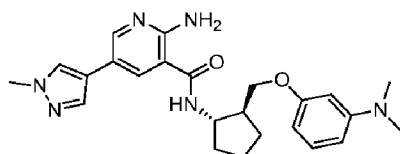
[505]

[506] MS (ESI, m/z): 434.3 [M+H]⁺[507] Example 82.

2-amino-N-((1S,2S)-2-(((3-(dimethylamino)phenoxy)methyl)cyclopentyl))-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

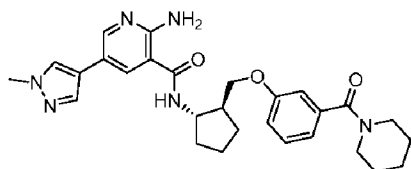
[508] Using 3-(((1S,2S)-2-aminocyclopentyl)methoxy)-N,N-dimethylaniline, the title compound was obtained as described for the example 1.

[509]

[510] MS (ESI, m/z): 435.2 [M+H]⁺[511] Example 83. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-(((3-(piperidin-1-carbonyl)phenoxy)methyl)cyclopentyl))nicotinamide

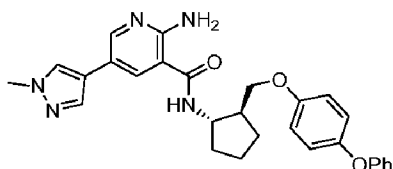
[512] Using (3-(((1S,2S)-2-aminocyclopentyl)methoxy)phenyl)(piperidin-1-yl)methanone, the title compound was obtained as described for the example 1.

[513]

[514] MS (ESI, m/z): 503.3 [M+H]⁺[515] Example 84. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-phenoxyphenoxy)methyl)cyclopentyl)nicotinamide

[516] Using (1S,2S)-2-((4-phenoxyphenoxy)methyl)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

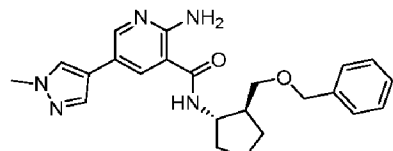
[517]

[518] MS (ESI, m/z): 484.2 [M+H]⁺[519] Example 85.

2-amino-N-((1S,2S)-2-((benzyloxy)methyl)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[520] Using (1S,2S)-2-((benzyloxy)methyl)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

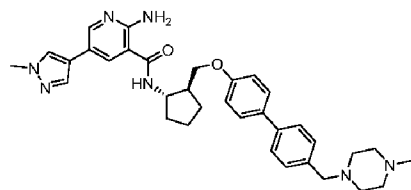
[521]

[522] MS (ESI, m/z): 406.2 [M+H]⁺[523] Example 86.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-(((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)oxy)methyl)cyclopentyl)nicotinamide

[524] Using (1S,2S)-2-(((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)oxy)methyl)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[525]

[526] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.56 - 1.65 (m, 1 H) 1.67 - 1.75 (m, 1 H) 1.79 (br d, J=6.46 Hz, 1 H) 1.85 (br d, J=8.80 Hz, 1 H) 2.03 - 2.12 (m, 1 H) 2.16 (br dd, J=12.91, 5.87 Hz, 1 H) 2.43 - 2.51 (m, 1 H) 2.84 (s, 3 H) 3.75 (s, 2 H) 3.89 (s, 3 H) 4.10

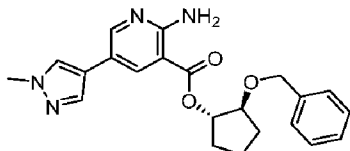
(d, $J=5.87$ Hz, 2 H) 4.30 - 4.38 (m, 1 H) 6.96 (d, $J=8.80$ Hz, 2 H) 7.38 (br d, $J=8.22$ Hz, 2 H) 7.50 (dd, $J=16.43, 8.22$ Hz, 4 H) 7.86 (s, 1 H) 7.98 (s, 1 H) 8.21 (d, $J=2.35$ Hz, 1 H) 8.51 (d, $J=2.35$ Hz, 1 H);

[527] MS (ESI, m/z): 580.3 $[M+H]^+$

[528] Example 87. (1S,2S)-2-(benzyloxy)cyclopentyl
2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinate

[529] Using (1S,2S)-2-(benzyloxy)cyclopentan-1-ol, the title compound was obtained as described for the example 1.

[530]

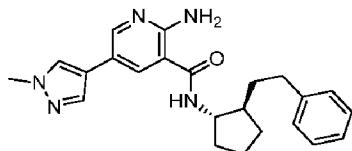


[531] MS (ESI, m/z): 393.2 $[M+H]^+$

[532] Example 88. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2R)
)2-phenethylcyclopentyl)nicotinamide

[533] Using (1S,2R)-2-phenethylcyclopentan-1-amine, the title compound was obtained as described for the example 1.

[534]

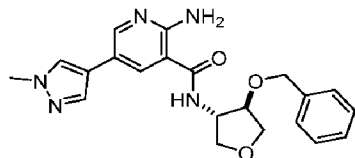


[535] MS (ESI, m/z): 390.2 $[M+H]^+$

[536] Example 89. 2-amino-N-(trans-4-(benzyloxy)tetrahydrofuran-3-yl)
5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[537] Using trans-4-(benzyloxy)tetrahydrofuran-3-amine, the title compound was obtained as described for the example 1.

[538]

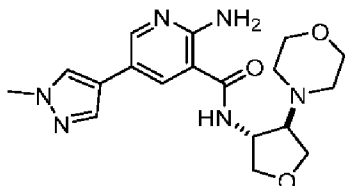


[539] MS (ESI, m/z): 394.2 $[M+H]^+$

[540] Example 90. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)
-N-(trans-4-morpholinotetrahydrofuran-3-yl)nicotinamide

[541] Using trans-4-morpholinotetrahydrofuran-3-amine, the title compound was obtained as described for the example 1.

[542]

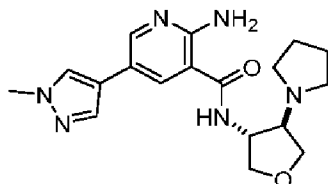


[543] MS (ESI, m/z): 373.2 [M+H]⁺

[544] Example 91. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-(trans-4-(pyrrolidin-1-yl)tetrahydrofuran-3-yl)nicotinamide

[545] Using trans-4-(pyrrolidin-1-yl)tetrahydrofuran-3-amine, the title compound was obtained as described for the example 1.

[546]

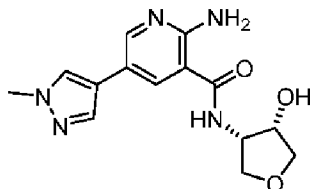


[547] MS (ESI, m/z): 357.2 [M+H]⁺

[548] Example 92. 2-amino-N-(cis-4-hydroxytetrahydrofuran-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[549] Using cis-4-aminotetrahydrofuran-3-ol, the title compound was obtained as described for the example 1.

[550]

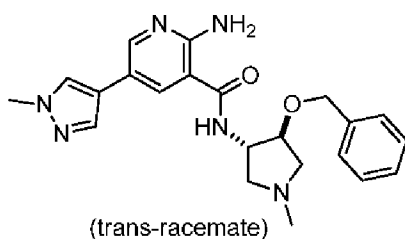


[551] MS (ESI, m/z): 304.1 [M+H]⁺

[552] Example 93. 2-amino-N-(4-(benzyloxy)-1-methylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[553] Using trans-4-(benzyloxy)-1-methylpyrrolidin-3-amine, the title compound was obtained as described for the example 1.

[554]

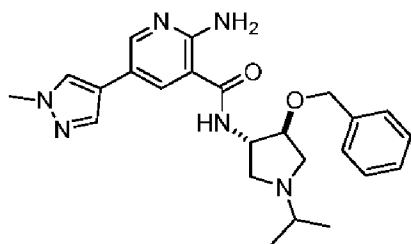


[555] MS (ESI, m/z): 407.2 [M+H]⁺

[556] Example 94. 2-amino-N-(trans-4-(benzyloxy)-1-isopropylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

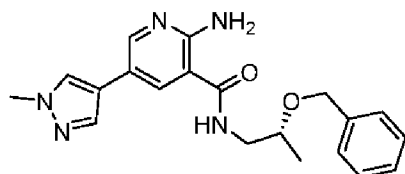
[557] Using trans-4-(benzyloxy)-1-isopropylpyrrolidin-3-amine, the title compound was obtained as described for the example 1.

[558]

[559] MS (ESI, m/z): 435.2 [M+H]⁺[560] Example 95. (R)-2-amino-N-(2-(benzyloxy)propyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

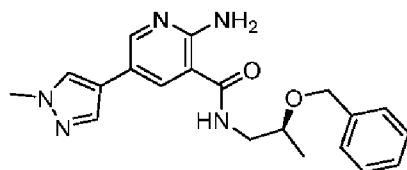
[561] Using (R)-2-(benzyloxy)propan-1-amine, the title compound was obtained as described for the example 1.

[562]

[563] MS (ESI, m/z): 366.2 [M+H]⁺[564] Example 96. (S)-2-amino-N-(2-(benzyloxy)propyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

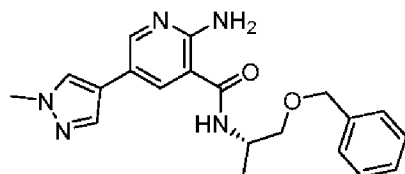
[565] Using (S)-2-(benzyloxy)propan-1-amine, the title compound was obtained as described for the example 1.

[566]

[567] MS (ESI, m/z): 366.2 [M+H]⁺[568] Example 97. (S)-2-amino-N-(1-(benzyloxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

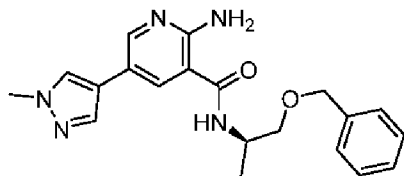
[569] Using (S)-1-(benzyloxy)propan-2-amine, the title compound was obtained as described for the example 1.

[570]

[571] MS (ESI, m/z): 366.2 [M+H]⁺[572] Example 98. (R)-2-amino-N-(1-(benzyloxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[573] Using (R)-1-(benzyloxy)propan-2-amine, the title compound was obtained as described for the example 1.

[574]

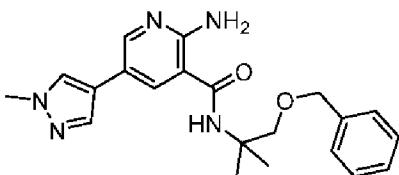


[575] MS (ESI, m/z): 366.2 [M+H]⁺

[576] Example 99. 2-amino-N-(1-(benzyloxy)-2-methylpropan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[577] Using 1-(benzyloxy)-2-methylpropan-2-amine, the title compound was obtained as described for the example 1.

[578]

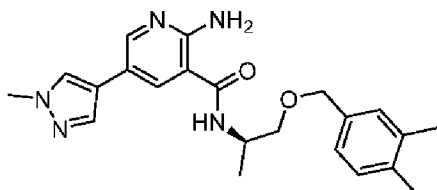


[579] MS (ESI, m/z): 380.2 [M+H]⁺

[580] Example 100. (R)-2-amino-N-(1-((3,4-dimethylbenzyl)oxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[581] Using (R)-1-((3,4-dimethylbenzyl)oxy)propan-2-amine, the title compound was obtained as described for the example 1.

[582]

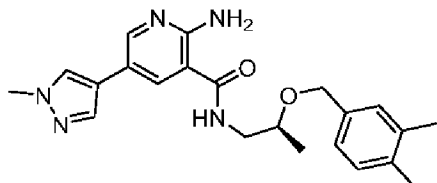


[583] MS (ESI, m/z): 394.2 [M+H]⁺

[584] Example 101. (S)-2-amino-N-(2-((3,4-dimethylbenzyl)oxy)propyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[585] Using (S)-2-((3,4-dimethylbenzyl)oxy)propan-1-amine, the title compound was obtained as described for the example 1.

[586]



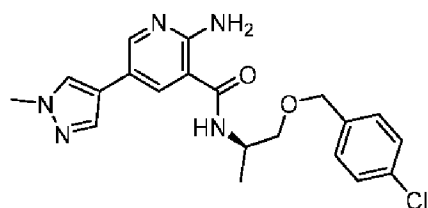
[587] MS (ESI, m/z): 394.2 [M+H]⁺

[588] Example 102. (R)-2-amino-N-(1-((4-chlorobenzyl)oxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[589] Using (R)-1-((4-chlorobenzyl)oxy)propan-2-amine, the title compound was obtained as described for the example 1.

[590]

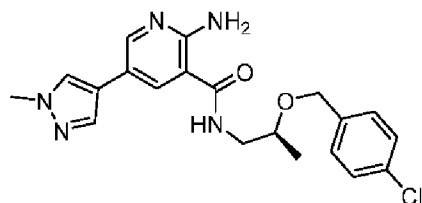


[591] MS (ESI, m/z): 400.2 [M+H]⁺

[592] Example 103. (S)-2-amino-N-(2-((4-chlorobenzyl)oxy)propyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[593] Using (S)-2-((4-chlorobenzyl)oxy)propan-1-amine, the title compound was obtained as described for the example 1.

[594]

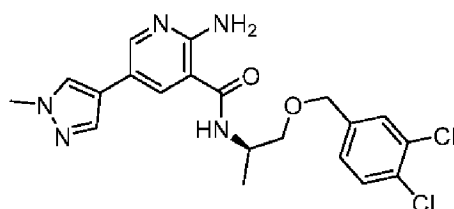


[595] MS (ESI, m/z): 400.2 [M+H]⁺

[596] Example 104. (R)-2-amino-N-(1-((3,4-dichlorobenzyl)oxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[597] Using (R)-1-((3,4-dichlorobenzyl)oxy)propan-2-amine, the title compound was obtained as described for the example 1.

[598]

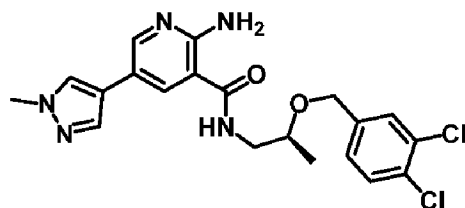


[599] MS (ESI, m/z): 434.1 [M+H]⁺

[600] Example 105. (S)-2-amino-N-(2-((3,4-dichlorobenzyl)oxy)propyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[601] Using (S)-2-((3,4-dichlorobenzyl)oxy)propan-1-amine, the title compound was obtained as described for the example 1.

[602]

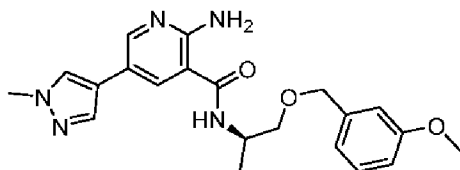


[603] MS (ESI, m/z): 419.1 [M+H]⁺

[604] Example 106. (R)-2-amino-N-(1-((3-methoxybenzyl)oxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[605] Using (R)-1-((3-methoxybenzyl)oxy)propan-2-amine, the title compound was obtained as described for the example 1.

[606]

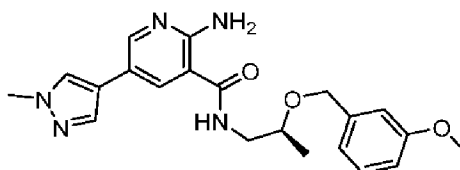


[607] MS (ESI, m/z): 396.2 [M+H]⁺

[608] Example 107. (S)-2-amino-N-(2-((3-methoxybenzyl)oxy)propyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[609] Using (S)-2-((3-methoxybenzyl)oxy)propan-1-amine, the title compound was obtained as described for the example 1.

[610]

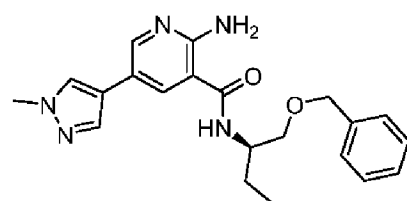


[611] MS (ESI, m/z): 396.2 [M+H]⁺

[612] Example 108. (R)-2-amino-N-(1-(benzyloxy)butan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[613] Using (R)-1-(benzyloxy)butan-2-amine, the title compound was obtained as described for the example 1.

[614]

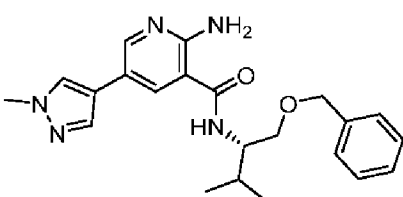


[615] MS (ESI, m/z): 380.2 [M+H]⁺

[616] Example 109. (S)-2-amino-N-(1-(benzyloxy)-3-methylbutan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[617] Using (S)-1-(benzyloxy)-3-methylbutan-2-amine, the title compound was obtained as described for the example 1.

[618]

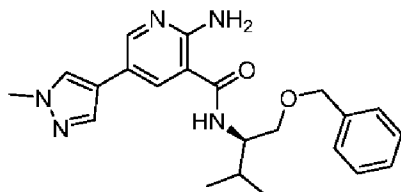


[619] MS (ESI, m/z): 394.2 [M+H]⁺

[620] Example 110. (R)-2-amino-N-(1-(benzyloxy)-3-methylbutan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[621] Using (R)-1-(benzyloxy)-3-methylbutan-2-amine, the title compound was obtained as described for the example 1.

[622]

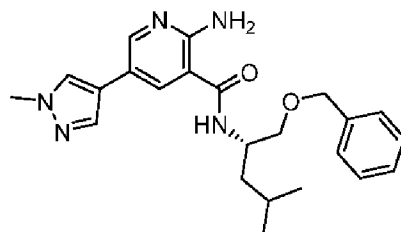


[623] MS (ESI, m/z): 394.2 [M+H]⁺

[624] Example 111. (S)-2-amino-N-(1-(benzyloxy)-4-methylpentan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[625] Using (S)-1-(benzyloxy)-4-methylpentan-2-amine, the title compound was obtained as described for the example 1.

[626]

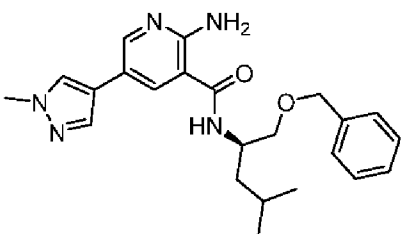


[627] MS (ESI, m/z): 408.2 [M+H]⁺

[628] Example 112. (R)-2-amino-N-(1-(benzyloxy)-4-methylpentan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[629] Using (R)-1-(benzyloxy)-4-methylpentan-2-amine, the title compound was obtained as described for the example 1.

[630]

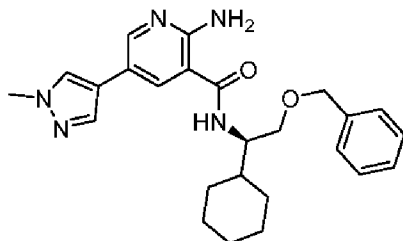


[631] MS (ESI, m/z): 408.2 [M+H]⁺

[632] Example 113. (R)-2-amino-N-(2-(benzyloxy)-1-cyclohexylethyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

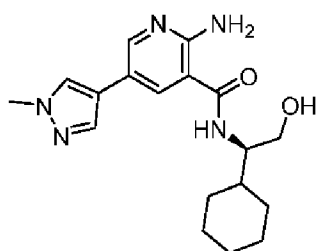
[633] Using (R)-2-(benzyloxy)-1-cyclohexylethan-1-amine, the title compound was obtained as described for the example 1.

[634]

[635] MS (ESI, m/z): 434.3 [M+H]⁺[636] Example 114. (R)-2-amino-N-(1-cyclohexyl-2-hydroxyethyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

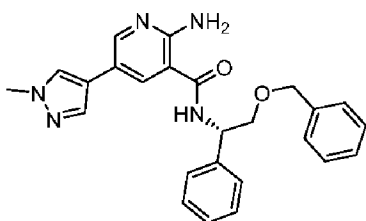
[637] Using (R)-2-amino-2-cyclohexylethan-1-ol, the title compound was obtained as described for the example 1.

[638]

[639] MS (ESI, m/z): 344.3 [M+H]⁺[640] Example 115. (S)-2-amino-N-(2-(benzyloxy)-1-phenylethyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

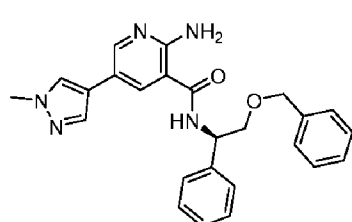
[641] Using (S)-2-(benzyloxy)-1-phenylethan-1-amine, the title compound was obtained as described for the example 1.

[642]

[643] MS (ESI, m/z): 428.2 [M+H]⁺[644] Example 116. (R)-2-amino-N-(2-(benzyloxy)-1-phenylethyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

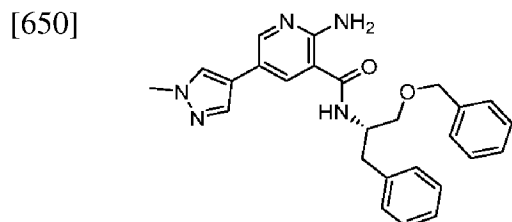
[645] Using (R)-2-(benzyloxy)-1-phenylethan-1-amine, the title compound was obtained as described for the example 1.

[646]

[647] MS (ESI, m/z): 428.2 [M+H]⁺

[648] Example 117. (S)-2-amino-N-(1-(benzyloxy)-3-phenylpropan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

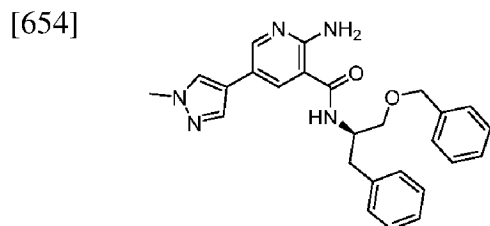
[649] Using (S)-1-(benzyloxy)-3-phenylpropan-2-amine, the title compound was obtained as described for the example 1.



[651] MS (ESI, m/z): 442.2 [M+H]⁺

[652] Example 118. (R)-2-amino-N-(1-(benzyloxy)-3-phenylpropan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

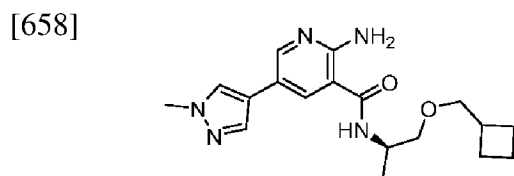
[653] Using (R)-1-(benzyloxy)-3-phenylpropan-2-amine, the title compound was obtained as described for the example 1.



[655] MS (ESI, m/z): 442.2 [M+H]⁺

[656] Example 119. (R)-2-amino-N-(1-(cyclobutylmethoxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

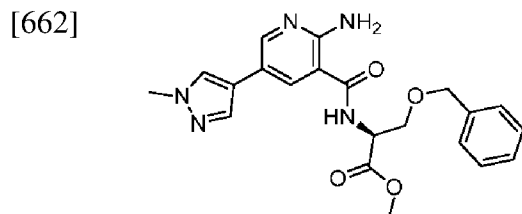
[657] Using (R)-1-(cyclobutylmethoxy)propan-2-amine, the title compound was obtained as described for the example 1.



[659] MS (ESI, m/z): 344.2 [M+H]⁺

[660] Example 120. methyl N-(2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinoyl)-O-benzyl-L-serinate

[661] Using methyl O-benzyl-L-serinate, the title compound was obtained as described for the example 1.

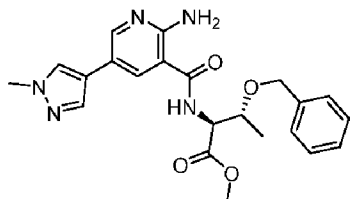


[663] MS (ESI, m/z): 410.2 [M+H]⁺

[664] Example 121. methyl N-(2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinoyl)-O-benzyl-L-threoninate

[665] Using methyl O-benzyl-L-threoninate, the title compound was obtained as described for the example 1.

[666]

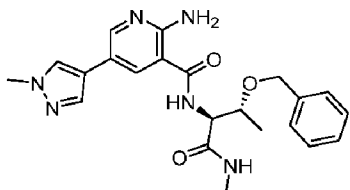


[667] MS (ESI, m/z): 424.2 [M+H]⁺

[668] Example 122 2-amino-N-((2S,3R)-3-(benzyloxy)-1-(methyamino)-1-oxobutan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[669] Using (2S,3R)-2-amino-3-(benzyloxy)-N-methylbutanamide, the title compound was obtained as described for the example 1.

[670]

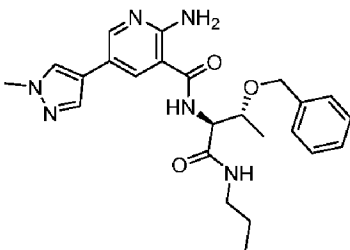


[671] MS (ESI, m/z): 423.2 [M+H]⁺

[672] Example 123. 2-amino-N-((2S,3R)-3-(benzyloxy)-1-oxo-1-(propylamino)butan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[673] Using (2S,3R)-2-amino-3-(benzyloxy)-N-propylbutanamide, the title compound was obtained as described for the example 1.

[674]

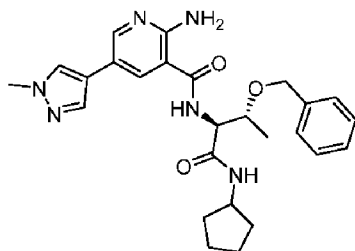


[675] MS (ESI, m/z): 451.2 [M+H]⁺

[676] Example 124. 2-amino-N-((2S,3R)-3-(benzyloxy)-1-(cyclopentylamino)-1-oxobutan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

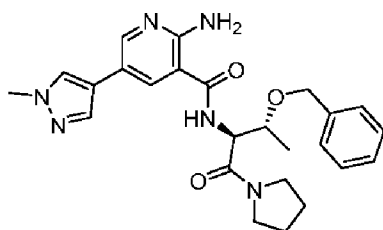
[677] Using (2S,3R)-2-amino-3-(benzyloxy)-N-cyclopentylbutanamide, the title compound was obtained as described for the example 1.

[678]

[679] MS (ESI, m/z): 477.3 [M+H]⁺[680] Example 125. 2-amino-N-((2S,3R)-3-(benzyloxy)-1-oxo-1-(pyrrolidin-1-yl)butan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

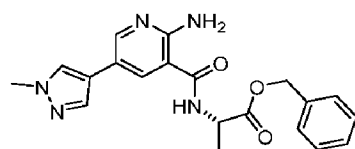
[681] Using (2S,3R)-2-amino-3-(benzyloxy)-1-(pyrrolidin-1-yl)butan-1-one, the title compound was obtained as described for the example 1.

[682]

[683] MS (ESI, m/z): 463.2 [M+H]⁺[684] Example 126. benzyl (2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinoyl)-L-alaninate

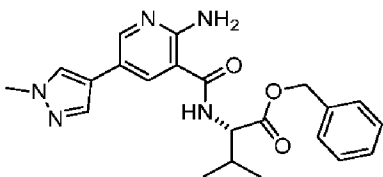
[685] Using benzyl L-alaninate, the title compound was obtained as described for the example 1.

[686]

[687] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.51 (d, J=7.43 Hz, 3 H) 3.92 (s, 3 H) 4.64 (d, J=7.43 Hz, 1 H) 5.12 - 5.25 (m, 2 H) 7.21 - 7.42 (m, 5 H) 7.84 (s, 1 H) 7.96 - 8.00 (m, 1 H) 8.21 - 8.27 (m, 1 H) 8.54 (d, J=2.35 Hz, 1 H);[688] MS (ESI, m/z): 380.2 [M+H]⁺[689] Example 127. benzyl (2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinoyl)-L-valinate

[690] Using benzyl L-valinate, the title compound was obtained as described for the example 1.

[691]

[692] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.00 (dd, J=9.19, 6.85 Hz, 6 H) 2.16 - 2.36 (m, 1 H) 4.46 - 4.55 (m, 1 H) 5.10 - 5.30 (m, 2 H) 7.22 - 7.41 (m, 5 H) 7.84 (d, J=0.78 Hz,

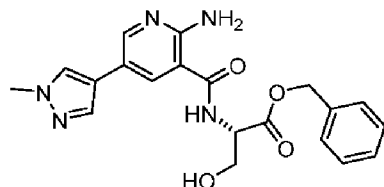
1 H) 7.98 (s, 1 H) 8.24 (d, $J=1.96$ Hz, 1 H) 8.48 (d, $J=2.35$ Hz, 1 H);

[693] MS (ESI, m/z): 408.2 $[M+H]^+$

[694] Example 128. benzyl (2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinoyl)-L-serinate

[695] Using benzyl L-serinate, the title compound was obtained as described for the example 1.

[696]



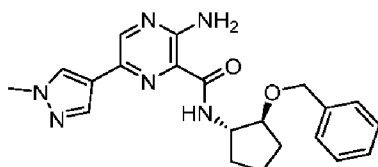
[697] ^1H NMR (400 MHz, CD_3OD) δ ppm 3.94 - 4.07 (m, 2 H) 4.78 (dd, $J=5.48, 4.30$ Hz, 1 H) 5.21 (s, 2 H) 7.23 - 7.43 (m, 5 H) 7.86 (d, $J=0.78$ Hz, 1 H) 8.01 (s, 1 H) 8.24 (d, $J=1.96$ Hz, 1 H) 8.64 (d, $J=1.96$ Hz, 1 H);

[698] MS (ESI, m/z): 396.2 $[M+H]^+$

[699] Example 129. 3-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-6-(1-methyl-1H-pyrazol-4-yl)pyrazine-2-carboxamide

[700] Using 3-amino-6-(1-methyl-1H-pyrazol-4-yl)pyrazine-2-carboxylic acid and (1S,2S)-2-(benzyloxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[701]



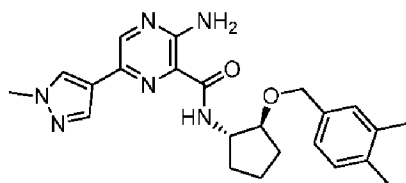
[702] MS (ESI, m/z): 393.2 $[M+H]^+$

[703] Example 130.

3-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-6-(1-methyl-1H-pyrazol-4-yl)pyrazine-2-carboxamide

[704] Using 3-amino-6-(1-methyl-1H-pyrazol-4-yl)pyrazine-2-carboxylic acid and (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the example 1.

[705]

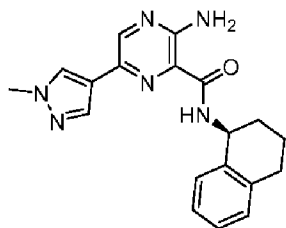


[706] MS (ESI, m/z): 421.2 $[M+H]^+$

[707] Example 131. (S)-3-amino-6-(1-methyl-1H-pyrazol-4-yl)-N-(1,2,3,4-tetrahydronaphthalen-1-yl)pyrazine-2-carboxamide

[708] Using 3-amino-6-(1-methyl-1H-pyrazol-4-yl)pyrazine-2-carboxylic acid and (S)-1,2,3,4-tetrahydronaphthalen-1-amine, the title compound was obtained as described for the example 1.

[709]

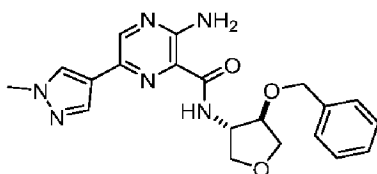


[710] MS (ESI, m/z): 349.2 [M+H]⁺

[711] Example 132. 3-amino-N-(trans-4-(benzyloxy)tetrahydrofuran-3-yl)-6-(1-methyl-1H-pyrazol-4-yl)pyrazine-2-carboxamide

[712] Using 3-amino-6-(1-methyl-1H-pyrazol-4-yl)pyrazine-2-carboxylic acid and trans-4-(benzyloxy)tetrahydrofuran-3-amine, the title compound was obtained as described for the example 1.

[713]

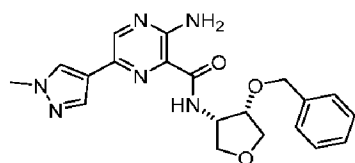


[714] MS (ESI, m/z): 395.2 [M+H]⁺

[715] Example 133. 3-amino-N-(cis-4-(benzyloxy)tetrahydrofuran-3-yl)-6-(1-methyl-1H-pyrazol-4-yl)pyrazine-2-carboxamide

[716] Using 3-amino-6-(1-methyl-1H-pyrazol-4-yl)pyrazine-2-carboxylic acid and cis-4-(benzyloxy)tetrahydrofuran-3-amine, the title compound was obtained as described for the example 1.

[717]

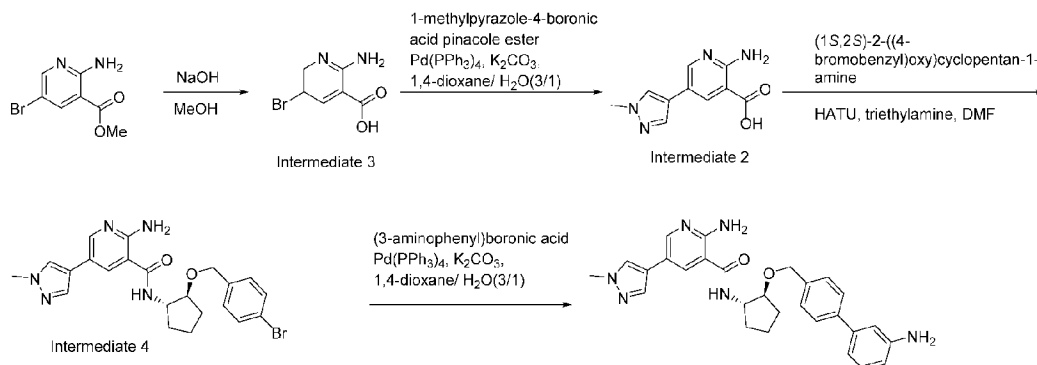


[718] MS (ESI, m/z): 395.2 [M+H]⁺

[719] Example 134. 2-amino-N-((1S,2S)-2-((3'-amino-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[720] Scheme for the preparation of the Compound of Example 134:

[721]



[722] Intermediate 3. To a solution of methyl 2-amino-5-bromonicotinate (560 mg, 2.42 mmol) in 10 ml of MeOH was added 2N NaOH (2 ml, 4 mmol) and the mixture was heated at 65 °C for 1 hr, cooled to room temperature, neutralized (2 ml of 2N HCl), and the resulting precipitate was filtered, washed with MeOH, and dried to give 0.35 g of white solid.

[723] ¹H NMR (400 MHz, CD₃OD) δ ppm 8.17 (d, J = 2.4 Hz, 1H), 8.23 (d, J = 2.4 Hz, 1H);

[724] MS (ESI, m/z): 217.0 [M+H]⁺

[725] Intermediate 2. To a mixture of intermediate 3 (4.48 g, 20.6 mmol) and 1-methylpyrazole-4-boronic acid pinacol ester (5.5 g, 26.8 mmol) in 100 ml of 1,4-dioxane/ water (3/1) was added K₂CO₃ (8.5 g, 61.9 mmol) followed by Pd(PPh₃)₄ (1.19 g, 1.03 mmol). The reaction mixture was heated at 100 °C for 3 hrs, cooled to room temperature, and partitioned between water and EtOAc. Water layer was separated and adjusted to pH value between 4 and 5. The precipitate was collected by filtration and dried to afford 4 g of the title compound. The crude product was used for the next step without further purification.

[726] ¹H NMR (600 MHz, DMSO-*d*₆) δ ppm 3.82(s, 3H), 5.73(s, 2H), 7.77(s, 1H), 8.05(s, 1H), 8.13(d, J = 2.4 Hz, 1H), 8.42(d, J = 2.4 Hz, 1H);

[727] MS (ESI, m/z): 219.1 [M+H]⁺

[728] Intermediate 4. To a mixture of intermediate 2 (350 mg, 1.60 mmol) and triethylamine (0.34 ml, 2.41 mmol) in 4 ml of DMF was added HATU (732 mg, 1.92 mmol) followed by (1S,2S)-2-((4-bromobenzyl)oxy)cyclopentan-1-amine (475 mg, 1.76 mmol). The mixture was stirred at room temperature for 1 hr and then saturated sodium bicarbonate solution was added. The mixture was extracted with EtOAc, washed with brine, dried over MgSO₄, and concentrated in vacuo. The crude product was purified through silicagel column chromatography to give 650 mg of off-white solid.

[729] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.59 - 1.69 (m, 1 H) 1.72 - 1.78 (m, 1 H) 1.78 - 1.86 (m, 2 H) 1.96 - 2.07 (m, 1 H) 2.16 (dq, J=13.50, 6.85 Hz, 1 H) 3.94 (s, 3 H) 3.95 (br d, J=1.76 Hz, 1 H) 4.33 - 4.42 (m, 1 H) 4.53 - 4.62 (m, 2 H) 7.25 (m, J=8.22 Hz, 2

H) 7.41 (m, $J=8.22$ Hz, 2 H) 7.87 (s, 1 H) 8.01 (s, 1 H) 8.22 (d, $J=1.76$ Hz, 1 H) 8.52 (d, $J=1.76$ Hz, 1 H);

[730] MS (ESI, m/z): 470.1/472.1 $[M+H]^+$

[731] Example 134.

2-amino-N-((1S,2S)-2-((3'-amino-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[732] To a mixture of intermediate 4 (33 mg, 0.07 mmol) and (3-aminophenyl)boronic acid (11 mg, 0.08 mmol) in 0.4 ml of 1,4-dioxane/ water (3/1) was added K_2CO_3 (29 mg, 0.21 mmol) followed by $Pd(PPh_3)_4$ (4 mg, 0.003 mmol). The reaction mixture was heated at 100 °C for 3 hrs, cooled to room temperature, and extracted with EtOAc, dried over anhydrous $MgSO_4$ and concentrated under vacuum. After concentration under vacuum, the crude residue was purified by preparative HPLC to afford 30 mg of the title compound.

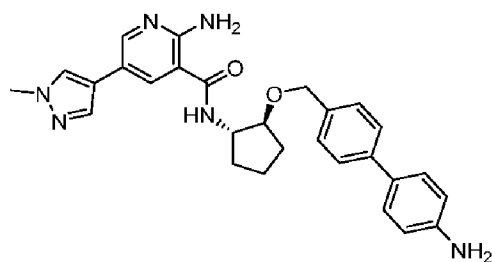
[733] 1H NMR (400 MHz, CD_3OD) δ ppm 1.60 - 1.69 (m, 1 H) 1.73 - 1.90 (m, 3 H) 2.05 (br d, $J=7.04$ Hz, 1 H) 2.17 (s, 1 H) 3.89 (s, 3 H) 4.00 (br d, $J=4.30$ Hz, 1 H) 4.36 - 4.46 (m, 2 H) 4.67 (s, 2 H) 7.24 (br d, $J=7.43$ Hz, 1 H) 7.42 - 7.59 (m, 7 H) 7.84 (s, 1 H) 7.97 (s, 1 H) 8.20 (d, $J=2.35$ Hz, 1 H) 8.48 (d, $J=2.35$ Hz, 1 H);

[734] MS (ESI, m/z): 483.2 $[M+H]^+$

[735] Example 135. 2-amino-N-((1S,2S)-2-((4'-amino-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[736] Using (4-aminophenyl)boronic acid, the title compound was obtained as described for the example 134.

[737]

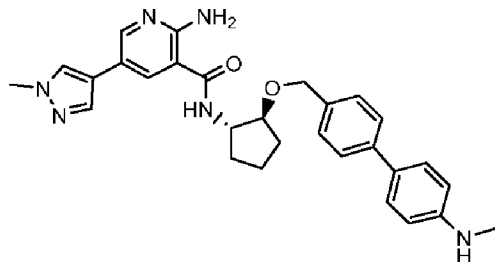


[738] MS (ESI, m/z): 483.2 $[M+H]^+$

[739] Example 136. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(methylamino)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[740] Using (4-(methylamino)phenyl)boronic acid, the title compound was obtained as described for the example 134.

[741]



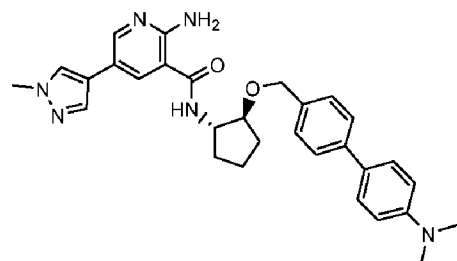
[742] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.64 (br d, $J=5.87$ Hz, 1 H) 1.73 - 1.94 (m, 3 H) 2.05 (br s, 1 H) 2.17 (br s, 1 H) 3.55 (br t, $J=11.15$ Hz, 3 H) 3.90 (s, 3 H) 4.00 (br s, 1 H) 4.43 (s, 4 H) 4.67 (s, 2 H) 7.45 (br d, $J=8.22$ Hz, 2 H) 7.55 (br d, $J=7.83$ Hz, 2 H) 7.60 (br d, $J=7.83$ Hz, 2 H) 7.71 (br d, $J=7.83$ Hz, 2 H) 7.85 (s, 1 H) 7.98 (s, 1 H) 8.21 (s, 1 H) 8.52 (s, 1 H);

[743] MS (ESI, m/z): 497.3 $[\text{M}+\text{H}]^+$

[744] Example 137. 2-amino-N-((1S,2S)-2-((4'-(dimethylamino)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[745] Using (4-(dimethylamino)phenyl)boronic acid, the title compound was obtained as described for the example 134.

[746]

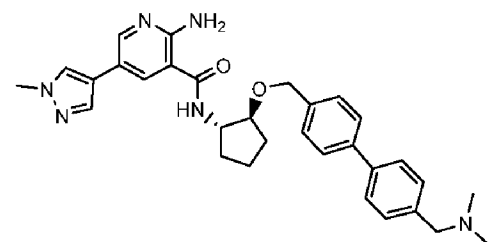


[747] MS (ESI, m/z): 511.3 $[\text{M}+\text{H}]^+$

[748] Example 138. 2-amino-N-((1S,2S)-2-((4'-((dimethylamino)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[749] Using ((4-((dimethylamino)methyl)phenyl)boronic acid, the title compound was obtained as described for the example 134.

[750]



[751] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.55 - 1.68 (m, 1 H) 1.80 (br s, 3 H) 2.04 (br d, $J=7.43$ Hz, 1 H) 2.15 (br s, 1 H) 3.49 (br s, 3 H) 3.62 (br s, 3 H) 3.75 (br s, 2 H) 3.89 (s, 3 H) 3.97 (br s, 1 H) 4.39 (br s, 1 H) 4.62 (br d, $J=12.91$ Hz, 1 H) 4.66 - 4.73 (m, 1

H) 7.44 (br t, $J=9.19$ Hz, 4 H) 7.56 (br d, $J=8.22$ Hz, 2 H) 7.62 (br d, $J=7.83$ Hz, 2 H) 7.82 (s, 1 H) 7.94 (s, 1 H) 8.16 (s, 1 H) 8.42 (s, 1 H);

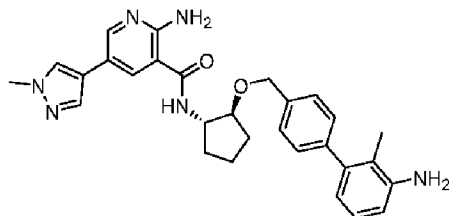
[752] MS (ESI, m/z): 525.3 $[M+H]^+$

[753] Example 139. 2-amino-N-((1S,2S

)-2-((3'-amino-2'-methyl-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[754] Using (3-amino-2-methylphenyl)boronic acid, the title compound was obtained as described for the example 134.

[755]



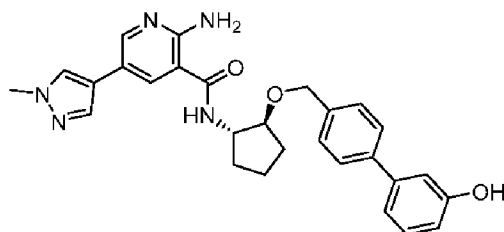
[756] MS (ESI, m/z): 497.2 $[M+H]^+$

[757] Example 140. 2-amino-N-((1S,2S)-2-((3'-hydroxy -

[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[758] Using (3-hydroxyphenyl)boronic acid, the title compound was obtained as described for the example 134.

[759]



[760] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.61 (br d, $J=7.43$ Hz, 1 H) 1.72 - 1.86 (m, 3 H) 1.95 - 2.08 (m, 1 H) 2.09 - 2.20 (m, 1 H) 3.87 (s, 3 H) 3.97 (br s, 1 H) 4.40 (br d, $J=18.00$ Hz, 1 H) 4.56 - 4.71 (m, 2 H) 6.70 - 6.75 (m, 1 H) 6.90 (br s, 1 H) 6.95 (br d, $J=7.83$ Hz, 1 H) 7.14 - 7.21 (m, 1 H) 7.32 - 7.41 (m, 2 H) 7.42 - 7.50 (m, 2 H) 7.78 - 7.83 (m, 1 H) 7.88 - 7.93 (m, 1 H) 8.16 (br d, $J=1.96$ Hz, 1 H) 8.36 (br d, $J=2.35$ Hz, 1 H);

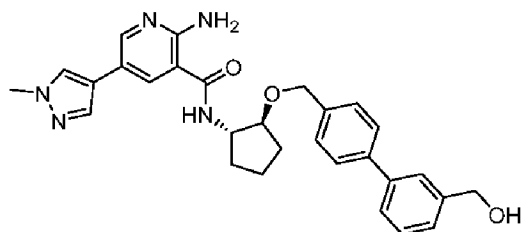
[761] MS (ESI, m/z): 484.2 $[M+H]^+$

[762] Example 141. 2-amino-N-((1S,2S)-2-((3'-(hydroxymethyl)

)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[763] Using (3-(hydroxymethyl)phenyl)boronic acid, the title compound was obtained as described for the example 134.

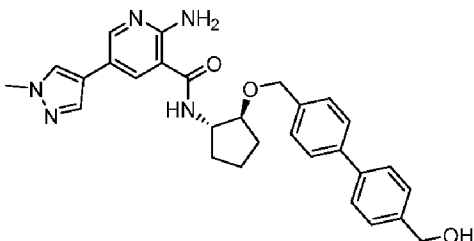
[764]

[765] MS (ESI, m/z): 498.2 [M+H]⁺

[766] Example 142. 2-amino-N-((1S,2S)-2-((4'-(hydroxymethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[767] Using ((4-(hydroxymethyl)phenyl)boronic acid, the title compound was obtained as described for the example 134.

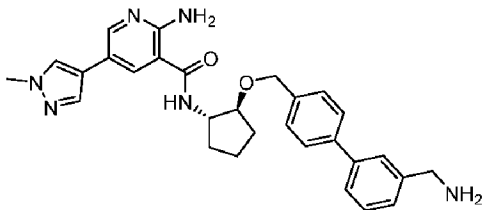
[768]

[769] MS (ESI, m/z): 498.2 [M+H]⁺

[770] Example 143. 2-amino-N-((1S,2S)-2-((3'-(aminomethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[771] Using (3-(aminomethyl)phenyl)boronic acid, the title compound was obtained as described for the example 134.

[772]



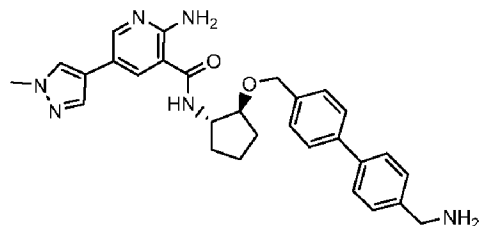
[773] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.54 - 1.67 (m, 1 H) 1.71 - 1.90 (m, 3 H) 2.03 (br dd, *J*=12.33, 7.04 Hz, 1 H) 2.11 - 2.21 (m, 1 H) 3.88 (s, 3 H) 3.96 - 4.03 (m, 1 H) 4.16 (s, 2 H) 4.35 - 4.47 (m, 1 H) 4.67 (s, 2 H) 7.40 (br d, *J*=7.63 Hz, 1 H) 7.44 (d, *J*=8.22 Hz, 1 H) 7.49 (br t, *J*=7.63 Hz, 2 H) 7.58 (d, *J*=7.63 Hz, 1 H) 7.59 - 7.62 (m, 2 H) 7.61 (br d, *J*=7.63 Hz, 1 H) 7.66 (s, 1 H) 7.80 (s, 1 H) 7.92 (s, 1 H) 8.21 (d, *J*=2.35 Hz, 1 H) 8.29 (br s, 1 H);

[774] MS (ESI, m/z): 497.3 [M+H]⁺

[775] Example 144. 2-amino-N-((1S,2S)-2-((4'-(aminomethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[776] Using (4-(aminomethyl)phenyl)boronic acid, the title compound was obtained as described for the example 134.

[777]



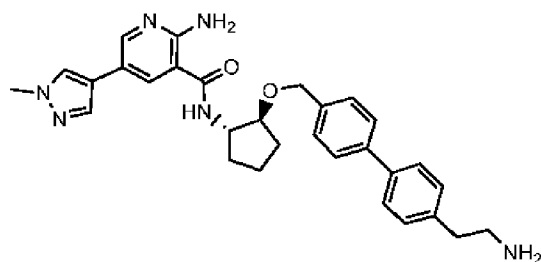
[778] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.64 (br dd, $J=14.09$, 7.04 Hz, 1 H) 1.72 - 1.90 (m, 3 H) 2.03 (br dd, $J=13.21$, 6.16 Hz, 1 H) 2.14 - 2.23 (m, 1 H) 3.90 (s, 3 H) 4.01 (br d, $J=7.04$ Hz, 1 H) 4.14 (s, 2 H) 4.40 - 4.45 (m, 1 H) 4.63 - 4.70 (m, 2 H) 7.43 (d, $J=8.22$ Hz, 2 H) 7.49 (d, $J=7.63$ Hz, 2 H) 7.57 (d, $J=7.63$ Hz, 2 H) 7.65 (d, $J=8.22$ Hz, 2 H) 7.85 (s, 1 H) 7.97 (s, 1 H) 8.21 (d, $J=1.76$ Hz, 1 H) 8.49 (br s, 1 H);

[779] MS (ESI, m/z): 497.3 $[\text{M}+\text{H}]^+$

[780] Example 145. 2-amino-N-((1S,2S)-2-((4'-(2-aminoethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[781] Using (4-(2-aminoethyl)phenyl)boronic acid, the title compound was obtained as described for the example 134.

[782]

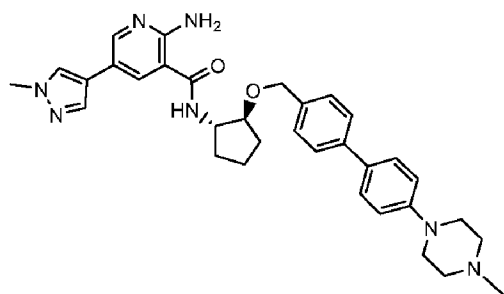


[783] MS (ESI, m/z): 511.3 $[\text{M}+\text{H}]^+$

[784] Example 146. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(4-methylpiperazin-1-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[785] Using (4-(4-methylpiperazin-1-yl)phenyl)boronic acid, the title compound was obtained as described for the example 134.

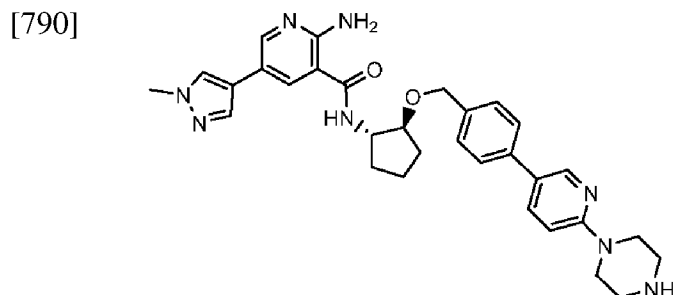
[786]



[787] MS (ESI, m/z): 566.3 $[\text{M}+\text{H}]^+$

[788] Example 147. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(6-(piperazin-1-yl)pyridin-3-yl)benzyl)oxy)cyclopentyl)nicotinamide

[789] Using (6-(piperazin-1-yl)pyridin-3-yl)boronic acid, the title compound was obtained as described for the example 134.

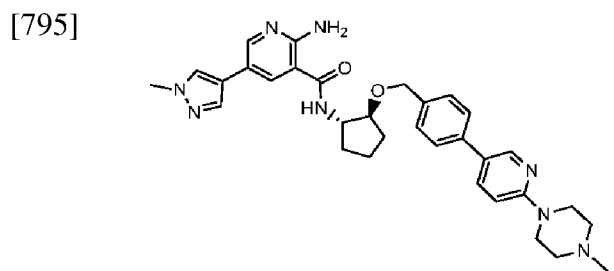


[791] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.64 (br d, $J=7.83$ Hz, 1 H) 1.81 (br d, $J=7.83$ Hz, 3 H) 2.04 (br s, 1 H) 2.18 (br s, 1 H) 3.32 - 3.40 (m, 4 H) 3.84 (br s, 4 H) 3.90 (s, 3 H) 3.98 (br s, 1 H) 4.40 (br s, 1 H) 4.65 (s, 2 H) 6.98 - 7.02 (m, 1 H) 7.41 (br d, $J=7.04$ Hz, 2 H) 7.50 (br d, $J=7.83$ Hz, 2 H) 7.83 - 7.89 (m, 2 H) 7.96 (s, 1 H) 8.20 (s, 1 H) 8.35 (s, 1 H) 8.48 (s, 1 H);

[792] MS (ESI, m/z): 553.3 $[\text{M}+\text{H}]^+$

[793] Example 148. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(6-(4-methylpiperazin-1-yl)pyridin-3-yl)benzyl)oxy)cyclopentyl)nicotinamide

[794] Using (6-(4-methylpiperazin-1-yl)pyridin-3-yl)boronic acid, the title compound was obtained as described for the example 134.



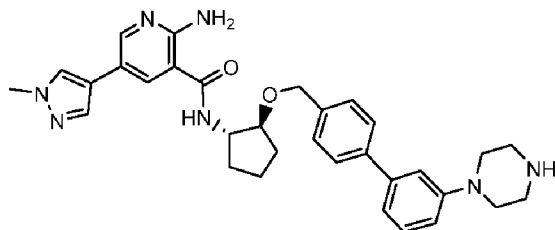
[796] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.58 - 1.66 (m, 1 H) 1.73 - 1.87 (m, 3 H) 2.04 (dq, $J=13.72, 6.77$ Hz, 1 H) 2.16 (dt, $J=13.35, 6.53$ Hz, 1 H) 2.96 (s, 3 H) 3.90 (s, 3 H) 3.96 - 4.01 (m, 1 H) 4.37 - 4.45 (m, 1 H) 4.60 - 4.69 (m, 2 H) 6.99 (d, $J=8.80$ Hz, 1 H) 7.41 (d, $J=8.22$ Hz, 2 H) 7.50 (d, $J=8.22$ Hz, 2 H) 7.83 (s, 1 H) 7.85 (d, $J=2.35$ Hz, 1 H) 7.96 (s, 1 H) 8.20 (d, $J=2.35$ Hz, 1 H) 8.36 (d, $J=2.35$ Hz, 1 H) 8.45 (s, 1 H);

[797] MS (ESI, m/z): 567.3 $[\text{M}+\text{H}]^+$

[798] Example 149. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3'-(piperazin-1-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[799] Using (3-(piperazin-1-yl)phenyl)boronic acid, the title compound was obtained as described for the example 134.

[800]



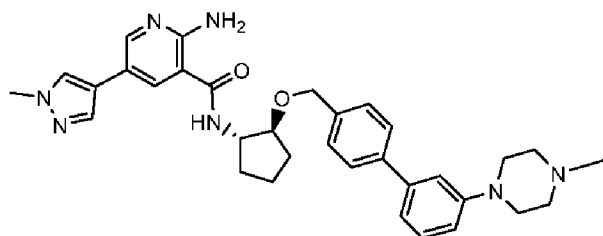
[801] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.62 (br d, $J=5.87$ Hz, 2 H) 1.81 (br d, $J=6.65$ Hz, 3 H) 1.96 - 2.07 (m, 1 H) 2.17 (br s, 1 H) 3.40 (br dd, $J=19.95, 5.87$ Hz, 8 H) 3.88 (s, 3 H) 4.00 (br s, 1 H) 4.40 (br s, 1 H) 4.65 (s, 2 H) 6.99 (br d, $J=7.43$ Hz, 1 H) 7.10 (br d, $J=6.65$ Hz, 1 H) 7.16 (s, 1 H) 7.32 (t, $J=7.60$ Hz, 1 H) 7.40 (d, $J=7.83$ Hz, 2 H) 7.53 (d, $J=8.61$ Hz, 2 H) 7.84 (s, 1 H) 7.95 (s, 1 H) 8.19 (s, 1 H) 8.46 (s, 1 H);

[802] MS (ESI, m/z): 552.3 $[\text{M}+\text{H}]^+$

[803] Example 150. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3'-(4-methylpiperazin-1-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[804] Using (3-(4-methylpiperazin-1-yl)phenyl)boronic acid, the title compound was obtained as described for the example 134.

[805]



[806] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.66 (s, 1 H) 1.73 - 1.88 (m, 3 H) 1.99 - 2.08 (m, 1 H) 2.17 (br dd, $J=13.50, 5.87$ Hz, 1 H) 2.97 (s, 3 H) 3.06 (br s, 2 H) 3.60 (br s, 2 H) 3.88 (s, 3 H) 3.96 - 4.03 (m, 1 H) 4.41 (br d, $J=4.70$ Hz, 1 H) 4.61 - 4.70 (m, 2 H) 6.99 (br d, $J=8.80$ Hz, 1 H) 7.10 (br d, $J=7.63$ Hz, 1 H) 7.16 (s, 1 H) 7.32 (t, $J=7.92$ Hz, 1 H) 7.41 (d, $J=8.22$ Hz, 2 H) 7.53 (d, $J=8.22$ Hz, 2 H) 7.82 (s, 1 H) 7.93 (s, 1 H) 8.19 (d, $J=1.76$ Hz, 1 H) 8.35 - 8.41 (m, 1 H);

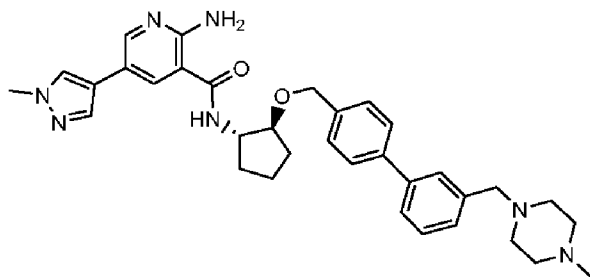
[807] MS (ESI, m/z): 566.3 $[\text{M}+\text{H}]^+$

[808] Example 151.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[809] Using (3-((4-methylpiperazin-1-yl)methyl)phenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 134.

[810]



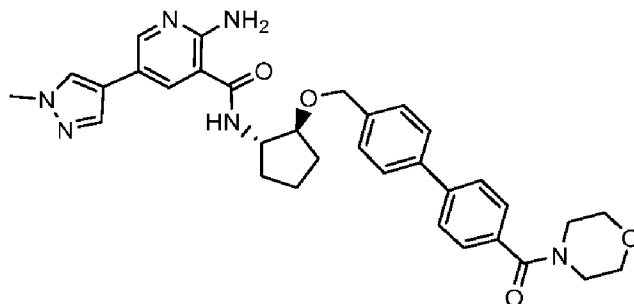
[811] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.65 (br dd, $J=13.30, 6.26$ Hz, 1 H) 1.76 - 1.90 (m, 3 H) 1.99 - 2.10 (m, 1 H) 2.18 (br dd, $J=14.09, 6.65$ Hz, 1 H) 2.85 (s, 3 H) 3.78 (s, 2 H) 3.91 (s, 3 H) 4.02 (br s, 1 H) 4.43 (br dd, $J=10.96, 7.83$ Hz, 1 H) 4.68 (s, 2 H) 7.34 (br d, $J=7.43$ Hz, 1 H) 7.38 - 7.45 (m, 3 H) 7.51 (br d, $J=7.83$ Hz, 1 H) 7.54 - 7.60 (m, 3 H) 7.86 (s, 1 H) 7.99 (s, 1 H) 8.21 (d, $J=1.96$ Hz, 1 H) 8.51 (d, $J=1.96$ Hz, 1 H);

[812] MS (ESI, m/z): 579.3 $[\text{M}+\text{H}]^+$

[813] Example 152. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(morpholine-4-carbonyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[814] Using (4-(morpholine-4-carbonyl)phenyl)boronic acid, the title compound was obtained as described for the example 134.

[815]

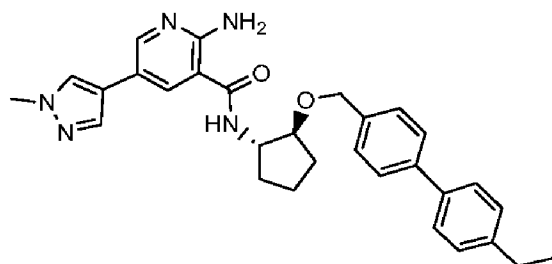


[816] MS (ESI, m/z): 581.3 $[\text{M}+\text{H}]^+$

[817] Example 153. 2-amino-N-((1S,2S)-2-((4'-ethyl-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[818] Using (4-ethylphenyl)boronic acid, the title compound was obtained as described for the example 134.

[819]



[820] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.24 (t, $J=7.63$ Hz, 3 H) 1.55 - 1.67 (m, 1 H) 1.73 - 1.86 (m, 3 H) 2.01 - 2.08 (m, 1 H) 2.16 (br dd, $J=13.21, 5.58$ Hz, 1 H) 2.66 (q, J

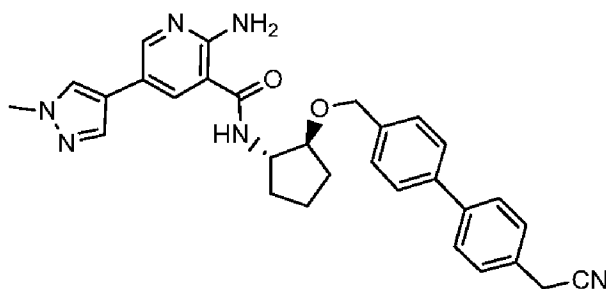
=7.63 Hz, 2 H) 3.87 (s, 3 H) 3.93 - 3.99 (m, 1 H) 4.38 - 4.42 (m, 1 H) 4.61 (d, $J=12.91$ Hz, 1 H) 4.65 - 4.71 (m, 1 H) 7.21 (d, $J=7.63$ Hz, 2 H) 7.38 (d, $J=8.22$ Hz, 2 H) 7.41 (d, $J=8.22$ Hz, 2 H) 7.50 (d, $J=8.22$ Hz, 2 H) 7.82 (s, 1 H) 7.91 (s, 1 H) 8.16 (d, $J=1.76$ Hz, 1 H) 8.42 (d, $J=2.35$ Hz, 1 H);

[821] MS (ESI, m/z): 496.3 $[M+H]^+$

[822] Example 154. 2-amino-N-((1S,2S)-2-((4'-(cyanomethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[823] Using (4-(cyanomethyl)phenyl)boronic acid, the title compound was obtained as described for the example 134.

[824]

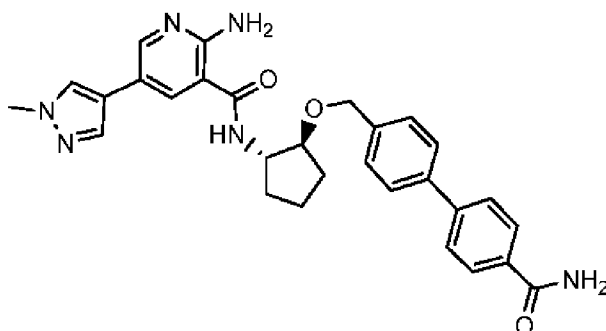


[825] MS (ESI, m/z): 507.2 $[M+H]^+$

[826] Example 155. 2-amino-N-((1S,2S)-2-((4'-carbamoyl-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[827] Using (4-carbamoylphenyl)boronic acid, the title compound was obtained as described for the example 134.

[828]



[829] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.62 (s, 1 H) 1.70 - 1.88 (m, 3 H) 2.05 (s, 1 H) 2.16 (td, $J=13.06$, 7.92 Hz, 1 H) 3.88 (s, 3 H) 3.98 (br d, $J=6.46$ Hz, 1 H) 4.40 (br d, $J=4.70$ Hz, 1 H) 4.63 (d, $J=12.33$ Hz, 1 H) 4.70 (d, $J=12.91$ Hz, 1 H) 7.44 (d, $J=8.22$ Hz, 2 H) 7.58 (d, $J=8.22$ Hz, 2 H) 7.61 (d, $J=8.80$ Hz, 2 H) 7.81 (s, 1 H) 7.89 (d, $J=8.22$ Hz, 2 H) 7.92 (s, 1 H) 8.17 (d, $J=2.35$ Hz, 1 H) 8.38 (d, $J=1.76$ Hz, 1 H);

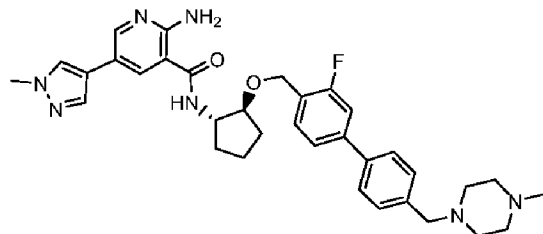
[830] MS (ESI, m/z): 511.2 $[M+H]^+$

[831] Example 156.

2-amino-N-((1S,2S)-2-((3-fluoro-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[832] Using (1S,2S)-2-((4-bromo-2-fluorobenzyl)oxy)cyclopentan-1-amine and 4-(4-methylpiperazino)methylphenylboronic acid pinacol ester, the title compound was obtained as described for the example 134.

[833]



[834] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.64 (br dd, $J=13.30$, 7.04 Hz, 1 H) 1.74 - 1.92 (m, 3 H) 2.04 (br dd, $J=12.72$, 6.06 Hz, 1 H) 2.17 (br dd, $J=13.50$, 6.46 Hz, 1 H) 2.91 (s, 3 H) 3.25 (br s, 4 H) 3.47 (br s, 4 H) 3.90 (s, 3 H) 3.96 - 4.08 (m, 1 H) 4.12 (s, 2 H) 4.34 - 4.45 (m, 1 H) 4.64 - 4.78 (m, 2 H) 5.47 (s, 1 H) 7.32 (br d, $J=11.35$ Hz, 1 H) 7.40 (br d, $J=7.83$ Hz, 1 H) 7.47 - 7.57 (m, 3 H) 7.62 (br d, $J=7.83$ Hz, 2 H) 7.85 (s, 1 H) 7.99 (s, 1 H) 8.18 (s, 1 H) 8.55 (s, 1 H);

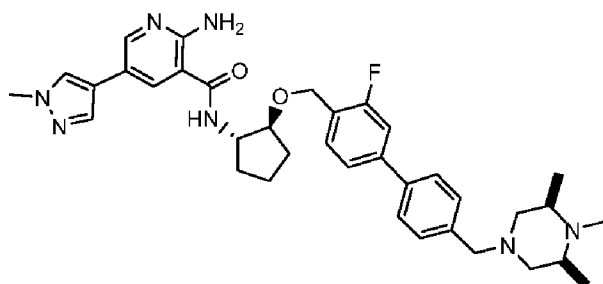
[835] MS (ESI, m/z): 598.4 $[\text{M}+\text{H}]^+$

[836] Example 157.

2-amino-N-((1S,2S)-2-((3-fluoro-4'-((cis-3,4,5-trimethylpiperazin-1-yl)methyl)-[1,1'-bi phenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[837] Using (1S,2S)-2-((4-bromo-2-fluorobenzyl)oxy)cyclopentan-1-amine and 4-((cis-3,4,5-trimethylpiperazin-1-yl)methyl)phenylboronic acid pinacol ester, the title compound was obtained as described for the example 134.

[838]



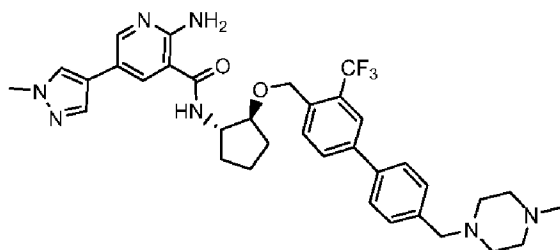
[839] MS (ESI, m/z): 626.4 $[\text{M}+\text{H}]^+$

[840] Example 158.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-3-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[841] Using (1S,2S)-2-((4-bromo-2-(trifluoromethyl)benzyl)oxy)cyclopentan-1-amine and 4-(4-methylpiperazino)methylphenylboronic acid pinacol ester, the title compound was obtained as described for the example 134.

[842]



[843] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.69 (dt, $J=13.89$, 6.75 Hz, 1 H) 1.77 - 1.93 (m, 3 H) 2.01 - 2.12 (m, 1 H) 2.13 - 2.30 (m, 1 H) 2.87 (s, 3 H) 3.75 (s, 2 H) 3.92 (s, 3 H) 4.00 - 4.08 (m, 1 H) 4.45 (br dd, $J=11.54$, 7.24 Hz, 1 H) 7.47 (d, $J=8.22$ Hz, 2 H) 7.62 (m, $J=8.22$ Hz, 2 H) 7.81 - 7.84 (m, 2 H) 7.86 (d, $J=5.09$ Hz, 2 H) 8.00 (s, 1 H) 8.23 (d, $J=1.96$ Hz, 1 H) 8.56 (d, $J=2.35$ Hz, 1 H);

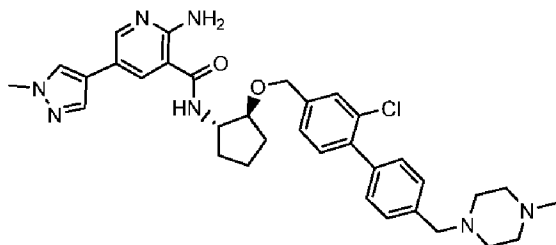
[844] MS (ESI, m/z): 648.3 $[\text{M}+\text{H}]^+$

[845] Example 159.

2-amino-N-((1S,2S)-2-((2-chloro-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[846] Using (1S,2S)-2-((4-bromo-3-chlorobenzyl)oxy)cyclopentan-1-amine and 4-(4-methylpiperazino)methylphenylboronic acid pinacol ester, the title compound was obtained as described for the example 134.

[847]



[848] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.65 (br dd, $J=13.50$, 7.04 Hz, 1 H) 1.74 - 1.89 (m, 3H) 1.97 - 2.11 (m, 1 H) 2.15 - 2.22 (m, 1 H) 2.85 (s, 3 H) 3.72 (s, 2 H) 3.92 (s, 3 H) 3.98 (dt, $J=6.46$, 4.11 Hz, 1 H) 4.42 (td, $J=7.34$, 4.11 Hz, 1 H) 4.66 (d, $J=2.35$ Hz, 2 H) 7.27 (d, $J=7.63$ Hz, 1 H) 7.30 - 7.37 (m, 3 H) 7.40 (d, $J=8.22$ Hz, 2 H) 7.47 (d, $J=1.17$ Hz, 1 H) 7.86 (s, 1 H) 7.99 (s, 1 H) 8.22 (d, $J=2.35$ Hz, 1 H) 8.49 (d, $J=2.35$ Hz, 1 H);

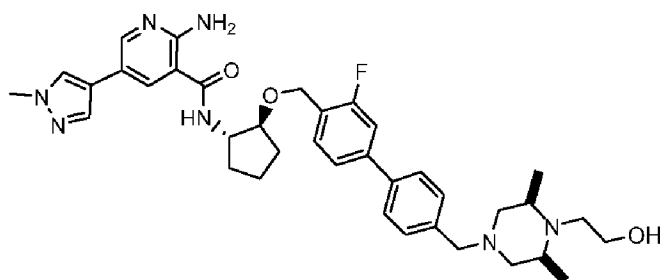
[849] MS (ESI, m/z): 614.3 $[\text{M}+\text{H}]^+$

[850] Example 160.

2-amino-N-((1S,2S)-2-((3-fluoro-4'-((cis-4-(2-hydroxyethyl)-3,5-dimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[851] Using (1S,2S)-2-((4-bromo-2-fluorobenzyl)oxy)cyclopentan-1-amine and 4-((cis-4-(2-hydroxyethyl)-3,5-dimethylpiperazin-1-yl)methyl)phenylboronic acid pinacol ester, the title compound was obtained as described for the example 134.

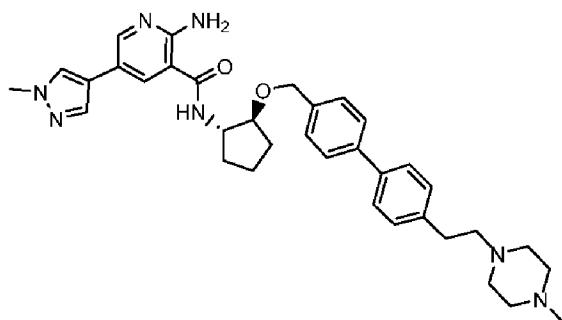
[852]

[853] MS (ESI, m/z): 656.4 [M+H]⁺[854] Example 161.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(2-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[855] Using 4-(2-(4-methylpiperazino)ethyl)phenylboronic acid pinacol ester, the title compound was obtained as described for the example 134.

[856]



[857] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.63 (br dd, *J*=13.79, 6.75 Hz, 1 H) 1.74 - 1.87 (m, 3 H) 2.00 - 2.11 (m, 1 H) 2.11 - 2.23 (m, 1 H) 2.79 - 2.96 (m, 2 H) 3.02 (br s, 2 H) 3.24 (s, 2 H) 3.41 (br s, 4 H) 3.89 (s, 3 H) 3.97 - 4.03 (m, 1 H) 4.41 (br s, 1 H) 4.61 - 4.71 (m, 2 H) 7.31 (br d, *J*=8.22 Hz, 2 H) 7.40 (d, *J*=7.63 Hz, 2 H) 7.50 (br d, *J*=8.22 Hz, 2 H) 7.51 - 7.57 (m, 2 H) 7.84 (br d, *J*=2.93 Hz, 1 H) 7.96 (s, 1 H) 8.16 - 8.21 (m, 1 H) 8.50 (br d, *J*=4.70 Hz, 1 H);

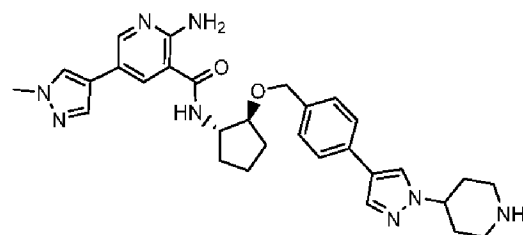
[858] MS (ESI, m/z): 594.4 [M+H]⁺

[859] Example 162. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)benzyl)oxy)cyclopentyl)nicotinamide

[860] Using tert-butyl

4-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-1H-pyrazol-1-yl)piperidine-1-carboxylate, the title compound was obtained as described for the example 134 and following deprotection with TFA.

[861]



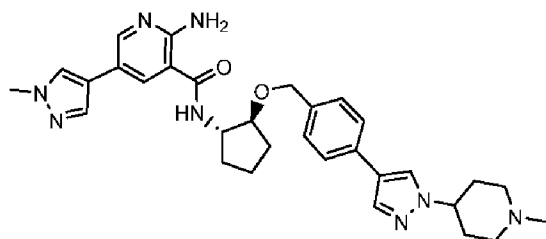
[862] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.62 (br s, 1 H) 1.80 (br d, $J=6.65$ Hz, 3 H) 2.03 (br s, 1 H) 2.15 (br s, 1 H) 2.28 (br d, $J=13.69$ Hz, 4 H) 3.14 - 3.25 (m, 2 H) 3.56 (br d, $J=11.35$ Hz, 2 H) 3.90 (s, 3 H) 3.97 (br s, 1 H) 4.39 (br s, 1 H) 4.53 (br s, 1 H) 4.60 (s, 2 H) 7.32 (br d, $J=7.83$ Hz, 2 H) 7.47 (br d, $J=7.83$ Hz, 2 H) 7.79 (s, 1 H) 7.85 (s, 1 H) 7.97 (br s, 2 H) 8.20 (br s, 1 H) 8.48 (s, 1 H);

[863] MS (ESI, m/z): 541.3 $[\text{M}+\text{H}]^+$

[864] Example 163. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)benzyl)oxy)cyclopentyl)nicotinamide

[865] Using (1-methyl-4-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-1H-pyrazol-1-yl)piperidine, the title compound was obtained as described for the example 134.

[866]



[867] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.57 - 1.66 (m, 1 H) 1.72 - 1.87 (m, 3 H) 2.03 (br dd, $J=12.62, 6.75$ Hz, 1 H) 2.17 (br s, 1 H) 2.24 - 2.42 (m, 4 H) 2.94 (s, 3 H) 3.19 - 3.27 (m, 2 H) 3.48 (br s, 1 H) 3.90 (s, 3 H) 3.98 (br d, $J=6.46$ Hz, 1 H) 4.36 - 4.45 (m, 1 H) 4.46 - 4.55 (m, 1 H) 4.57 - 4.64 (m, 2 H) 7.33 (br d, $J=8.22$ Hz, 2 H) 7.47 (br d, $J=8.22$ Hz, 2 H) 7.79 (br s, 1 H) 7.84 (s, 1 H) 7.97 (d, $J=5.87$ Hz, 2 H) 8.20 (br d, $J=1.76$ Hz, 1 H) 8.47 (s, 1 H);

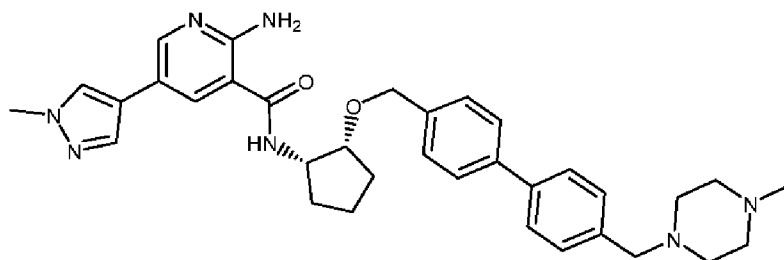
[868] MS (ESI, m/z): 555.3 $[\text{M}+\text{H}]^+$

[869] Example 164.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2R)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[870] Using (1S,2R)-2-((4-bromobenzyl)oxy)cyclopentan-1-amine and (4-((4-methylpiperazin-1-yl)methyl)phenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 134.

[871]



[872] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.58 - 1.69 (m, 1 H) 1.82 - 1.97 (m, 4 H) 2.00 -

2.07 (m, 1 H) 2.83 - 2.90 (m, 3 H) 3.79 (s, 3 H) 3.80 - 3.87 (m, 2 H) 4.11 - 4.18 (m, 1 H) 4.36 - 4.43 (m, 1 H) 4.45 (d, $J=11.74$ Hz, 1 H) 4.67 (d, $J=11.74$ Hz, 1 H) 7.38 (d, $J=8.22$ Hz, 2 H) 7.40 - 7.44 (m, 2 H) 7.46 (d, $J=8.22$ Hz, 2 H) 7.49 (d, $J=8.22$ Hz, 2 H) 7.78 (s, 1 H) 7.83 (s, 1 H) 8.12 - 8.19 (m, 1 H) 8.44 (s, 1 H);

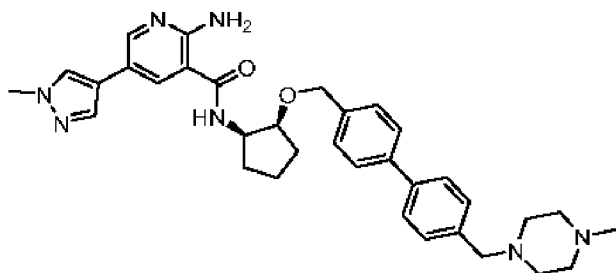
[873] MS (ESI, m/z): 580.3 $[M+H]^+$

[874] Example 165.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1R,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[875] Using (1R,2S)-2-((4-bromobenzyl)oxy)cyclopentan-1-amine and (4-((4-methylpiperazin-1-yl)methyl)phenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 134.

[876]



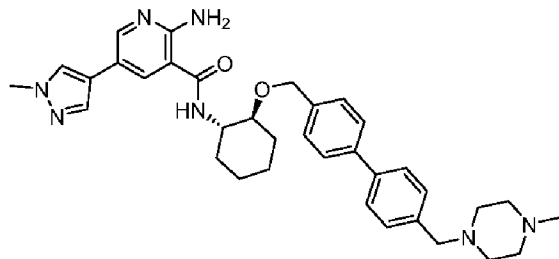
[877] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.60 - 1.70 (m, 1 H) 1.81 - 1.98 (m, 4 H) 2.00 - 2.09 (m, 1 H) 2.87 (s, 3 H) 3.79 (s, 3 H) 3.80 - 3.85 (m, 2 H) 4.15 (d, $J=4.70$ Hz, 1 H) 4.36 - 4.42 (m, 1 H) 4.45 (d, $J=11.74$ Hz, 1 H) 4.67 (d, $J=12.33$ Hz, 1 H) 7.38 (d, $J=8.22$ Hz, 2 H) 7.42 (d, $J=7.04$ Hz, 2 H) 7.46 (d, $J=8.22$ Hz, 2 H) 7.48 - 7.50 (m, 2 H) 7.78 (s, 1 H) 7.83 (s, 1 H) 8.15 (d, $J=1.76$ Hz, 1 H) 8.44 (d, $J=2.35$ Hz, 1 H);

[878] MS (ESI, m/z): 580.3 $[M+H]^+$

[879] Example 166. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclohexyl)nicotinamide

[880] Using (1S,2S)-2-((4-bromobenzyl)oxy)cyclohexan-1-amine and (4-((4-methylpiperazin-1-yl)methyl)phenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 134.

[881]



[882] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.43 (br s, 4 H) 1.97 - 2.07 (m, 2 H) 2.18 (br s, 2 H) 2.32 (s, 3 H) 3.40 - 3.48 (m, 1 H) 3.58 (s, 2 H) 3.80 - 3.89 (m, 1 H) 3.90 (s, 3 H)

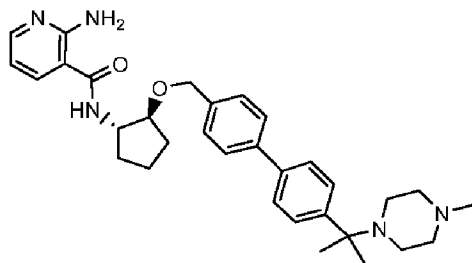
4.61 (s, 2 H) 7.41 (dd, $J=14.09$, 8.22 Hz, 4 H) 7.55 - 7.62 (m, 4 H) 7.78 (s, 1 H) 7.89 (s, 1 H) 8.03 (d, $J=1.76$ Hz, 1 H) 8.23 (br s, 1 H);

[883] MS (ESI, m/z): 594.4 $[M+H]^+$

[884] Example 167. 2-amino-N-((1S,2S)-2-(((4'-(2-(4-methylpiperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[885] Using 2-aminonicotinic acid and (4-(2-(4-methylpiperazin-1-yl)propan-2-yl)phenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 134.

[886]



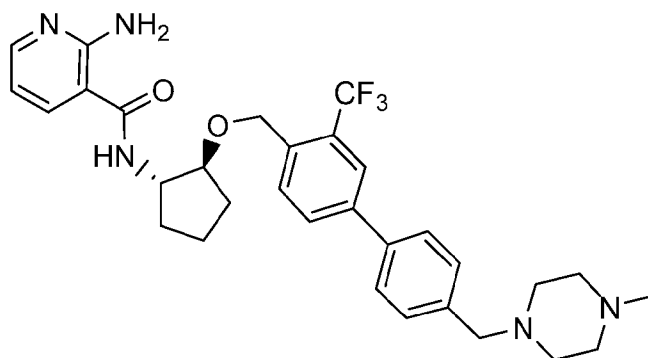
[887] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.47 (s, 6 H) 1.55 - 1.70 (m, 1 H) 1.82 (br d, $J=7.04$ Hz, 3 H) 2.03 (br s, 1 H) 2.12 - 2.25 (m, 1 H) 2.86 (s, 3 H) 4.00 (br s, 1 H) 4.40 (br s, 1 H) 4.66 (s, 2 H) 6.90 - 6.99 (m, 1 H) 7.38 - 7.46 (m, 2 H) 7.59 (br dd, $J=10.96$, 7.83 Hz, 6 H) 8.01 (d, $J=5.09$ Hz, 1 H) 8.33 (d, $J=7.83$ Hz, 1 H);

[888] MS (ESI, m/z): 528.3 $[M+H]^+$

[889] Example 168. 2-amino-N-((1S,2S)-2-(((4'-(4-methylpiperazin-1-yl)methyl)-3-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[890] Using 2-aminonicotinic acid, (1S,2S)-2-((4-bromo-2-(trifluoromethyl)benzyl)oxy)cyclopentan-1-amine and 4-(4-methylpiperazino)methylphenylboronic acid pinacol ester, the title compound was obtained as described for the example 134.

[891]



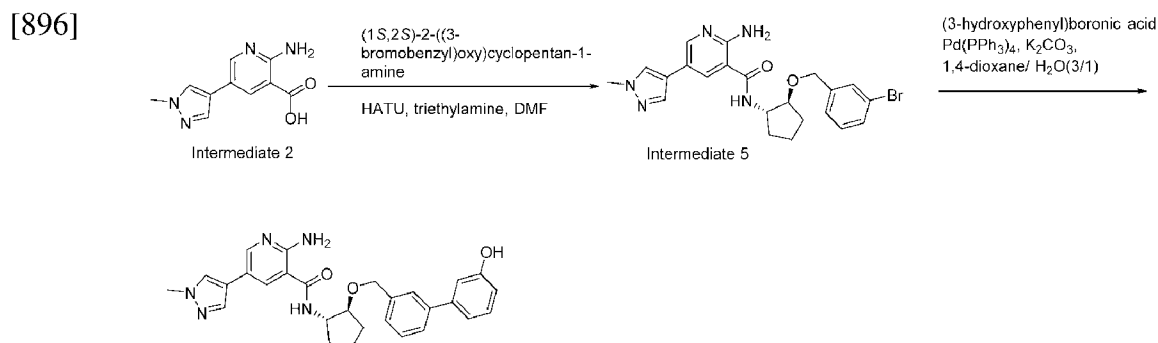
[892] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.66 (dt, $J=13.60$, 6.70 Hz, 1 H) 1.78 - 1.93 (m, 3 H) 1.97 - 2.12 (m, 1 H) 2.13 - 2.26 (m, 1 H) 2.87 (s, 3 H) 3.77 (s, 2 H) 4.00 - 4.05 (m, 1 H) 4.43 (br dd, $J=10.76$, 7.63 Hz, 1 H) 6.98 (dd, $J=7.43$, 6.26 Hz, 1 H) 7.48 (d, $J=8.22$ Hz, 2 H) 7.65 (d, $J=8.22$ Hz, 2 H) 7.77 - 7.93 (m, 3 H) 8.02 (br dd, $J=6.26$, 1.57

Hz, 1 H) 8.37 (dd, $J=7.43, 1.57$ Hz, 1 H):

[893] MS (ESI, m/z): 568.3[M+H]⁺

[894] Example 169. amino-N-((1S,2S)-2-((3'-hydroxy -
[1,1'-biphenyl]-3-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[895] Scheme for the preparation of the Compound of Example 169:



[897] Intermediate 5. To a mixture of intermediate 2 (350 mg, 1.60 mmol) and triethylamine (0.34 ml, 2.41 mmol) in 4 ml of DMF was added HATU (732 mg, 1.92 mmol) followed by (1S,2S)-2-((3-bromobenzyl)oxy)cyclopentan-1-amine (475 mg, 1.76 mmol). The mixture was stirred at room temperature for 1 hr and then saturated sodium bicarbonate solution was added. The mixture was extracted with EtOAc, washed with brine, dried over MgSO₄, and concentrated in vacuo. The crude product was purified through silicagel column chromatography to give 680 mg of off-white solid.

[898] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.58 - 1.69 (m, 1 H) 1.72 - 1.88 (m, 3 H) 1.96 - 2.08 (m, 1 H) 2.16 (td, $J=13.35, 7.92$ Hz, 1 H) 3.86 - 4.00 (m, 3 H) 4.39 (td, $J=7.48, 4.40$ Hz, 1 H) 4.60 (q, $J=12.72$ Hz, 2 H) 7.20 (t, $J=7.92$ Hz, 1 H) 7.29 (d, $J=7.63$ Hz, 1 H) 7.35 (d, $J=7.63$ Hz, 1 H) 7.50 (s, 1 H) 7.45 - 7.53 (m, 1 H) 7.86 (s, 1 H) 8.00 (s, 1 H) 8.23 (d, $J=2.35$ Hz, 1 H) 8.46 (d, $J=1.76$ Hz, 1 H):

[899] MS (ESI, m/z): 470.1/472.1 [M+H]⁺

[900] Example 169.

2-amino-N-((1S,2S)-2-((3'-hydroxy-[1,1'-biphenyl]-3-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

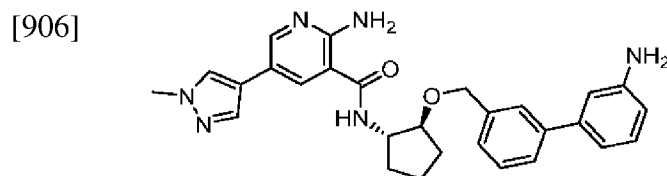
[901] To a mixture of intermediate 5 (33 mg, 0.07 mmol) and (3-hydroxyphenyl)boronic acid (11 mg, 0.08 mmol) in 0.4 ml of 1,4-dioxane/ water (3/1) was added K₂CO₃ (29 mg, 0.21 mmol) followed by Pd(PPh₃)₄ (4 mg, 0.003 mmol). The reaction mixture was heated at 100 °C for 3 hrs, cooled to room temperature, and extracted with EtOAc, dried over anhydrous MgSO₄ and concentrated under vacuum. The crude residue was dissolved with 0.5 ml of CH₂Cl₂ / TFA (10/1) and the mixture was stirred for 2 hrs. After concentration under vacuum, the crude residue was purified by preparative HPLC to afford 27 mg of the title compound.

[902] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.62 (br dd, $J=12.62$, 6.75 Hz, 1 H) 1.81 (br d, $J=4.70$ Hz, 3 H) 2.03 (br d, $J=11.74$ Hz, 1 H) 2.16 (br s, 1 H) 3.92 (s, 3 H) 3.94 - 4.01 (m, 1 H) 4.43 (br s, 1 H) 4.64 - 4.74 (m, 2 H) 7.13 (br d, $J=6.46$ Hz, 2 H) 7.34 - 7.43 (m, 3 H) 7.47 (br d, $J=7.63$ Hz, 2 H) 7.58 - 7.62 (m, 1 H) 7.81 (s, 1 H) 7.96 (s, 1 H) 8.17 (br d, $J=1.76$ Hz, 1 H) 8.36 (br d, $J=2.35$ Hz, 1 H);

[903] MS (ESI, m/z): 484.2 $[\text{M}+\text{H}]^+$

[904] Example 170. 2-amino-N-((1S,2S)-2-((3'-(3'-amino-[1,1'-biphenyl]-3-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

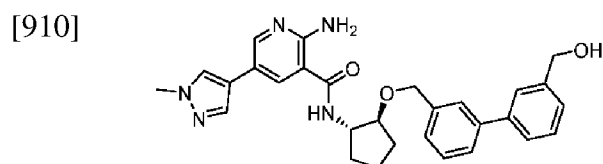
[905] Using (3-aminophenyl)boronic acid, the title compound was obtained as described for the example 169.



[907] MS (ESI, m/z): 483.2 $[\text{M}+\text{H}]^+$

[908] Example 171. 2-amino-N-((1S,2S)-2-((3'-(3-(hydroxymethyl)phenyl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

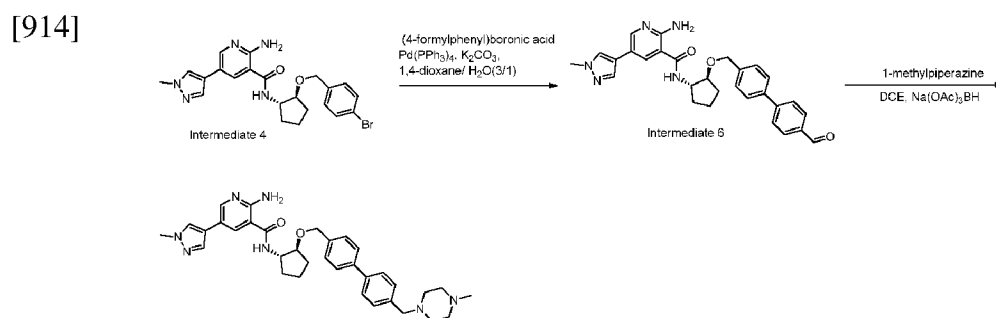
[909] Using (3-(hydroxymethyl)phenyl)boronic acid, the title compound was obtained as described for the example 169.



[911] MS (ESI, m/z): 498.2 $[\text{M}+\text{H}]^+$

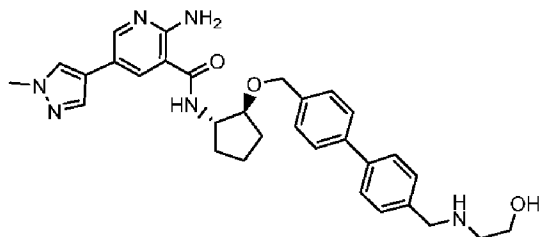
[912] Example 172. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[913] Scheme for the preparation of the Compound of Example 172:



- [915] Intermediate 6. To a mixture of intermediate 4 (33 mg, 0.07 mmol) and (4-formylphenyl)boronic acid (12 mg, 0.08 mmol) in 0.4 ml of 1,4-dioxane/ water (3/1) was added K_2CO_3 (29 mg, 0.21 mmol) followed by $Pd(PPh_3)_4$ (4 mg, 0.003 mmol). The reaction mixture was heated at 100 °C for 3 hrs, cooled to room temperature, and extracted with EtOAc, dried over anhydrous $MgSO_4$. After concentration under vacuum, the crude residue was purified by preparative HPLC to afford 30 mg of the title compound.
- [916] 1H NMR (400 MHz, $CDCl_3$) δ ppm 1.52 - 1.62 (m, 1 H) 1.74 - 1.85 (m, 3 H) 1.85 - 1.93 (m, 1 H) 1.97 - 2.06 (m, 1 H) 2.27 (br dd, $J=13.30, 5.48$ Hz, 1 H) 3.87 (s, 3 H) 3.97 - 4.03 (m, 1 H) 4.36 - 4.46 (m, 1 H) 4.69 (s, 2 H) 6.90 (br s, 1 H) 7.12 (br s, 1 H) 7.16 - 7.19 (m, 1 H) 7.43 - 7.48 (m, 2 H) 7.50 (s, 1 H) 7.54 - 7.60 (m, 2 H) 7.68 (m, $J=8.22$ Hz, 2 H) 7.79 (s, 1 H) 7.90 (m, $J=8.22$ Hz, 2 H) 7.98 (s, 1 H) 10.02 (s, 1 H); MS (ESI, m/z): 496.2 $[M+H]^+$
- [917] Example 172.
2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
- [918] To intermediate 6 (30 mg, 0.06 mmol) in 0.4 ml of dichloroethane was added 1-methylpiperazine (12 mg, 0.12 mmol) followed by $NaBH(OAc)_3$ (26 mg, 0.18 mmol). The mixture was stirred at room temperature for 4 hr and then water was added. The mixture was extracted with EtOAc, washed with brine, dried over $MgSO_4$. After concentration under vacuum, the crude residue was purified by preparative HPLC to afford 27 mg of the title compound.
- [919] 1H NMR (400 MHz, CD_3OD) δ ppm 1.52 - 1.67 (m, 1 H) 1.69 - 1.86 (m, 3 H) 2.01 (br dd, $J=12.52, 5.87$ Hz, 1 H) 2.08 - 2.21 (m, 1 H) 2.28 (s, 3 H) 2.51 (br s, 8 H) 3.54 (s, 2 H) 3.84 (s, 3 H) 3.91 - 3.99 (m, 1 H) 4.40 (br d, $J=4.70$ Hz, 1 H) 4.64 (br d, $J=3.13$ Hz, 2 H) 7.34 (br d, $J=7.83$ Hz, 2 H) 7.39 (br d, $J=8.22$ Hz, 2 H) 7.47 (br d, $J=7.83$ Hz, 1 H) 7.50 (br d, $J=7.83$ Hz, 2 H) 7.73 (s, 1 H) 7.81 (s, 1 H) 7.96 (s, 1 H) 8.23 (s, 1 H);
- [920] MS (ESI, m/z): 580.3 $[M+H]^+$
- [921] Example 173.
2-amino-N-((1S,2S)-2-((4'-(((2-hydroxyethyl)amino)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
- [922] Using 2-aminoethan-1-ol, the title compound was obtained as described for the example 172.

[923]



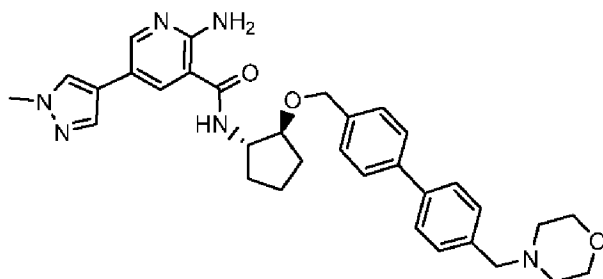
[924] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.59 - 1.69 (m, 1 H) 1.74 - 1.88 (m, 3 H) 1.99 - 2.11 (m, 1 H) 2.18 (td, $J=12.91, 7.04$ Hz, 1 H) 3.11 - 3.12 (m, 1 H) 3.11 - 3.16 (m, 1 H) 3.77 - 3.86 (m, 2 H) 3.90 (s, 3 H) 3.93 (br d, $J=5.87$ Hz, 1 H) 3.97 - 4.05 (m, 1 H) 4.26 (s, 2 H) 4.39 - 4.48 (m, 1 H) 4.67 (s, 2 H) 7.44 (d, $J=8.22$ Hz, 2 H) 7.53 (m, $J=8.22$ Hz, 2 H) 7.55 - 7.62 (m, 2 H) 7.66 (d, $J=8.22$ Hz, 2 H) 7.85 (s, 1 H) 7.97 (s, 1 H) 8.20 (s, 1 H) 8.49 (br s, 1 H);

[925] MS (ESI, m/z): 541.3 $[\text{M}+\text{H}]^+$

[926] Example 174. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(morpholinomethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[927] Using morpholine, the title compound was obtained as described for the example 172.

[928]



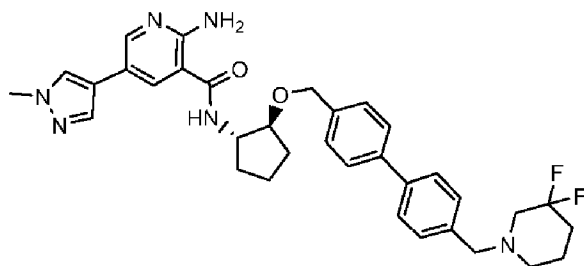
[929] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.57 - 1.69 (m, 1 H) 1.74 - 1.90 (m, 3 H) 2.04 (s, 1 H) 2.14 - 2.23 (m, 1 H) 2.19 (br d, $J=7.63$ Hz, 1 H) 3.31 - 3.46 (m, 2 H) 3.90 (s, 3 H) 3.99 - 4.03 (m, 1 H) 4.39 (s, 2 H) 4.42 (br d, $J=5.28$ Hz, 1 H) 4.67 (d, $J=3.52$ Hz, 2 H) 7.45 (d, $J=8.22$ Hz, 2 H) 7.56 (d, $J=8.22$ Hz, 2 H) 7.59 (d, $J=8.22$ Hz, 2 H) 7.71 (d, $J=7.63$ Hz, 2 H) 7.85 (s, 1 H) 7.98 (s, 1 H) 8.21 (d, $J=1.76$ Hz, 1 H) 8.49 (br s, 1 H);

[930] MS (ESI, m/z): 567.3 $[\text{M}+\text{H}]^+$

[931] Example 175. 2-amino-N-((1S,2S)-2-((4'-((3,3-difluoropiperidin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[932] Using 3,3-difluoropiperidine, the title compound was obtained as described for the example 172.

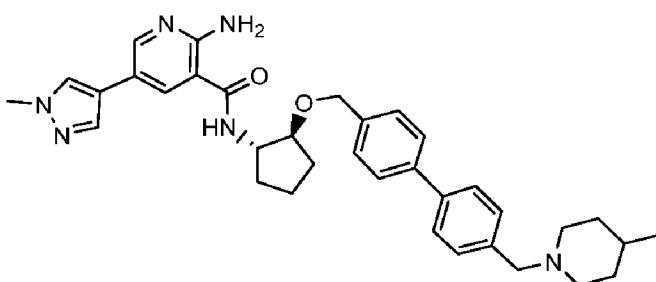
[933]

[934] MS (ESI, m/z): 601.3 [M+H]⁺[935] Example 176.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperidin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[936] Using 4-methylpiperidine, the title compound was obtained as described for the example 172.

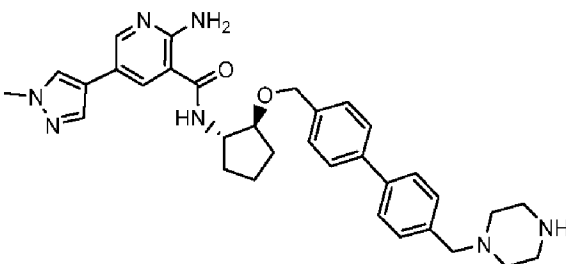
[937]

[938] MS (ESI, m/z): 579.3 [M+H]⁺

[939] Example 177. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(piperazin-1-ylmethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[940] Using piperazine, the title compound was obtained as described for the example 172.

[941]



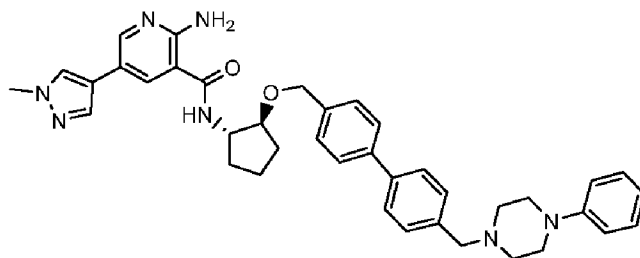
[942] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.63 (br dd, *J*=13.50, 7.04 Hz, 1 H) 1.73 - 1.88 (m, 3 H) 2.00 - 2.08 (m, 1 H) 2.13 - 2.22 (m, 1 H) 2.96 (br s, 4 H) 3.32 (br d, *J*=9.98 Hz, 4 H) 3.50 (s, 1 H) 3.84 - 3.89 (m, 2 H) 3.90 (s, 3 H) 4.00 (br s, 1 H) 4.38 - 4.44 (m, 1 H) 4.66 (d, *J*=2.93 Hz, 2 H) 7.38 - 7.47 (m, 4 H) 7.52 - 7.60 (m, 4 H) 7.85 (s, 1 H) 7.97 (s, 1 H) 8.19 (d, *J*=2.35 Hz, 1 H) 8.50 (d, *J*=2.35 Hz, 1 H);

[943] MS (ESI, m/z): 566.3 [M+H]⁺[944] Example 178.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-phenylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[945] Using 1-phenylpiperazine, the title compound was obtained as described for the example 172.

[946]



[947] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.61 - 1.69 (m, 1 H) 1.76 - 1.87 (m, 3 H) 2.00 - 2.07 (m, 1 H) 2.15 - 2.23 (m, 1 H) 3.90 (s, 3 H) 3.98 - 4.04 (m, 1 H) 4.39 - 4.44 (m, 1 H) 4.45 (s, 2 H) 4.68 (s, 2 H) 6.92 (t, $J=7.34$ Hz, 1 H) 7.00 (d, $J=8.22$ Hz, 2 H) 7.27 (t, $J=7.92$ Hz, 2 H) 7.45 (d, $J=8.22$ Hz, 2 H) 7.60 (dd, $J=9.68, 8.51$ Hz, 4 H) 7.72 (br d, $J=8.22$ Hz, 2 H) 7.85 (s, 1 H) 7.98 (s, 1 H) 8.21 (d, $J=1.76$ Hz, 1 H) 8.51 (d, $J=1.76$ Hz, 1 H);

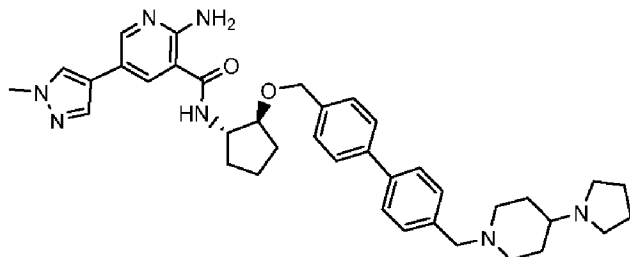
[948] MS (ESI, m/z): 642.4 $[\text{M}+\text{H}]^+$

[949] Example 179.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-(pyrrolidin-1-yl)piperidin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[950] Using 4-(pyrrolidin-1-yl)piperidine, the title compound was obtained as described for the example 172.

[951]



[952] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.60 - 1.69 (m, 1 H) 1.74 - 1.88 (m, 3 H) 1.96 - 2.23 (m, 8 H) 2.43 (br d, $J=13.50$ Hz, 2 H) 3.06 - 3.21 (m, 4 H) 3.44 (br s, 2 H) 3.66 (br d, $J=12.91$ Hz, 4 H) 3.90 (s, 3 H) 3.99 - 4.03 (m, 1 H) 4.37 (s, 2 H) 4.39 - 4.45 (m, 1 H) 4.67 (s, 2 H) 7.41 - 7.48 (m, 2 H) 7.51 - 7.57 (m, 2 H) 7.58 (d, $J=8.22$ Hz, 2 H) 7.68 (br d, $J=8.22$ Hz, 2 H) 7.85 (s, 1 H) 7.98 (s, 1 H) 8.20 (d, $J=2.35$ Hz, 1 H) 8.50 (d, $J=1.76$ Hz, 1 H);

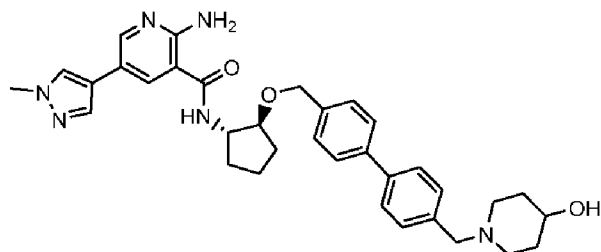
[953] MS (ESI, m/z): 634.4 $[\text{M}+\text{H}]^+$

[954] Example 180.

2-amino-N-((1S,2S)-2-((4'-((4-hydroxypiperidin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[955] Using piperidin-4-ol, the title compound was obtained as described for the example 172.

[956]



[957] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.59 - 1.68 (m, 1 H) 1.74 - 1.87 (m, 3 H) 1.92 (br s, 1 H) 2.03 (dt, $J=13.35$, 6.53 Hz, 1 H) 2.10 - 2.23 (m, 1 H) 3.07 (br s, 1 H) 3.51 (br d, $J=10.56$ Hz, 1 H) 3.82 (br s, 1 H) 3.89 - 3.92 (m, 3 H) 3.98 - 4.03 (m, 1 H) 4.08 (br s, 1 H) 4.34 (br s, 2 H) 4.39 - 4.45 (m, 1 H) 4.67 (s, 2 H) 7.45 (d, $J=8.22$ Hz, 2 H) 7.54 (br s, 2 H) 7.57 - 7.61 (m, 2 H) 7.59 (d, $J=8.22$ Hz, 2 H) 7.69 (br d, $J=8.22$ Hz, 2 H) 7.85 (s, 1 H) 7.99 (s, 1 H) 8.21 (s, 1 H) 8.52 (d, $J=1.76$ Hz, 1 H);

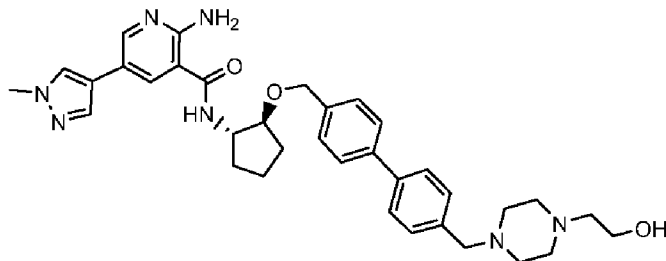
[958] MS (ESI, m/z): 581.3 $[\text{M}+\text{H}]^+$

[959] Example 181.

2-amino-N-((1S,2S)-2-(((4'-(4-(2-hydroxyethyl)piperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[960] Using 2-(piperazin-1-yl)ethan-1-ol, the title compound was obtained as described for the example 172.

[961]



[962] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.64 (br dd, $J=13.50$, 7.04 Hz, 1 H) 1.76 - 1.86 (m, 3 H) 2.00 - 2.08 (m, 1 H) 2.14 - 2.22 (m, 1 H) 3.19 (br s, 2 H) 3.82 - 3.85 (m, 2 H) 3.90 (s, 3 H) 3.98 - 4.02 (m, 1 H) 4.39 - 4.44 (m, 1 H) 4.66 (s, 2 H) 7.40 - 7.47 (m, 4 H) 7.53 - 7.61 (m, 4 H) 7.85 (s, 1 H) 7.97 (s, 1 H) 8.20 (d, $J=2.35$ Hz, 1 H) 8.52 (d, $J=2.35$ Hz, 1 H);

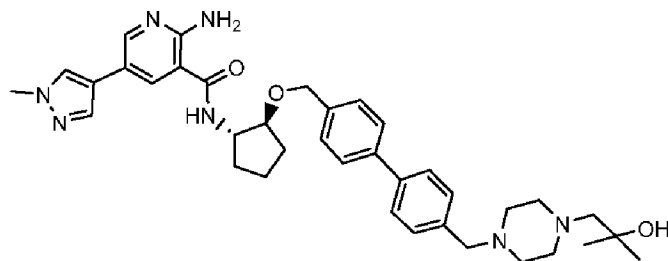
[963] MS (ESI, m/z): 610.3 $[\text{M}+\text{H}]^+$

[964] Example 182.

2-amino-N-((1S,2S)-2-(((4'-(4-(2-hydroxy-2-methylpropyl)piperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[965] Using 2-methyl-1-(piperazin-1-yl)propan-2-ol, the title compound was obtained as described for the example 172.

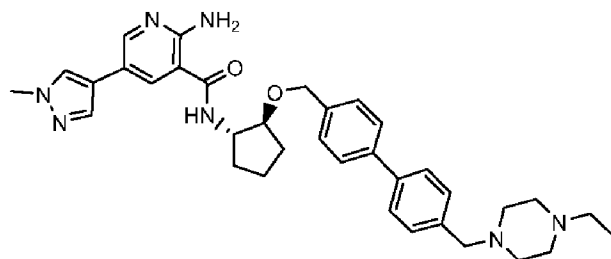
[966]

[967] MS (ESI, m/z): 638.4 [M+H]⁺[968] Example 183.

2-amino-N-((1S,2S)-2-(((4'-((4-ethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[969] Using 1-ethylpiperazine, the title compound was obtained as described for the example 172.

[970]



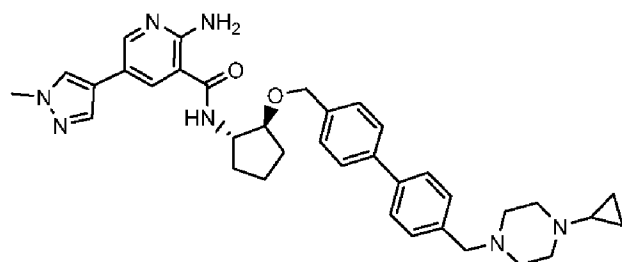
[971] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.32 (t, *J*=7.34 Hz, 3 H) 1.59 - 1.68 (m, 1 H) 1.74 - 1.88 (m, 3 H) 2.04 (dq, *J*=13.50, 6.85 Hz, 1 H) 2.13 - 2.21 (m, 1 H) 3.18 (br d, *J*=7.63 Hz, 2 H) 3.78 - 3.87 (m, 2 H) 3.90 (s, 3 H) 3.98 - 4.02 (m, 1 H) 4.38 - 4.44 (m, 1 H) 4.66 (d, *J*=1.76 Hz, 2 H) 7.38 - 7.46 (m, 4 H) 7.51 - 7.60 (m, 4 H) 7.85 (s, 1 H) 7.97 (s, 1 H) 8.19 (d, *J*=2.35 Hz, 1 H) 8.51 (d, *J*=2.35 Hz, 1 H); MS (ESI, m/z): 594.4 [M+H]⁺

[972] Example 184.

2-amino-N-((1S,2S)-2-(((4'-((4-cyclopropylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[973] Using 1-cyclopropylpiperazine, the title compound was obtained as described for the example 172.

[974]

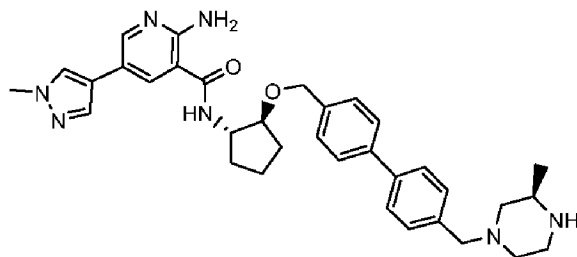
[975] MS (ESI, m/z): 606.4 [M+H]⁺[976] Example 185.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-(((4'-((R)-3-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[977] Using tert-butyl(R)-2-methylpiperazine-1-carboxylate, the title compound was obtained as described for the example 172 and following deprotection with TFA.

[978]



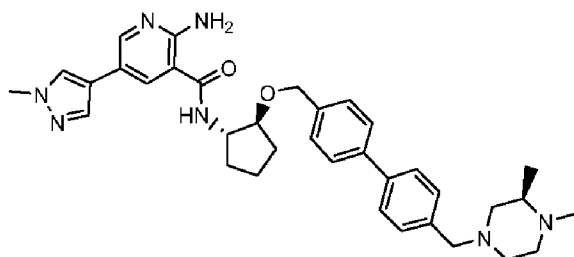
[979] MS (ESI, m/z): 580.3 [M+H]⁺

[980] Example 186.

2-amino-N-((1S,2S)-2-(((4'-(((R)-3,4-dimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[981] Using (R)-1,2-dimethylpiperazine, the title compound was obtained as described for the example 172.

[982]



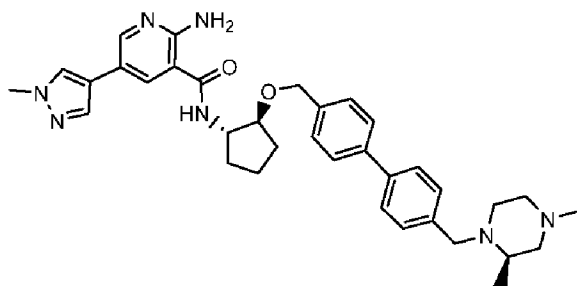
[983] MS (ESI, m/z): 594.4 [M+H]⁺

[984] Example 187.

2-amino-N-((1S,2S)-2-(((4'-(((R)-2,4-dimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[985] Using (R)-1,3-dimethylpiperazine, the title compound was obtained as described for the example 172.

[986]



[987] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.34 (br d, *J*=5.09 Hz, 3 H) 1.63 (br dd, *J*=15.06, 6.46 Hz, 1 H) 1.81 (br d, *J*=7.43 Hz, 3 H) 2.03 (br d, *J*=6.26 Hz, 1 H) 2.18 (s, 1 H) 2.55 (br s, 1 H) 2.82 (s, 3 H) 2.92 (br s, 1 H) 3.02 (br d, *J*=12.52 Hz, 1 H) 3.89 (s, 3 H) 4.00 (br s, 1 H) 4.30 (br d, *J*=11.35 Hz, 1 H) 4.42 (br s, 1 H) 4.65 (s, 2 H) 7.41 (br

d, $J=7.43$ Hz, 4 H) 7.54 (br dd, $J=7.63$, 3.33 Hz, 4 H) 7.84 (s, 1 H) 7.96 (s, 1 H) 8.19 (s, 1 H) 8.50 (s, 1 H);

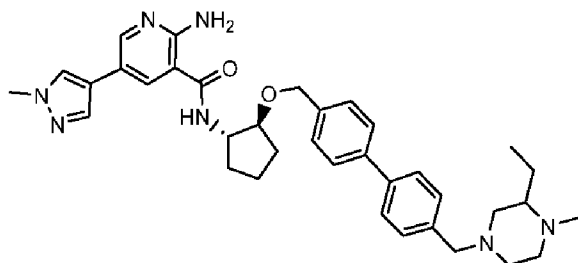
[988] MS (ESI, m/z): 594.4 $[M+H]^+$

[989] Example 188.

2-amino-N-((1S,2S)-2-((4'-((3-ethyl-4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[990] Using 2-ethyl-1-methylpiperazine, the title compound was obtained as described for the example 172.

[991]



[992] ^1H NMR (400 MHz, CD_3OD) δ ppm 0.96 (br t, $J=7.24$ Hz, 3 H) 1.62 (br d, $J=14.48$ Hz, 3 H) 1.81 (br d, $J=7.43$ Hz, 3 H) 1.92 (br s, 1 H) 2.04 (br s, 1 H) 2.16 (br d, $J=7.04$ Hz, 1 H) 2.87 (s, 3 H) 3.20 (br d, $J=14.09$ Hz, 1 H) 3.45 (br d, $J=13.30$ Hz, 1 H) 3.70 (br d, $J=13.30$ Hz, 1 H) 3.81 (br d, $J=12.91$ Hz, 1 H) 3.89 (s, 3 H) 3.99 (br s, 1 H) 4.42 (br s, 1 H) 4.65 (s, 2 H) 7.41 (br d, $J=8.22$ Hz, 4 H) 7.55 (br d, $J=7.43$ Hz, 4 H) 7.85 (s, 1 H) 7.97 (s, 1 H) 8.19 (s, 1 H) 8.51 (s, 1 H);

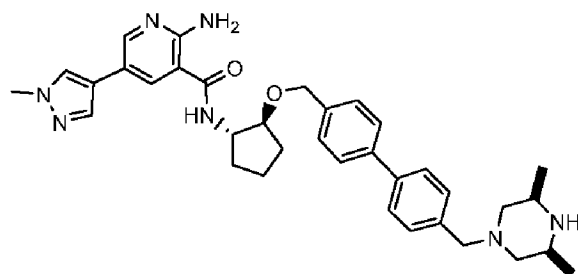
[993] MS (ESI, m/z): 608.4 $[M+H]^+$

[994] Example 189.

2-amino-N-((1S,2S)-2-((4'-((cis-3,5-dimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[995] Using tert-butyl cis-2,6-dimethylpiperazine-1-carboxylate, the title compound was obtained as described for the example 172 and following deprotection with TFA.

[996]



[997] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.27 (br d, $J=6.26$ Hz, 6 H) 1.64 (br d, $J=5.87$ Hz, 1 H) 1.81 (br d, $J=7.04$ Hz, 3 H) 1.96 - 2.24 (m, 3 H) 3.09 (d, $J=12.91$ Hz, 2 H) 3.62 (br s, 5 H) 3.68 (s, 3 H) 3.89 (s, 3 H) 4.00 (br s, 1 H) 4.37 - 4.45 (m, 1 H) 4.65 (s, 2 H) 7.34 - 7.46 (m, 4 H) 7.53 (br d, $J=7.43$ Hz, 4 H) 7.83 (s, 1 H) 7.95 (s, 1 H) 8.20 (s, 1 H) 8.45 (s, 1 H);

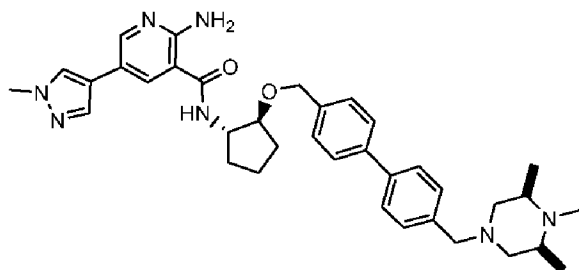
[998] MS (ESI, m/z): 594.4 $[M+H]^+$

[999] Example 190.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((cis-3,4,5-trimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1000] Using cis-1,2,6-trimethylpiperazine, the title compound was obtained as described for the example 172.

[1001]



[1002] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.30 (br d, $J=6.46$ Hz, 6 H) 1.64 (br dd, $J=13.50, 7.04$ Hz, 1 H) 1.74 - 1.90 (m, 3 H) 2.00 - 2.09 (m, 1 H) 2.18 (br dd, $J=12.91, 5.87$ Hz, 1 H) 2.30 (br d, $J=12.91$ Hz, 3 H) 3.22 (br s, 3 H) 3.45 (br s, 2 H) 3.84 (br d, $J=19.37$ Hz, 2 H) 3.90 (s, 3 H) 3.97 - 4.03 (m, 1 H) 4.38 - 4.45 (m, 1 H) 4.66 (s, 2 H) 4.69 (s, 1 H) 7.42 (br d, $J=7.63$ Hz, 4 H) 7.49 - 7.62 (m, 4 H) 7.85 (s, 1 H) 7.97 (s, 1 H) 8.20 (d, $J=2.35$ Hz, 1 H) 8.52 (d, $J=1.76$ Hz, 1 H);

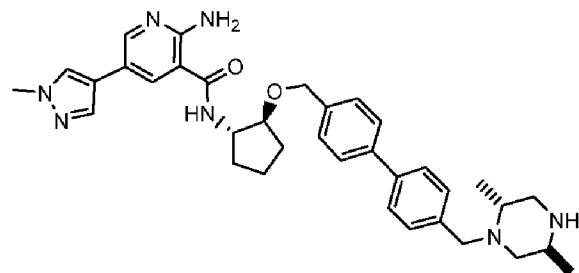
[1003] MS (ESI, m/z): 608.4 $[\text{M}+\text{H}]^+$

[1004] Example 191.

2-amino-N-((1S,2S)-2-((4'-((trans-2,5-dimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1005] Using trans-2,5-dimethylpiperazine, the title compound was obtained as described for the example 172.

[1006]



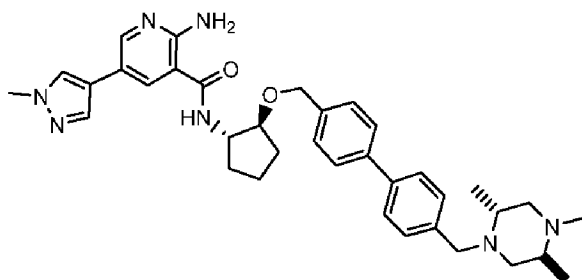
[1007] MS (ESI, m/z): 594.4 $[\text{M}+\text{H}]^+$

[1008] Example 192.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((2R,5S)-2,4,5-trimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1009] Using trans-1,2,5-trimethylpiperazine, the title compound was obtained as described for the example 172.

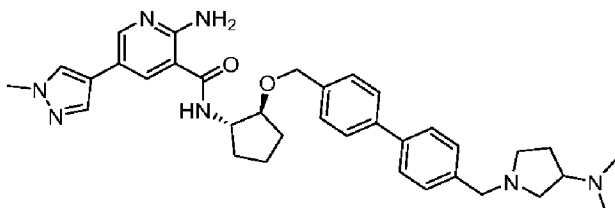
[1010]

[1011] MS (ESI, m/z): 608.4 [M+H]⁺[1012] Example 193.

2-amino-N-((1S,2S)-2-((4'-((3-(dimethylamino)pyrrolidin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1013] Using N,N-Dimethyl-3-pyrrolidinamine, the title compound was obtained as described for the example 172.

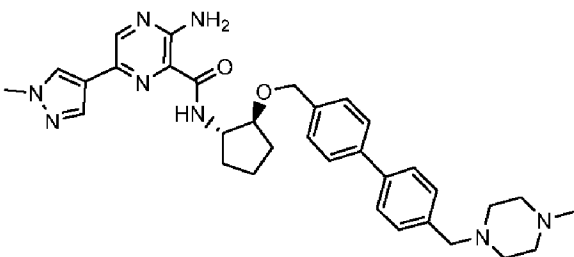
[1014]

[1015] MS (ESI, m/z): 594.4 [M+H]⁺[1016] Example 194.

3-amino-6-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)pyrazine-2-carboxamide

[1017] Using 3-amino-6-(1-methyl-1H-pyrazol-4-yl)pyrazine-2-carboxylic acid, the title compound was obtained as described for the example 172.

[1018]



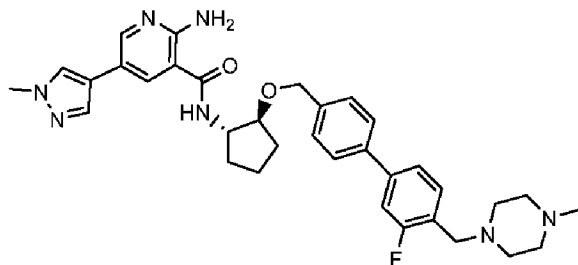
[1019] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.60 - 1.69 (m, 1 H) 1.70 - 1.78 (m, 1 H) 1.78 - 1.87 (m, 2 H) 2.03 - 2.20 (m, 3 H) 2.88 (d, J=1.76 Hz, 3 H) 3.00 (br s, 4 H) 3.34 (br d, J=11.74 Hz, 3 H) 3.85 (s, 3 H) 3.91 (br d, J=11.74 Hz, 2 H) 3.99 - 4.06 (m, 1 H) 4.33 - 4.40 (m, 1 H) 4.59 - 4.70 (m, 2 H) 7.38 (d, J=8.22 Hz, 2 H) 7.42 (br d, J=8.22 Hz, 2 H) 7.47 (d, J=8.22 Hz, 2 H) 7.52 (br d, J=8.22 Hz, 2 H) 7.99 (s, 1 H) 8.12 (s, 1 H) 8.41 (s, 1 H);

[1020] MS (ESI, m/z): 581.3 [M+H]⁺[1021] Example 195.

2-amino-N-((1S,2S)-2-((3'-fluoro-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1022] Using (3-fluoro-4-formylphenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 172.

[1023]



[1024] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.63 (br dd, $J=13.69$, 7.04 Hz, 1 H) 1.72 - 1.90 (m, 3 H) 1.96 - 2.09 (m, 1 H) 2.10 - 2.23 (m, 1 H) 2.90 (s, 3 H) 3.05 - 3.27 (m, 4 H) 3.34 - 3.51 (m, 4 H) 3.89 (s, 3 H) 3.94 - 4.01 (m, 1 H) 4.07 (s, 2 H) 4.34 - 4.47 (m, 1 H) 4.60 - 4.73 (m, 2 H) 5.47 (s, 1 H) 7.35 (br d, $J=11.35$ Hz, 1 H) 7.42 (br d, $J=7.83$ Hz, 3 H) 7.50 (br t, $J=7.83$ Hz, 1 H) 7.55 (d, $J=8.22$ Hz, 2 H) 7.83 (s, 1 H) 7.97 (s, 1 H) 8.17 (d, $J=1.96$ Hz, 1 H) 8.50 (d, $J=1.96$ Hz, 1 H);

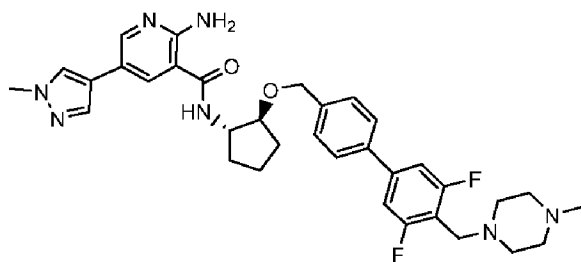
[1025] MS (ESI, m/z): 598.7 $[\text{M}+\text{H}]^+$

[1026] Example 196.

2-amino-N-((1S,2S)-2-((3',5'-difluoro-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1027] Using ((3,5-difluoro-4-formylphenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 172.

[1028]



[1029] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.63 (br dd, $J=13.30$, 7.04 Hz, 1 H) 1.71 - 1.91 (m, 3 H) 2.03 (br dd, $J=12.91$, 5.48 Hz, 1 H) 2.12 - 2.23 (m, 1 H) 2.87 (s, 3 H) 2.94 (br d, $J=18.00$ Hz, 3 H) 3.32 (br s, 4 H) 3.90 (s, 3 H) 3.99 (br s, 1 H) 4.40 (br d, $J=3.91$ Hz, 1 H) 4.62 - 4.77 (m, 2 H) 7.24 (br d, $J=8.61$ Hz, 2 H) 7.44 (m, $J=7.83$ Hz, 2 H) 7.57 (m, $J=7.83$ Hz, 2 H) 7.83 (s, 1 H) 7.98 (s, 1 H) 8.19 (s, 1 H) 8.50 (s, 1 H);

[1030] MS (ESI, m/z): 616.8 $[\text{M}+\text{H}]^+$

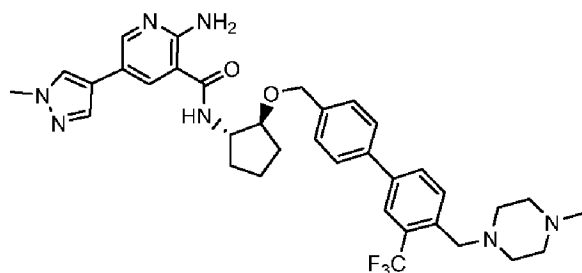
[1031] Example 197.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1032] Using (4-formyl-3-(trifluoromethyl)phenyl)boronic acid pinacol ester, the title

compound was obtained as described for the example 172.

[1033]



[1034] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.59 - 1.71 (m, 1 H) 1.75 - 1.89 (m, 3 H) 1.99 - 2.10 (m, 1 H) 2.13 - 2.25 (m, 1 H) 2.91 (s, 3 H) 3.47 (br d, $J=1.57$ Hz, 2 H) 3.81 (s, 2 H) 3.91 (s, 3 H) 4.02 (br d, $J=4.30$ Hz, 1 H) 4.39 - 4.46 (m, 1 H) 4.69 (s, 2 H) 7.47 (m, $J=8.22$ Hz, 2 H) 7.60 (m, $J=8.22$ Hz, 2 H) 7.83 (d, $J=8.22$ Hz, 4 H) 7.98 (s, 1 H) 8.21 (d, $J=1.96$ Hz, 1 H) 8.50 (d, $J=2.35$ Hz, 1 H);

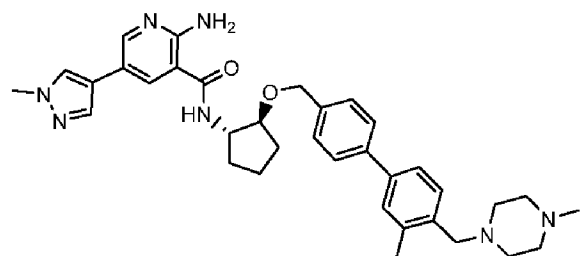
[1035] MS (ESI, m/z): 648.32 $[\text{M}+\text{H}]^+$

[1036] Example 198.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3'-methoxy-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1037] Using (4-formyl-3-methylphenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 172.

[1038]



[1039] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.64 (br dd, $J=13.11$, 6.85 Hz, 2 H) 1.72 - 1.90 (m, 3 H) 1.82 (br s, 1 H) 1.94 - 2.09 (m, 2 H) 2.10 - 2.24 (m, 2 H) 2.43 (s, 1 H) 2.88 (s, 3 H) 3.29 - 3.31 (m, 11 H) 3.69 (s, 1 H) 3.90 (s, 2 H) 3.93 - 3.96 (m, 1 H) 4.01 (br d, $J=4.70$ Hz, 1 H) 4.16 (s, 1 H) 4.37 - 4.47 (m, 1 H) 4.66 (d, $J=3.13$ Hz, 1 H) 7.37 - 7.43 (m, 2 H) 7.51 - 7.55 (m, 1 H) 7.52 - 7.59 (m, 1 H) 7.85 (d, $J=0.78$ Hz, 1 H) 7.96 (s, 1 H) 8.19 (d, $J=1.96$ Hz, 1 H) 8.49 (d, $J=2.35$ Hz, 1 H);

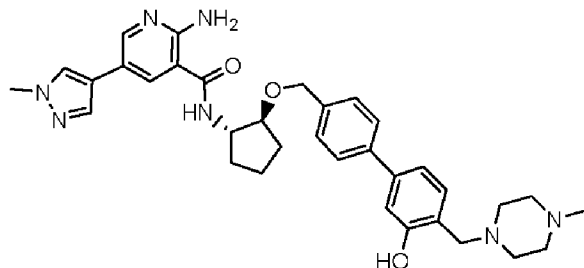
[1040] MS (ESI, m/z): 594.4 $[\text{M}+\text{H}]^+$

[1041] Example 199.

2-amino-N-((1S,2S)-2-((3'-hydroxy-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1042] Using (4-formyl-3-hydroxyphenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 172.

[1043]



[1044] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.64 (br dd, $J=12.72$, 6.85 Hz, 1 H) 1.74 - 1.90 (m, 3 H) 2.05 (br s, 1 H) 2.12 - 2.26 (m, 1 H) 2.82 (d, $J=3.13$ Hz, 3 H) 3.13 (br s, 5 H) 3.91 (s, 3 H) 4.01 (br d, $J=6.26$ Hz, 1 H) 4.05 (s, 1 H) 4.08 (s, 1 H) 4.38 - 4.46 (m, 1 H) 4.66 (s, 2 H) 7.05 (s, 1 H) 7.28 (br d, $J=8.61$ Hz, 1 H) 7.25 - 7.34 (m, 1 H) 7.32 (br d, $J=7.83$ Hz, 1 H) 7.41 (d, $J=8.22$ Hz, 2 H) 7.52 (d, $J=8.22$ Hz, 2 H) 7.54 - 7.59 (m, 1 H) 7.85 (s, 1 H) 7.97 (s, 1 H) 8.20 (d, $J=2.35$ Hz, 1 H) 8.48 (d, $J=2.35$ Hz, 1 H);

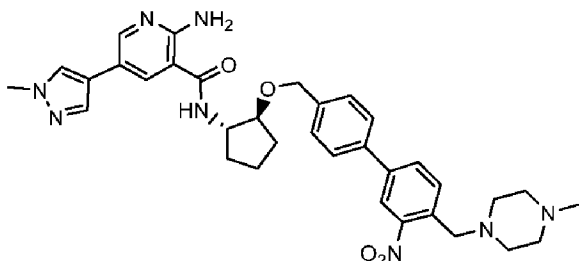
[1045] MS (ESI, m/z): 596.3 $[\text{M}+\text{H}]^+$

[1046] Example 200.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-3'-nitro-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1047] Using (4-formyl-3-nitrophenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 172.

[1048]



[1049] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.64 (dt, $J=13.89$, 7.14 Hz, 1 H) 1.74 - 1.91 (m, 3 H) 2.00 - 2.10 (m, 1 H) 2.13 - 2.24 (m, 1 H) 2.88 (s, 3 H) 3.35 - 3.39 (m, 2 H) 3.91 (s, 3 H) 3.92 - 3.95 (m, 2 H) 3.99 - 4.03 (m, 1 H) 4.39 - 4.47 (m, 1 H) 4.69 (d, $J=3.13$ Hz, 2 H) 7.48 (d, $J=8.22$ Hz, 2 H) 7.60 - 7.65 (m, 4 H) 7.83 (s, 1 H) 7.97 (s, 1 H) 8.02 (d, $J=1.96$ Hz, 1 H) 8.21 (d, $J=2.35$ Hz, 1 H) 8.48 (d, $J=2.35$ Hz, 1 H);

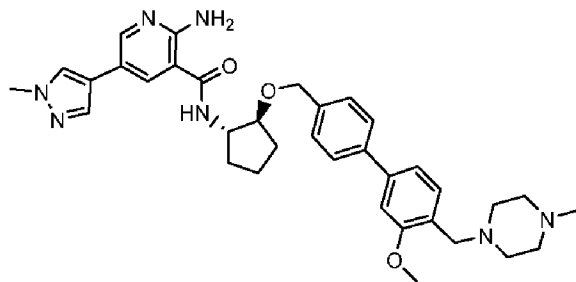
[1050] MS (ESI, m/z): 625.3 $[\text{M}+\text{H}]^+$

[1051] Example 201.

2-amino-N-((1S,2S)-2-((3'-methoxy-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1052] Using (4-formyl-3-methoxyphenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 172.

[1053]



[1054] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.65 (br dd, $J=13.50, 6.46$ Hz, 1 H) 1.74 - 1.91 (m, 3 H) 1.99 - 2.10 (m, 1 H) 2.19 (br d, $J=6.65$ Hz, 1 H) 2.81 (s, 3 H) 3.91 (s, 3 H) 3.92 (s, 3 H) 3.98 - 4.07 (m, 1 H) 4.43 (br d, $J=3.52$ Hz, 1 H) 4.68 (s, 2 H) 7.15 - 7.24 (m, 2 H) 7.37 - 7.47 (m, 3 H) 7.59 (d, $J=8.22$ Hz, 2 H) 7.86 (s, 1 H) 7.98 (s, 1 H) 8.21 (d, $J=1.96$ Hz, 1 H) 8.51 (d, $J=2.35$ Hz, 1 H);

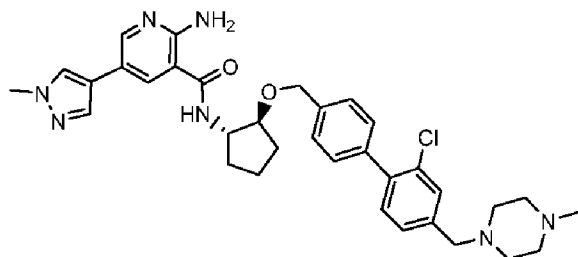
[1055] MS (ESI, m/z): 610.3 $[\text{M}+\text{H}]^+$

[1056] Example 202.

2-amino-N-((1S,2S)-2-((2'-chloro-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1057] Using (2-chloro-4-formylphenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 172.

[1058]

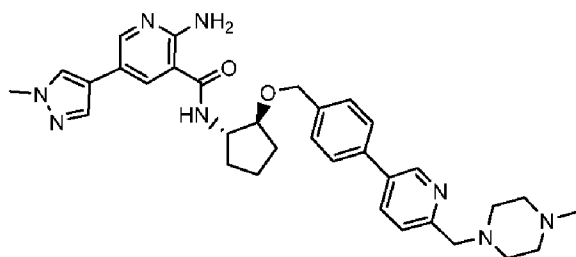


[1059] MS (ESI, m/z): 614.3 $[\text{M}+\text{H}]^+$

[1060] Example 203. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(6-((4-methylpiperazin-1-yl)methyl)pyridin-3-yl)benzyl)oxy)cyclopentyl)nicotinamide

[1061] Using ((6-formylpyridin-3-yl)boronic acid pinacol ester, the title compound was obtained as described for the example 172.

[1062]



[1063] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.65 (dt, $J=13.60, 7.09$ Hz, 1 H) 1.74 - 1.90 (m, 3 H) 2.05 (br dd, $J=13.11, 6.46$ Hz, 1 H) 2.13 - 2.26 (m, 1 H) 2.90 (s, 3 H) 3.91 - 3.94 (m, 3 H) 3.99 - 4.06 (m, 1 H) 4.43 (br dd, $J=11.93, 6.85$ Hz, 1 H) 7.52 (d, $J=8.22$ Hz, 2

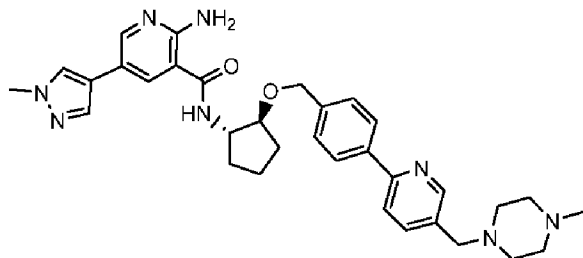
H) 7.64 - 7.68 (m, 2 H) 7.72 (br dd, $J=12.33$, 8.41 Hz, 2 H) 7.85 (s, 1 H) 7.99 (s, 1 H) 8.22 (d, $J=2.35$ Hz, 1 H) 8.51 (d, $J=1.96$ Hz, 1 H) 8.82 (d, $J=2.35$ Hz, 1 H);

[1064] MS (ESI, m/z): 581.3 $[M+H]^+$

[1065] Example 204. 2-amino-5-((1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(5-((4-methylpiperazin-1-yl)methyl)pyridin-2-yl)benzyl)oxy)cyclopentyl)nicotinamide

[1066] Using (5-formylpyridin-2-yl)boronic acid pinacol ester, the title compound was obtained as described for the example 172.

[1067]



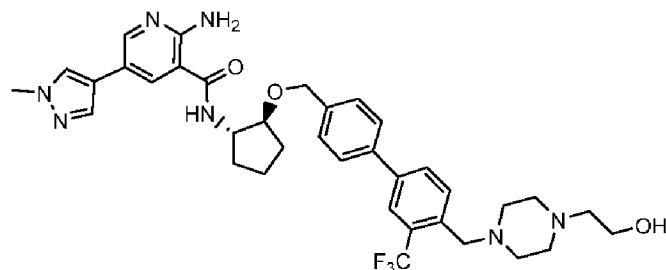
[1068] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.66 (td, $J=14.09$, 7.04 Hz, 1 H) 1.76 - 1.92 (m, 3 H) 1.98 - 2.11 (m, 1 H) 2.19 (br s, 1 H) 2.90 (s, 3 H) 3.64 (s, 1 H) 3.76 (s, 3 H) 3.98 - 4.07 (m, 1 H) 4.38 - 4.48 (m, 1 H) 7.52 (d, $J=8.22$ Hz, 2 H) 7.84 (s, 1 H) 7.90 (dd, $J=8.41$, 1.76 Hz, 3 H) 7.98 (s, 1 H) 8.02 (br d, $J=8.61$ Hz, 1 H) 8.21 (d, $J=1.96$ Hz, 1 H) 8.50 (d, $J=1.96$ Hz, 1 H) 8.60 (s, 1 H);

[1069] MS (ESI, m/z): 581.3 $[M+H]^+$

[1070] Example 205. 2-amino-N-((1S,2S)-2-((4'-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1071] Using (4-formyl-3-(trifluoromethyl)phenyl)boronic acid pinacol ester and 2-(piperazin-1-yl)ethan-1-ol, the title compound was obtained as described for the example 172.

[1072]



[1073] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.57 - 1.72 (m, 1 H) 1.75 - 1.90 (m, 3 H) 2.04 (dt, $J=12.81$, 6.70 Hz, 1 H) 2.13 - 2.26 (m, 1 H) 3.82 (s, 2 H) 3.86 - 3.90 (m, 2 H) 3.91 (s, 3 H) 3.97 - 4.05 (m, 1 H) 4.43 (br dd, $J=11.93$, 6.46 Hz, 1 H) 4.69 (s, 2 H) 7.48 (d, $J=8.22$ Hz, 2 H) 7.60 (d, $J=8.22$ Hz, 2 H) 7.81 - 7.87 (m, 3 H) 7.99 (s, 1 H) 8.22 (d, J

=2.35 Hz, 1 H) 8.51 (d, J =1.96 Hz, 1 H);

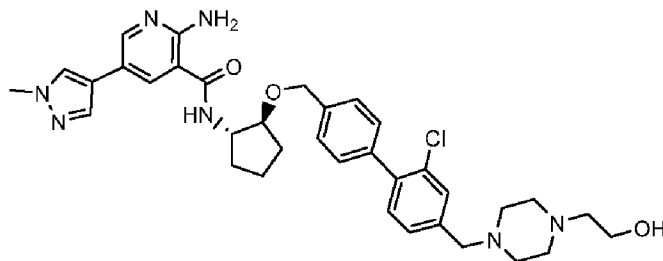
[1074] MS (ESI, m/z): 678.3[M+H]⁺

[1075] Example 206.

2-amino-N-((1S,2S)-2-((2'-chloro-4'-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1076] Using (2-chloro-4-formylphenyl)boronic acid pinacol ester and 2-(piperazin-1-yl)ethan-1-ol, the title compound was obtained as described for the example 172.

[1077]

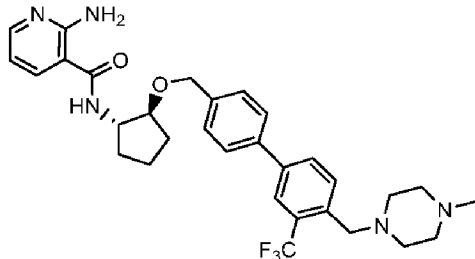


[1078] MS (ESI, m/z): 644.3 [M+H]⁺

[1079] Example 207. 2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1080] Using 2-aminonicotinic acid and (4-formyl-3-(trifluoromethyl)phenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 172.

[1081]



[1082] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.53 - 1.69 (m, 1 H) 1.76 - 1.89 (m, 3 H) 2.01 (s, 1 H) 2.18 (br dd, J =13.30, 5.87 Hz, 1 H) 2.48 (br s, 2 H) 2.91 (s, 3 H) 3.82 (s, 2 H) 3.99 (br d, J =4.30 Hz, 1 H) 4.40 (br d, J =5.09 Hz, 1 H) 4.68 (d, J =4.30 Hz, 2 H) 6.95 (dd, J =7.43, 6.26 Hz, 1 H) 7.47 (d, J =8.22 Hz, 2 H) 7.62 (d, J =8.22 Hz, 2 H) 7.84 - 7.92 (m, 3 H) 7.98 - 8.05 (m, 1 H) 8.32 (dd, J =7.43, 1.56 Hz, 1 H);

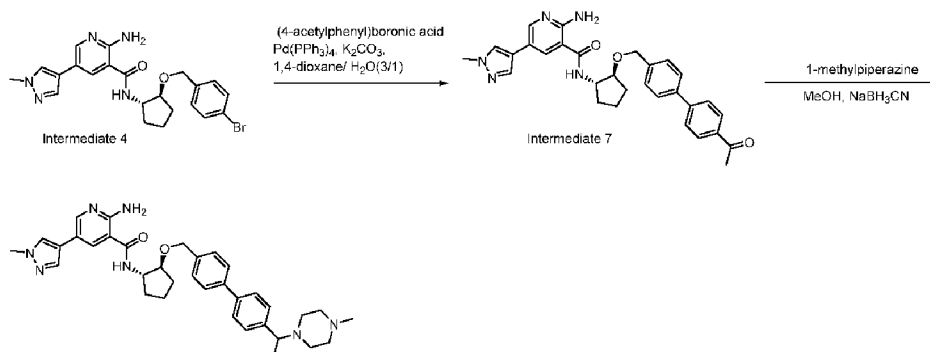
[1083] MS (ESI, m/z): 568.3 [M+H]⁺

[1084] Example 208.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1085] Scheme for the preparation of the Compound of Example 208:

[1086]



[1087] Intermediate 7. To a mixture of intermediate 4 (100 mg, 0.21 mmol) and (4-acetylphenyl)boronic acid (52 mg, 0.32 mmol) in 1.2 ml of 1,4-dioxane/ water (3/1) was added K_2CO_3 (88 mg, 0.64 mmol) followed by $\text{Pd}(\text{PPh}_3)_4$ (12 mg, 0.01 mmol). The reaction mixture was heated at 100 °C for 3 hrs, cooled to room temperature, and extracted with EtOAc, dried over anhydrous MgSO_4 . After concentration under vacuum, the crude product was purified by silicagel column chromatography to give 80 mg of off-white solid

[1088] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.62 (br dd, $J=13.21$, 7.34 Hz, 1 H) 1.74 - 1.88 (m, 3 H) 2.05 (br dd, $J=12.62$, 7.34 Hz, 1 H) 2.17 (br dd, $J=13.21$, 5.58 Hz, 1 H) 2.62 (s, 3 H) 3.89 (s, 3 H) 3.96 - 4.01 (m, 1 H) 4.38 - 4.45 (m, 1 H) 4.61 - 4.73 (m, 2 H) 7.45 (d, $J=8.22$ Hz, 2 H) 7.60 (d, $J=8.22$ Hz, 2 H) 7.66 (d, $J=8.22$ Hz, 2 H) 7.82 (s, 1 H) 7.94 (s, 1 H) 8.01 (d, $J=8.22$ Hz, 2 H) 8.18 (d, $J=1.76$ Hz, 1 H) 8.44 (d, $J=1.76$ Hz, 1 H);

[1089] MS (ESI, m/z): 510.8 $[\text{M}+\text{H}]^+$

[1090] Example 208.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1091] To a mixture of intermediate 7 (30 mg, 0.06 mmol) in 0.4 ml of methanol was added 1-methylpiperazine (14 μl , 0.12 mmol) followed by NaBH_3CN (11 mg, 0.18 mmol). The mixture was stirred at room temperature for 4 hr and then water was added. The mixture was extracted with EtOAc, washed with brine, dried over MgSO_4 . After concentration under vacuum, the crude residue was purified by preparative HPLC to afford 17 mg of the title compound.

[1092] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.40 (d, $J=6.46$ Hz, 3 H) 1.59 (br dd, $J=13.21$, 7.34 Hz, 1 H) 1.73 - 1.85 (m, 3 H) 1.98 - 2.05 (m, 1 H) 2.15 (br dd, $J=13.21$, 5.58 Hz, 1 H) 2.31 (s, 3 H) 2.35 - 2.77 (m, 8 H) 3.41 - 3.48 (m, 1 H) 3.86 (s, 3 H) 3.90 - 3.99 (m, 1 H) 4.37 - 4.44 (m, 1 H) 4.61 - 4.70 (m, 2 H) 7.34 (d, $J=7.63$ Hz, 2 H) 7.39 (br d, $J=7.63$ Hz, 2 H) 7.48 (br d, $J=7.63$ Hz, 2 H) 7.50 (br d, $J=8.22$ Hz, 2 H) 7.74 (s, 1 H) 7.82 (d, $J=2.93$ Hz, 1 H) 7.96 (s, 1 H) 8.22 - 8.26 (m, 1 H);

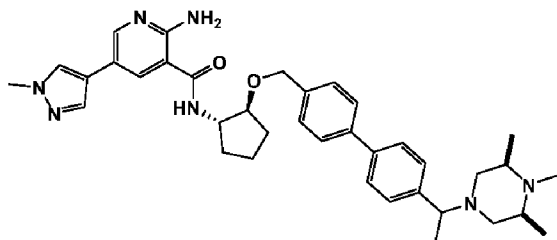
[1093] MS (ESI, m/z): 594.7 $[\text{M}+\text{H}]^+$

[1094] Example 209.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(1-((3S,5R)-3,4,5-trimethylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1095] Using (2S,6R)-1,2,6-trimethylpiperazine, title compound was obtained as described for the example 208.

[1096]



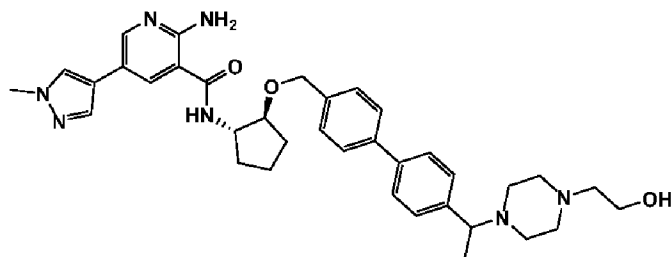
[1097] MS (ESI, m/z): 622.4 [M+H]⁺

[1098] Example 210.

2-amino-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1099] Using 1-(2-hydroxyethyl)piperazine, title compound was obtained as described for the example 208.

[1100]



[1101] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.64 (br dd, *J*=13.50, 7.04 Hz, 1 H) 1.69 (d, *J*=7.04 Hz, 3 H) 1.75 - 1.88 (m, 3 H) 2.00 - 2.08 (m, 1 H) 2.18 (br dd, *J*=13.50, 5.87 Hz, 1 H) 3.16 - 3.23 (m, 2 H) 3.23 - 3.27 (m, 2 H) 3.53 (br s, 4 H) 3.84 (br t, *J*=4.99 Hz, 2 H) 3.90 (s, 3 H) 3.98 - 4.03 (m, 1 H) 4.25 (br d, *J*=7.04 Hz, 1 H) 4.38 - 4.45 (m, 1 H) 4.64 - 4.70 (m, 2 H) 7.43 (d, *J*=7.63 Hz, 2 H) 7.51 (m, *J*=8.22 Hz, 2 H) 7.56 (m, *J*=8.22 Hz, 2 H) 7.64 (d, *J*=8.22 Hz, 2 H) 7.85 (s, 1 H) 7.98 (s, 1 H) 8.19 (s, 1 H) 8.53 (s, 1 H);

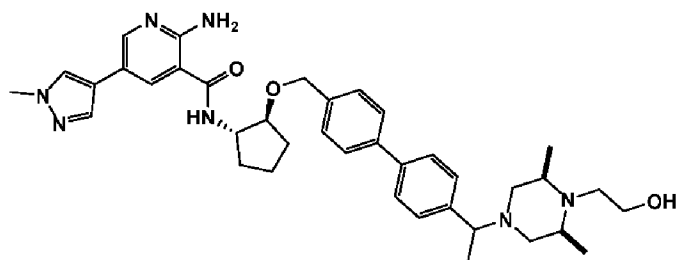
[1102] MS (ESI, m/z): 624.4 [M+H]⁺

[1103] Example 211.

2-amino-N-((1S,2S)-2-((4'-(1-((3S,5R)-4-(2-hydroxyethyl)-3,5-dimethylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1104] Using 2-(cis-2,6-dimethylpiperazin-1-yl)ethan-1-ol, title compound was obtained as described for the example 208.

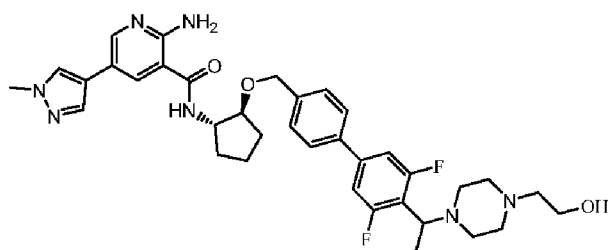
[1105]

[1106] MS (ESI, m/z): 652.4 [M+H]⁺[1107] Example 212.

2-amino-N-((1S,2S)-2-(((3',5'-difluoro-4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl))-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

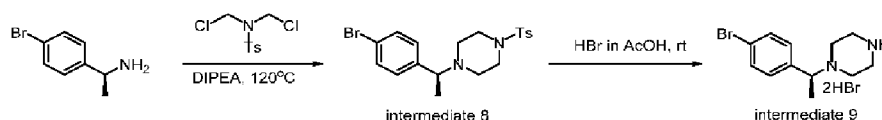
[1108] Using (4-acetyl-3,5-difluorophenyl)boronic acid pinacol ester and 2-(piperazin-1-yl)ethan-1-ol, the title compound was obtained as described for the example 208.

[1109]

[1110] MS (ESI, m/z): 660.32 [M+H]⁺

[1111] Scheme for the preparation of the intermediate 9:

[1112]



[1113] Intermediate 8. A mixture of (S)-1-(4-Bromophenyl)ethan-1-amine (300 mg, 1.50 mmol) and (N,N-bis(2-chloroethyl)-4-methylbenzenesulfonamide (533 mg, 1.80 mmol) in 3 ml of DIPEA was heated at 120 °C for 24 hrs, cooled to room temperature, and extracted with EtOAc, dried over anhydrous MgSO₄. After concentration under vacuum, the crude product was purified by silicagel column chromatography to give 500 mg of off-white solid

[1114] ¹H NMR (600 MHz, DMSO-*d*₆) δ ppm 1.16 (d, *J*=6.46 Hz, 3 H) 2.27 - 2.33 (m, 2 H) 2.39 (s, 5 H) 2.78 (br s, 4 H) 3.37 - 3.44 (m, 1 H) 7.16 (d, *J*=7.87 Hz, 2 H) 7.43 (t, *J*=7.59 Hz, 4 H) 7.55 - 7.60 (m, 2 H) :

[1115] MS (ESI, m/z): 423.1/ 425.2[M+H]⁺

[1116] Intermediate 9. (S)-1-(1-(4-bromophenyl)ethyl)piperazine

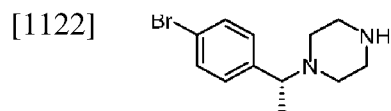
[1117] Intermediate 8 (0.5 g, 1.1 mmol) in 5 ml of HBr in AcOH was stirred at room temperature for 24 hrs. After concentration under vacuum, the crude product was diluted with EtOAc and the solid was collected by filtration to give 0.5 g of off-white solid

[1118] ^1H NMR (600 MHz, $\text{DMSO-}d_6$) δ ppm 1.63 (br s, 3 H) 3.40 (br s, 1 H) 3.47 - 3.72 (br s, 8 H) 7.54 (br s, 2 H) 7.69 (br d, $J=7.63$ Hz, 2 H);

[1119] MS (ESI, m/z): 269.1/ 271.4 $[\text{M}+\text{H}]^+$

[1120] Intermediate 10. (R)-1-(1-(4-bromophenyl)ethyl)piperazine

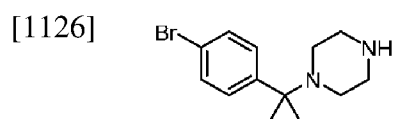
[1121] Using (R)-1-(4-Bromophenyl)ethylamine, the title compound was obtained as described for the intermediate 9.



[1123] MS (ESI, m/z): 269.1/ 271.4 $[\text{M}+\text{H}]^+$

[1124] Intermediate 11. 1-(1-(4-bromophenyl)cyclopropyl)piperazine

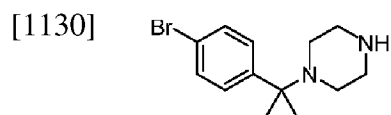
[1125] Using 1-(4-Bromophenyl)cyclopropan-1-amine, the title compound was obtained as described for the intermediate 9.



[1127] MS (ESI, m/z): 281.1/ 283.4 $[\text{M}+\text{H}]^+$

[1128] Intermediate 12. 1-(2-(4-bromophenyl)propan-2-yl)piperazine

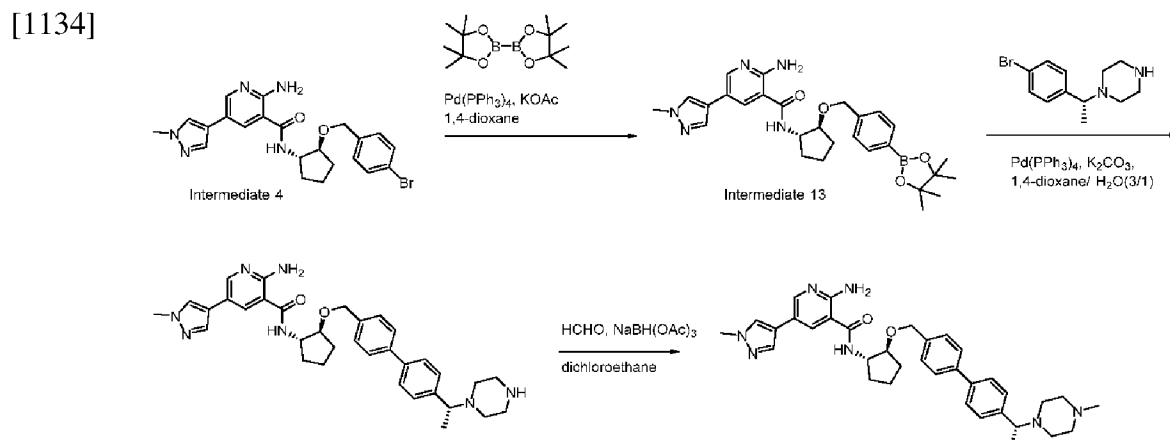
[1129] Using 2-(4-Bromophenyl)propan-2-amine, the title compound was obtained as described for the intermediate 9.



[1131] MS (ESI, m/z): 283.1/ 285.4 $[\text{M}+\text{H}]^+$

[1132] Example 213 and 214.

[1133] Scheme for the preparation of the Compounds of Example 213 and 214;



[1135] Intermediate 13. To a mixture of intermediate 4 (0.56 g, 1.19 mmol) and bis(pinacolato)diboron (0.6 g, 2.38 mmol) in 6 ml of 1,4-dioxane was added KOAc (0.35 g, 3.57 mmol) followed by $\text{Pd}(\text{PPh}_3)_4$ (69 mg, 0.06 mmol). The reaction mixture

was heated at 110 °C for 5 hrs, cooled to room temperature, and partitioned between water and EtOAc, dried over anhydrous MgSO₄. After concentration under vacuum, the crude product was purified by silicagel column chromatography to give 0.5 g of light yellow solid

[1136] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.19 (s, 6 H) 1.30 (s, 6 H) 1.60 (br dd, *J*=13.30, 7.04 Hz, 1 H) 1.68 - 1.88 (m, 3 H) 1.93 - 2.06 (m, 1 H) 2.15 (br dd, *J*=13.11, 6.06 Hz, 1 H) 3.90 (s, 3 H) 3.92 - 3.99 (m, 1 H) 4.32 - 4.44 (m, 1 H) 4.64 (s, 2 H) 7.33 (m, *J*=7.83 Hz, 2 H) 7.66 (m, *J*=7.83 Hz, 2 H) 7.75 (s, 1 H) 7.85 (s, 1 H) 7.97 (d, *J*=1.96 Hz, 1 H) 8.20 - 8.30 (m, 1 H);

[1137] MS (ESI, *m/z*): 518.3 [M+H]⁺

[1138] Example 213.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1*S*,2*S*)-2-((4'-((*R*)-1-(piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1139] To a mixture of intermediate 13 (150 mg, 0.29 mmol) and intermediate 10 (100 mg, 0.29 mmol) in 1.5 ml of 1,4-dioxane/ water (3/1) was added K₂CO₃ (120 mg, 0.87 mmol) followed by Pd(PPh₃)₄ (17 mg, 0.01 mmol). The reaction mixture was heated at 100 °C for 3 hrs, cooled to room temperature, and extracted with EtOAc, dried over anhydrous MgSO₄. After concentration under vacuum, the crude product was purified by silicagel column chromatography to give 130 mg of off-white solid

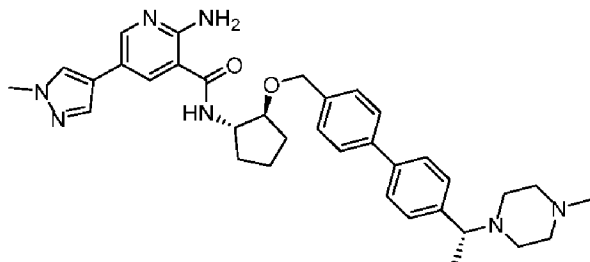
[1140] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.40 (d, *J*=6.46 Hz, 3 H) 1.54 - 1.63 (m, 1 H) 1.73 - 1.86 (m, 3 H) 1.98 - 2.05 (m, 1 H) 2.12 - 2.19 (m, 1 H) 2.40 (br s, 2 H) 2.82 (t, *J*=4.99 Hz, 4 H) 3.40 (q, *J*=6.46 Hz, 1 H) 3.86 (s, 3 H) 3.95 (dt, *J*=6.90, 4.48 Hz, 1 H) 4.41 (td, *J*=7.63, 4.70 Hz, 1 H) 4.61 - 4.70 (m, 2 H) 5.48 (s, 1 H) 7.33 (d, *J*=8.22 Hz, 2 H) 7.39 (d, *J*=8.22 Hz, 2 H) 7.44 - 7.49 (m, 2 H) 7.49 - 7.55 (m, 2 H) 7.74 (s, 1 H) 7.83 (s, 1 H) 7.97 (d, *J*=2.35 Hz, 1 H) 8.23 (d, *J*=2.35 Hz, 1 H);

[1141] MS (ESI, *m/z*): 580.6[M+H]⁺

[1142] Example 214.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1*S*,2*S*)-2-((4'-((*R*)-1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1143]



[1144] To compound 213 (20 mg, 0.03 mmol) in 0.2 ml of 1,2-dichloroethane was added formaldehyde (0.005 ml, 0.06 mmol) followed by NaBH(OAc)₃ (13 mg, 0.09 mmol). The mixture was stirred at room temperature for 1 hr and then water was added. The

mixture was extracted with EtOAc, washed with brine, dried over MgSO₄, and concentrated in vacuo. The crude residue was purified by preparative HPLC to afford 15 mg of the title compound.

[1145] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.64 (dd, *J*=13.50, 7.04 Hz, 1 H) 1.71 (d, *J*=7.04 Hz, 3 H) 1.75 - 1.88 (m, 3 H) 2.00 - 2.10 (m, 1 H) 2.12 - 2.23 (m, 1 H) 2.91 (s, 3 H) 3.20 - 3.28 (m, 2 H) 3.52 (br s, 4 H) 3.90 (s, 3 H) 4.00 (dt, *J*=6.46, 4.40 Hz, 1 H) 4.32 (q, *J*=6.65 Hz, 1 H) 4.42 (td, *J*=7.34, 4.11 Hz, 1 H) 4.63 - 4.71 (m, 2 H) 7.43 (d, *J*=8.22 Hz, 2 H) 7.52 (d, *J*=8.22 Hz, 2 H) 7.56 (d, *J*=8.22 Hz, 2 H) 7.64 (d, *J*=8.22 Hz, 2 H) 7.85 (s, 1 H) 7.98 (s, 1 H) 8.20 (d, *J*=1.76 Hz, 1 H) 8.53 (d, *J*=2.35 Hz, 1 H);

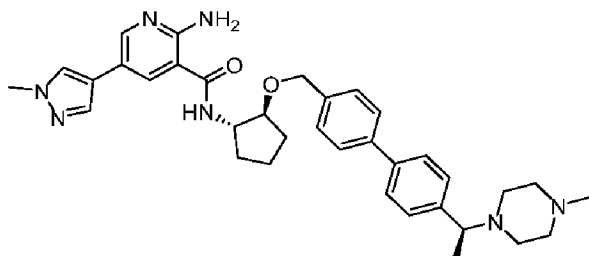
[1146] MS (ESI, *m/z*): 594.8 [M+H]⁺

[1147] Example 215.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((S)-1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1148] Using intermediate 9, the title compound was obtained as described for the example 214.

[1149]



[1150] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.51 (d, *J*=7.04 Hz, 3 H) 1.64 (br dd, *J*=13.21, 6.75 Hz, 1 H) 1.76 - 1.85 (m, 3 H) 2.01 - 2.06 (m, 1 H) 2.14 (s, 1 H) 2.15 - 2.20 (m, 1 H) 2.84 (s, 3 H) 3.82 (br d, *J*=6.46 Hz, 1 H) 3.90 (s, 3 H) 3.98 - 4.02 (m, 1 H) 4.42 (br dd, *J*=6.75, 3.23 Hz, 1 H) 4.66 (s, 2 H) 7.42 (dd, *J*=8.22, 1.76 Hz, 4 H) 7.54 - 7.59 (m, 4 H) 7.86 (s, 1 H) 7.98 (s, 1 H) 8.20 (d, *J*=2.35 Hz, 1 H) 8.53 (d, *J*=1.76 Hz, 1 H);

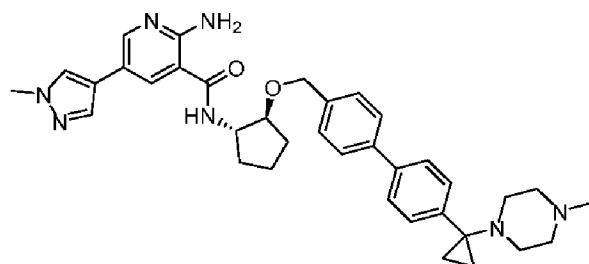
[1151] MS (ESI, *m/z*): 594.8 [M+H]⁺

[1152] Example 216.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((1-(4-methylpiperazin-1-yl)cyclopropyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1153] Using intermediate 11, the title compound was obtained as described for the example 214.

[1154]



[1155] ^1H NMR (600 MHz, CD_3OD) δ ppm 0.85 - 0.88 (m, 1 H) 0.89 - 0.92 (m, 1 H) 0.99 - 1.01 (m, 1 H) 1.01 - 1.04 (m, 1 H) 1.64 (br dd, $J=13.50$, 6.46 Hz, 1 H) 1.75 - 1.88 (m, 3 H) 2.01 - 2.07 (m, 1 H) 2.16 - 2.24 (m, 2 H) 2.79 (d, $J=1.76$ Hz, 3 H) 3.00 (br s, 2 H) 3.15 - 3.21 (m, 2 H) 3.34 - 3.43 (m, 4 H) 3.90 (s, 3 H) 4.00 (dt, $J=6.46$, 4.11 Hz, 1 H) 4.42 (td, $J=7.34$, 4.70 Hz, 1 H) 4.66 (s, 2 H) 7.26 (d, $J=8.31$ Hz, 2 H) 7.37 - 7.40 (m, 2 H) 7.40 - 7.43 (m, 2 H) 7.49 - 7.52 (m, 1 H) 7.86 (s, 1 H) 7.98 (s, 1 H) 8.20 (d, $J=1.76$ Hz, 1 H) 8.54 (d, $J=2.35$ Hz, 1 H);

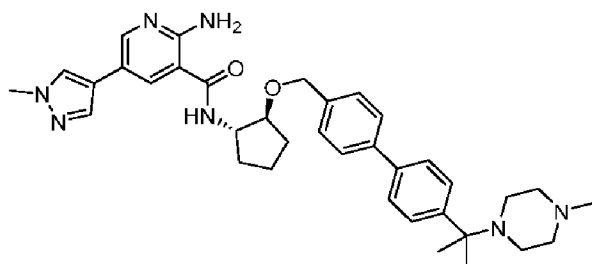
[1156] MS (ESI, m/z): 606.3 $[\text{M}+\text{H}]^+$

[1157] Example 217.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(2-(4-methylpiperazin-1-yl)propyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1158] Using intermediate 12, the title compound was obtained as described for the example 214.

[1159]



[1160] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.49 (s, 5 H) 1.60 - 1.61 (m, 1 H) 1.60 - 1.66 (m, 1 H) 1.80 - 1.88 (m, 3 H) 2.02 - 2.08 (m, 1 H) 2.17 (br s, 1 H) 2.87 (s, 3 H) 3.90 (s, 3 H) 4.02 (br s, 1 H) 4.40 - 4.47 (m, 1 H) 4.67 (s, 2 H) 7.42 (d, $J=8.22$ Hz, 2 H) 7.51 - 7.58 (m, 4 H) 7.58 - 7.62 (m, 2 H) 7.85 (d, $J=0.78$ Hz, 1 H) 7.98 (s, 1 H) 8.20 (d, $J=2.35$ Hz, 1 H) 8.51 (d, $J=1.96$ Hz, 1 H);

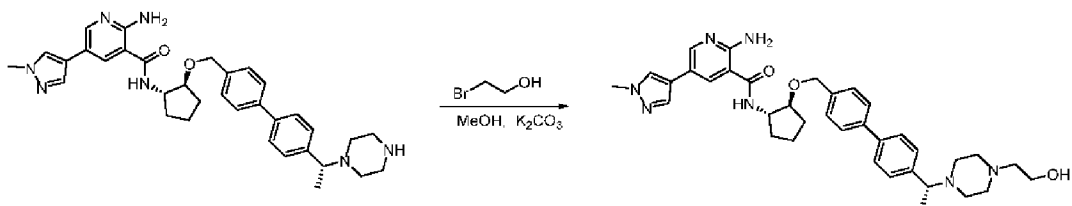
[1161] MS (ESI, m/z): 608.2 $[\text{M}+\text{H}]^+$

[1162] Example 218.

2-amino-N-((1S,2S)-2-((4'-(R)-1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1163] Scheme for the preparation of the Compound of Example 218;

[1164]



[1165] To a mixture of compound 213 (20 mg, 0.03 mmol) and K_2CO_3 (14 mg, 0.1 mmol) in 0.3 ml of methanol was added 2-bromoethanol (4 μl , 0.05 mmol). The reaction mixture was stirred at room temperature for 3 hrs, After concentration under vacuum, the crude product was purified by HPLC to give 10 mg of off-white solid

[1166] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.60 - 1.71 (m, 1 H) 1.75 (d, $J=7.04$ Hz, 3 H) 1.76 - 1.85 (m, 3 H) 2.00 - 2.09 (m, 1 H) 2.14 - 2.23 (m, 1 H) 3.33 - 3.44 (m, 2 H) 3.56 - 3.73 (m, 4 H) 3.83 - 3.87 (m, 2 H) 3.90 (s, 3 H) 4.00 (dt, $J=6.60, 4.33$ Hz, 1 H) 4.38 - 4.45 (m, 2 H) 4.64 - 4.70 (m, 2 H) 7.43 (d, $J=8.22$ Hz, 2 H) 7.54 (d, $J=8.22$ Hz, 2 H) 7.56 - 7.61 (m, 2 H) 7.64 - 7.71 (m, 2 H) 7.85 (s, 1 H) 7.98 (s, 1 H) 8.20 (d, $J=1.76$ Hz, 1 H) 8.53 (s, 1 H);

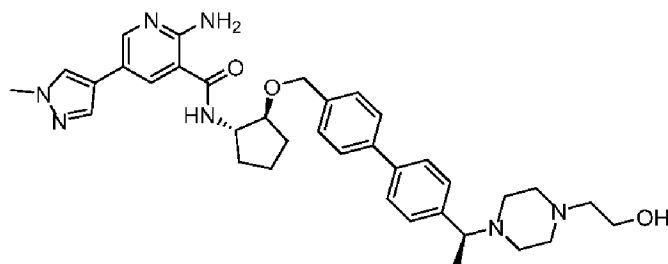
[1167] MS (ESI, m/z): 624.8 $[\text{M}+\text{H}]^+$

[1168] Example 219.

2-amino-N-((1S,2S)-2-((4'-((S)-1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1169] Using intermediate 9, the title compound was obtained as described for the example 213 and 218.

[1170]



[1171] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.58 (d, $J=7.04$ Hz, 3 H) 1.64 (br dd, $J=13.21, 6.75$ Hz, 1 H) 1.72 - 1.87 (m, 3 H) 2.00 - 2.07 (m, 1 H) 2.15 - 2.23 (m, 1 H) 2.99 (br s, 2 H) 3.17 - 3.22 (m, 3 H) 3.35 - 3.44 (m, 4 H) 3.80 - 3.85 (m, 3 H) 3.90 (s, 3 H) 3.96 - 4.03 (m, 2 H) 4.42 (td, $J=7.34, 4.11$ Hz, 1 H) 4.66 (s, 2 H) 7.42 (d, $J=8.22$ Hz, 2 H) 7.46 (d, $J=8.22$ Hz, 2 H) 7.55 - 7.57 (m, 2 H) 7.60 (d, $J=8.22$ Hz, 2 H) 7.86 (s, 1 H) 7.98 (s, 1 H) 8.20 (d, $J=2.35$ Hz, 1 H) 8.52 (d, $J=2.35$ Hz, 1 H);

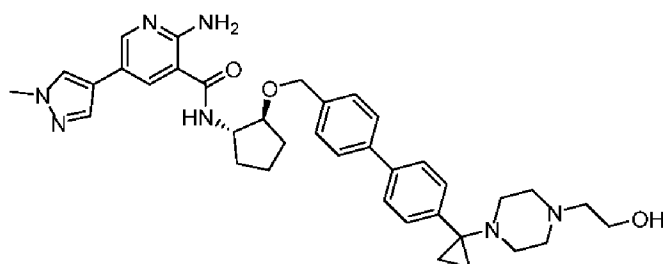
[1172] MS (ESI, m/z): 624.8 $[\text{M}+\text{H}]^+$

[1173] Example 220.

2-amino-N-((1S,2S)-2-((4'-((1-(4-(2-hydroxyethyl)piperazin-1-yl)cyclopropyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1174] Using intermediate 11, the title compound was obtained as described for the example 213 and 218.

[1175]



[1176] ^1H NMR (600 MHz, CD_3OD) δ ppm 0.85 - 0.88 (m, 1 H) 0.91 - 0.94 (m, 1 H) 1.00 - 1.03 (m, 1 H) 1.05 - 1.07 (m, 1 H) 1.64 (dd, $J=13.21, 6.75$ Hz, 1 H) 1.74 - 1.86 (m, 2

H) 1.99 - 2.07 (m, 1 H) 2.15 - 2.21 (m, 1 H) 3.13 - 3.18 (m, 3 H) 3.76 - 3.81 (m, 2 H) 3.90 (s, 3 H) 3.97 - 4.04 (m, 1 H) 4.39 - 4.45 (m, 1 H) 4.61 - 4.71 (m, 2 H) 7.25 - 7.28 (m, 1 H) 7.35 - 7.43 (m, 3 H) 7.49 - 7.58 (m, 4 H) 7.85 (s, 1 H) 7.98 (s, 1 H) 8.19 (d, $J=1.76$ Hz, 1 H) 8.53 (d, $J=1.76$ Hz, 1 H);

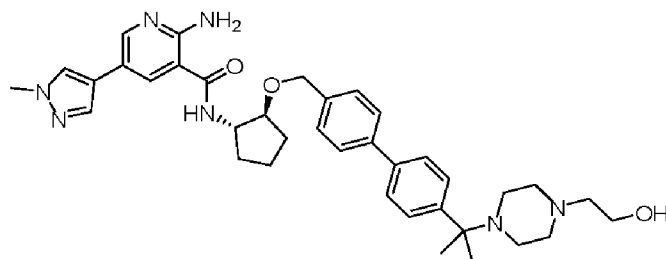
[1177] MS (ESI, m/z): 636.5 $[M+H]^+$

[1178] Example 221.

2-amino-N-((1S,2S)-2-((4'-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1179] Using intermediate 12, the title compound was obtained as described for the example 213 and 218.

[1180]



[1181] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.35 - 1.44 (m, 6 H) 1.60 (br dd, $J=12.91$, 7.43 Hz, 1 H) 1.73 - 1.89 (m, 3 H) 2.03 (br dd, $J=13.50$, 6.46 Hz, 1 H) 2.11 - 2.21 (m, 1 H) 2.48 - 2.62 (m, 9 H) 3.67 (t, $J=6.06$ Hz, 2 H) 3.86 (s, 3 H) 3.96 (dt, $J=6.95$, 4.55 Hz, 1 H) 4.36 - 4.46 (m, 1 H) 4.59 - 4.72 (m, 2 H) 7.40 (d, $J=7.83$ Hz, 2 H) 7.43 - 7.49 (m, 2 H) 7.53 (dd, $J=12.72$, 8.41 Hz, 4 H) 7.75 (s, 1 H) 7.83 (s, 1 H) 7.97 (d, $J=2.35$ Hz, 1 H) 8.24 (d, $J=1.96$ Hz, 1 H);

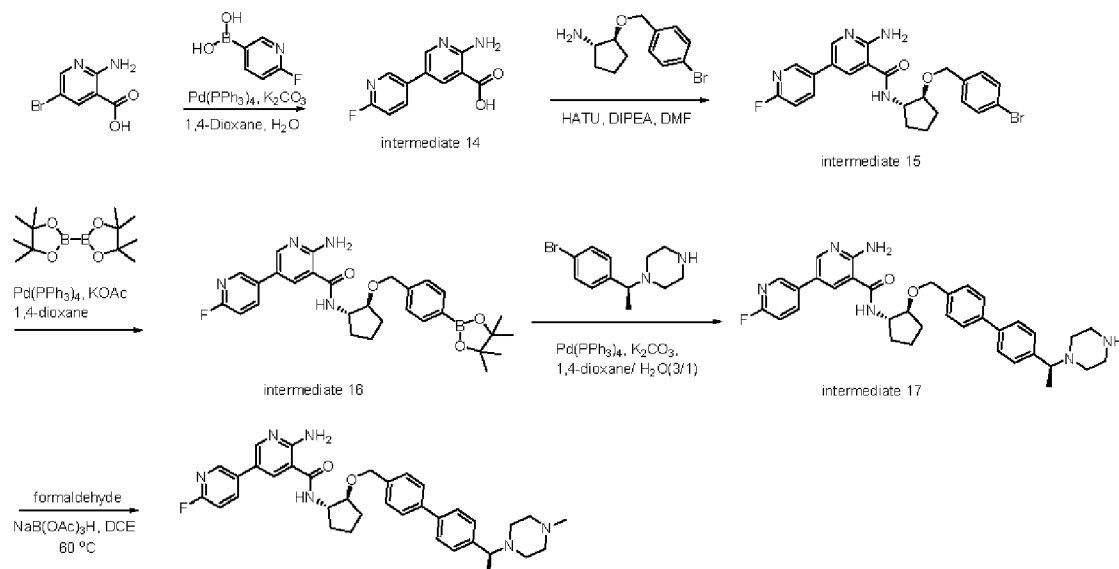
[1182] MS (ESI, m/z): 624.8 $[M+H]^+$

[1183] Example 222.

6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(S)-1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

[1184] Scheme for the preparation of the Compound of Example 222:

[1185]



[1186] Intermediate 14.

[1187] Using 6-fluoropyridine-3-boronic acid, the title compound was obtained as described for the intermediate 2.

[1188] ^1H NMR (600 MHz, $\text{DMSO-}d_6$) δ ppm 7.20 (dd, $J=8.51, 2.64$ Hz, 1 H) 8.20 (td, $J=8.22, 2.35$ Hz, 1 H) 8.27 (d, $J=2.93$ Hz, 1 H) 8.45 (d, $J=2.93$ Hz, 1 H) 8.48 (d, $J=2.35$ Hz, 1 H);[1189] MS (ESI+) m/z 234.1 $[\text{M}+\text{H}]^+$

[1190] Intermediate 15.

[1191] Using intermediate 14, the title compound was obtained as described for the intermediate 4.

[1192] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.60 (br dd, $J=13.30, 7.04$ Hz, 1 H) 1.71 - 1.84 (m, 3 H) 2.00 (br dd, $J=13.30, 6.26$ Hz, 1 H) 2.10 - 2.21 (m, 1 H) 3.92 (dt, $J=6.55, 4.35$ Hz, 1 H) 4.39 (td, $J=7.34, 4.50$ Hz, 1 H) 4.58 (s, 2 H) 7.15 (dd, $J=8.41, 2.54$ Hz, 1 H) 7.26 (d, $J=8.22$ Hz, 2 H) 7.38 - 7.43 (m, 2 H) 8.08 (d, $J=2.35$ Hz, 1 H) 8.12 - 8.21 (m, 1 H) 8.35 (d, $J=2.35$ Hz, 1 H) 8.43 (d, $J=2.35$ Hz, 1 H);[1193] MS (ESI+) m/z 485.2/ 487.3 $[\text{M}+\text{H}]^+$

[1194] Intermediate 16.

[1195] Using intermediate 15, the title compound was obtained as described for the intermediate 13.

[1196] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.18 (s, 12 H) 1.58 (br dd, $J=13.21, 7.34$ Hz, 1 H) 1.69 - 1.84 (m, 3 H) 1.96 - 2.03 (m, 1 H) 2.15 (br d, $J=7.63$ Hz, 1 H) 3.93 (br d, $J=6.46$ Hz, 1 H) 4.39 (br d, $J=4.70$ Hz, 1 H) 4.63 (s, 2 H) 7.13 (dd, $J=8.51, 2.64$ Hz, 1 H) 7.32 (d, $J=7.63$ Hz, 2 H) 7.49 - 7.57 (m, 1 H) 7.64 (d, $J=7.63$ Hz, 2 H) 8.07 (d, $J=2.35$ Hz, 1 H) 8.10 - 8.18 (m, 1 H) 8.33 (d, $J=1.76$ Hz, 1 H) 8.41 (d, $J=2.35$ Hz, 1 H);[1197] MS (ESI+) m/z 533.3 $[\text{M}+\text{H}]^+$

[1198] Intermediate 17.

[1199] Using intermediate 16, the title compound was obtained as described for the compound 213.

[1200] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.61 (d, *J*=6.65 Hz, 3 H) 1.64 (br s, 1 H) 1.77 - 1.86 (m, 3 H) 2.02 - 2.08 (m, 1 H) 2.16 - 2.22 (m, 1 H) 3.02 (br s, 2 H) 3.13 (br s, 2 H) 3.32 - 3.40 (m, 4 H) 3.97 - 4.02 (m, 2 H) 4.05 (br d, *J*=6.26 Hz, 1 H) 4.41 - 4.46 (m, 1 H) 4.67 (d, *J*=3.91 Hz, 2 H) 7.16 (br dd, *J*=8.41, 2.54 Hz, 1 H) 7.43 (br d, *J*=8.22 Hz, 2 H) 7.48 (d, *J*=8.22 Hz, 2 H) 7.55 (d, *J*=7.83 Hz, 2 H) 7.60 (d, *J*=7.83 Hz, 2 H) 8.19 (td, *J*=8.02, 2.74 Hz, 1 H) 8.35 (d, *J*=2.35 Hz, 1 H) 8.47 (br d, *J*=2.74 Hz, 1 H) 8.52 (d, *J*=2.35 Hz, 1 H);

[1201] MS (ESI+) *m/z* 595.3 [M+H]⁺

[1202] Example 222.

6-amino-6'-fluoro-N-((1*S*,2*S*)-2-((4'-((*S*)-1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

[1203] Using intermediate 17, the title compound was obtained as described for the example 214.

[1204] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.57 (d, *J*=6.65 Hz, 3 H) 1.63 (br dd, *J*=13.50, 6.85 Hz, 1 H) 1.72 - 1.89 (m, 3 H) 2.00 - 2.08 (m, 1 H) 2.14 - 2.23 (m, 1 H) 2.87 (s, 3 H) 3.90 - 3.97 (m, 1 H) 3.97 - 4.05 (m, 1 H) 4.40 - 4.47 (m, 1 H) 4.63 - 4.71 (m, 2 H) 7.16 (dd, *J*=8.61, 2.74 Hz, 1 H) 7.32 - 7.50 (m, 4 H) 7.55 (br d, *J*=8.22 Hz, 2 H) 7.58 (br d, *J*=8.22 Hz, 2 H) 8.19 (ddd, *J*=8.61, 7.43, 2.74 Hz, 1 H) 8.35 (d, *J*=2.35 Hz, 1 H) 8.48 (d, *J*=2.74 Hz, 1 H) 8.56 (d, *J*=2.35 Hz, 1 H);

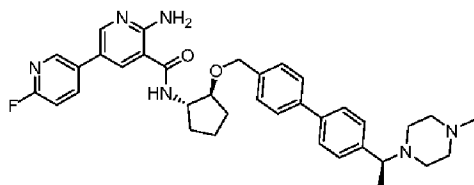
[1205] MS (ESI+) *m/z* 609.3 [M+H]⁺

[1206] Example 223.

6-amino-6'-fluoro-N-((1*S*,2*S*)-2-((4'-((*R*)-1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

[1207] Using intermediate 10, the title compound was obtained as described for the example 222.

[1208]



[1209] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.49 (d, *J*=7.04 Hz, 3 H) 1.63 (br d, *J*=6.65 Hz, 1 H) 1.84 (br d, *J*=15.65 Hz, 3 H) 2.06 (br s, 1 H) 2.19 (br d, *J*=8.61 Hz, 1 H) 2.84 (s, 3 H) 3.74 (br d, *J*=6.26 Hz, 1 H) 4.00 (br s, 1 H) 4.43 (br s, 1 H) 4.67 (d, *J*=3.13 Hz, 2 H) 7.15 (br dd, *J*=9.00, 2.74 Hz, 1 H) 7.42 (dd, *J*=7.83, 3.52 Hz, 4 H) 7.54 (br dd, *J*=7.83, 5.09 Hz, 4 H) 8.15 - 8.22 (m, 1 H) 8.35 (br d, *J*=2.35 Hz, 1 H) 8.46 (s, 1 H) 8.50 (br d,

$J=1.96$ Hz, 1 H);

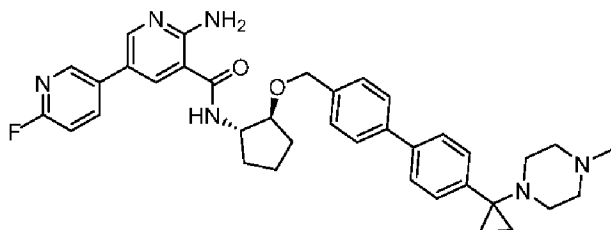
[1210] MS (ESI+) m/z 609.4 [M+H]⁺

[1211] Example 224.

6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)cyclopropyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

[1212] Using intermediate 11, the title compound was obtained as described for the example 222.

[1213]



[1214] ¹H NMR (400 MHz, CD₃OD) δ ppm 0.91 - 0.95 (m, 2 H) 1.01 - 1.06 (m, 2 H) 1.64 (br dd, $J=13.21$, 6.75 Hz, 1 H) 1.76 - 1.85 (m, 3 H) 2.01 - 2.06 (m, 1 H) 2.14 (s, 1 H) 2.15 - 2.20 (m, 1 H) 2.80 (s, 3 H) 3.34 (s, 2 H) 3.99 (br d, $J=4.30$ Hz, 1 H) 4.43 (br d, $J=4.70$ Hz, 1 H) 4.67 (d, $J=3.52$ Hz, 2 H) 7.12 - 7.16 (m, 1 H) 7.40 (dd, $J=14.28$, 8.41 Hz, 4 H) 7.52 (br dd, $J=8.22$, 3.91 Hz, 4 H) 8.18 (s, 1 H) 8.35 (d, $J=2.35$ Hz, 1 H) 8.42 (d, $J=2.35$ Hz, 1 H) 8.45 (s, 1 H);

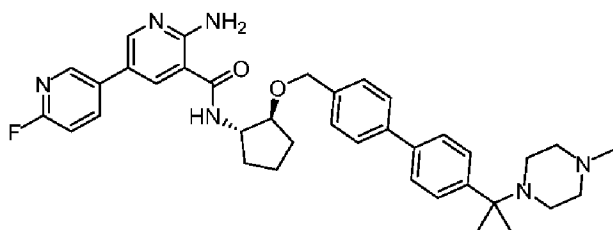
[1215] MS (ESI+) m/z 621.5 [M+H]⁺

[1216] Example 225.

6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(2-(4-methylpiperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

[1217] Using intermediate 12, the title compound was obtained as described for the example 222.

[1218]



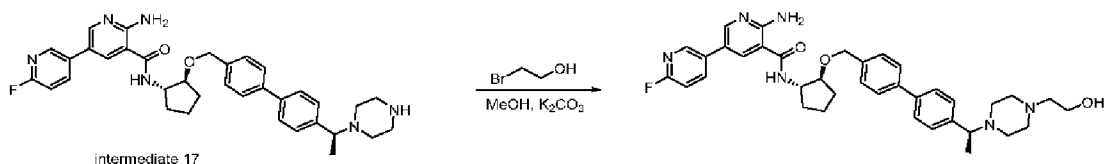
[1219] MS (ESI+) m/z 623.3 [M+H]⁺

[1220] Example 226.

6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(S)-1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

[1221] Scheme for the preparation of the Compound of Example 226:

[1222]



[1223] Using intermediate 17, the title compound was obtained as described for the example 218.

[1224] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.58 - 1.68 (m, 4 H) 1.77 - 1.87 (m, 3 H) 2.02 - 2.09 (m, 1 H) 2.15 - 2.23 (m, 1 H) 3.13 (br s, 2 H) 3.17 - 3.26 (m, 2 H) 3.46 (br s, 4 H) 3.77 (br s, 1 H) 3.82 - 3.87 (m, 2 H) 4.02 (br d, $J=4.70$ Hz, 2 H) 4.11 (br d, $J=6.26$ Hz, 1 H) 4.44 (br dd, $J=11.74$, 7.43 Hz, 1 H) 4.67 (d, $J=2.74$ Hz, 2 H) 7.17 (dd, $J=8.61$, 2.74 Hz, 1 H) 7.43 (d, $J=8.22$ Hz, 2 H) 7.49 (d, $J=8.22$ Hz, 2 H) 7.56 (d, $J=8.22$ Hz, 2 H) 7.62 (d, $J=8.61$ Hz, 2 H) 8.20 (td, $J=8.02$, 2.74 Hz, 1 H) 8.36 (d, $J=2.35$ Hz, 1 H) 8.48 (br d, $J=2.74$ Hz, 1 H) 8.57 (d, $J=1.96$ Hz, 1 H);

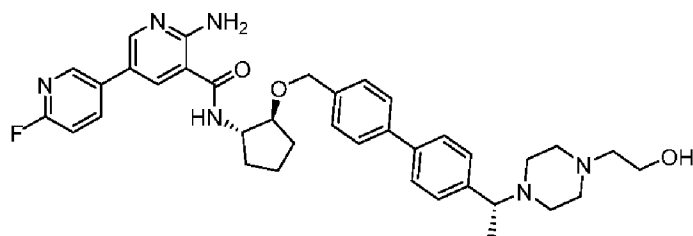
[1225] MS (ESI+) m/z 639.4 $[\text{M}+\text{H}]^+$

[1226] Example 227.

6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

[1227] Using intermediate 10, the title compound was obtained as described for the example 226.

[1228]



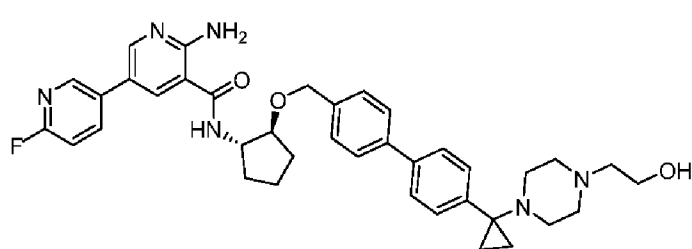
[1229] MS (ESI+) m/z 639.1 $[\text{M}+\text{H}]^+$

[1230] Example 228.

6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)cyclopropyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

[1231] Using intermediate 11, the title compound was obtained as described for the example 226.

[1232]



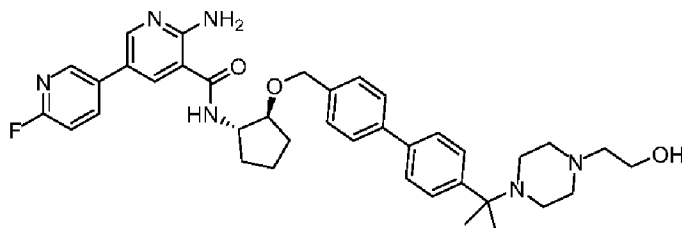
[1233] MS (ESI+) m/z 651.6 $[\text{M}+\text{H}]^+$

[1234] Example 229.

6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

[1235] Using intermediate 12, the title compound was obtained as described for the example 226.

[1236]



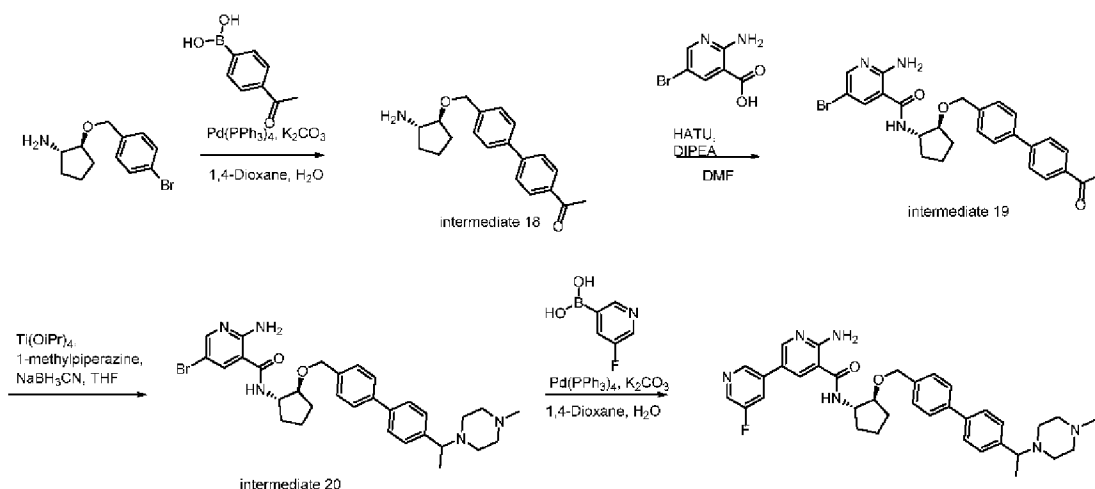
[1237] MS (ESI+) m/z 653.4 [M+H]⁺

[1238] Example 230.

6-amino-5'-fluoro-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

[1239] Scheme for the preparation of the Compound of Example 230:

[1240]



[1241] Intermediate 18.

[1242] Using (1S,2S)-2-((4-bromobenzyl)oxy)cyclopentan-1-amine, the title compound was obtained as described for the intermediate 7.

[1243] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.58 - 1.65 (m, 1 H) 1.74 - 1.85 (m, 3 H) 2.01 - 2.08 (m, 1 H) 2.12 - 2.18 (m, 1 H) 2.60 (s, 3 H) 3.41 - 3.48 (m, 1 H) 3.92 (q, J =5.87 Hz, 1 H) 4.45 - 4.55 (m, 2 H) 7.27 (d, J =8.22 Hz, 2 H) 7.43 - 7.50 (m, 3 H) 7.65 (d, J =8.22 Hz, 1 H) 7.73 (d, J =8.22 Hz, 1 H) 8.03 (d, J =8.22 Hz, 1 H);

[1244] MS (ESI+) m/z 310.1 [M+H]⁺

[1245] Intermediate 19.

[1246] Using intermediate 18, the title compound was obtained as described for the intermediate 4.

[1247] ¹H NMR (600 MHz, CDCl₃) δ ppm 1.45 - 1.54 (m, 1 H) 1.71 - 1.82 (m, 2 H) 1.84 - 1.92 (m, 1 H) 1.92 - 2.02 (m, 1 H) 2.23 - 2.33 (m, 1 H) 2.63 (s, 3 H) 3.81 - 3.91 (m, 1

H) 4.29 - 4.44 (m, 1 H) 4.63 - 4.75 (m, 2 H) 5.90 (br d, $J=6.46$ Hz, 1 H) 6.35 (br s, 2 H) 7.44 (d, $J=8.22$ Hz, 2 H) 7.56 - 7.62 (m, 3 H) 7.66 (d, $J=8.22$ Hz, 2 H) 8.01 (d, $J=8.22$ Hz, 2 H) 8.15 (d, $J=1.76$ Hz, 1 H);

[1248] MS (ESI+) m/z 508.1/510.2 [M+H]⁺

[1249] Intermediate 20.

[1250] To intermediate 19 (300 mg, 0.59 mmol) in 3 ml of THF was added 1-methylpiperazine (0.13 ml, 1.18 mmol) followed by Ti(OiPr)₄ (0.7 ml, 2.36 mmol). The mixture was stirred at 60 °C for 4 hr and then NaBH₃CN (0.11 g, 1.18 mmol) was added. The mixture was stirred for 1 h and extracted with EtOAc, washed with brine, dried over MgSO₄. After concentration under vacuum, the crude product was purified by silicagel column chromatography to give 200 mg of off-white solid.

[1251] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.55 - 1.61 (m, 1 H) 1.64 (d, $J=7.04$ Hz, 3 H) 1.72 - 1.84 (m, 3 H) 1.97 - 2.05 (m, 1 H) 2.09 - 2.17 (m, 1 H) 2.88 (s, 3 H) 3.11 (br s, 2 H) 3.36 - 3.49 (m, 4 H) 3.95 (dt, $J=6.75, 4.26$ Hz, 1 H) 4.14 (br d, $J=6.46$ Hz, 1 H) 4.35 (td, $J=7.34, 4.70$ Hz, 1 H) 4.61 - 4.68 (m, 2 H) 7.42 (d, $J=8.22$ Hz, 2 H) 7.50 (d, $J=8.22$ Hz, 2 H) 7.57 (d, $J=8.22$ Hz, 2 H) 7.65 (d, $J=8.22$ Hz, 2 H) 8.13 (d, $J=2.35$ Hz, 1 H) 8.20 (d, $J=2.35$ Hz, 1 H);

[1252] MS (ESI+) m/z 592.2/594.3 [M+H]⁺

[1253] Example 230.

6-amino-5'-fluoro-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

[1254] Using intermediate 20 and 5-fluoropyridine-3-boronic acid, the title compound was obtained as described for the intermediate 14.

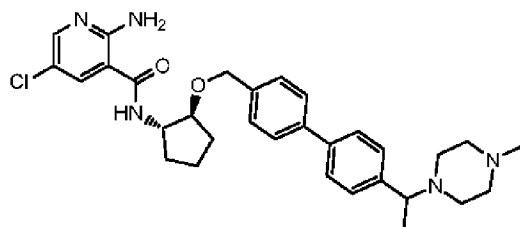
[1255] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.54 (d, $J=7.04$ Hz, 3 H) 1.63 (br dd, $J=13.21, 6.75$ Hz, 1 H) 1.77 - 1.86 (m, 3 H) 2.04 (br dd, $J=12.91, 7.04$ Hz, 1 H) 2.16 - 2.23 (m, 1 H) 2.85 (s, 3 H) 3.88 (br d, $J=7.04$ Hz, 1 H) 3.97 - 4.03 (m, 1 H) 4.43 (br d, $J=4.70$ Hz, 1 H) 4.64 - 4.70 (m, 2 H) 7.42 (br dd, $J=8.22, 4.11$ Hz, 4 H) 7.53 (br d, $J=8.22$ Hz, 2 H) 7.56 (br d, $J=8.22$ Hz, 2 H) 7.96 (br d, $J=9.39$ Hz, 1 H) 8.42 (s, 1 H) 8.50 (d, $J=2.35$ Hz, 1 H) 8.56 (s, 1 H) 8.70 (br s, 1 H);

[1256] MS (ESI+) m/z 609.3 [M+H]⁺

[1257] Example 231. 2-amino-5-chloro-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1258] Using 2-amino-5-chloronicotinic acid, the title compound was obtained as described for the synthesis of intermediate 20.

[1259]



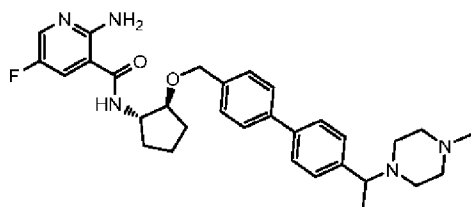
[1260] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.60 (dt, $J=13.60$, 7.09 Hz, 1 H) 1.66 (d, $J=6.65$ Hz, 3 H) 1.73 - 1.87 (m, 3 H) 1.98 - 2.06 (m, 1 H) 2.10 - 2.20 (m, 1 H) 2.90 (s, 2 H) 3.15 (br s, 2 H) 3.45 (br s, 4 H) 3.96 (dt, $J=6.65$, 4.30 Hz, 1 H) 4.18 (q, $J=6.65$ Hz, 1 H) 4.37 (td, $J=7.24$, 4.30 Hz, 1 H) 4.61 - 4.71 (m, 2 H) 7.43 (m, $J=8.22$ Hz, 2 H) 7.52 (d, $J=8.22$ Hz, 2 H) 7.59 (d, $J=8.22$ Hz, 2 H) 7.67 (m, $J=8.22$ Hz, 2 H) 8.09 (d, $J=2.74$ Hz, 1 H) 8.14 (d, $J=2.74$ Hz, 1 H);

[1261] MS (ESI+) m/z 548.3 $[\text{M}+\text{H}]^+$

[1262] Example 232. 2-amino-5-fluoro-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1263] Using 2-amino-5-fluoronicotinic acid, the title compound was obtained as described for the synthesis of intermediate 20.

[1264]

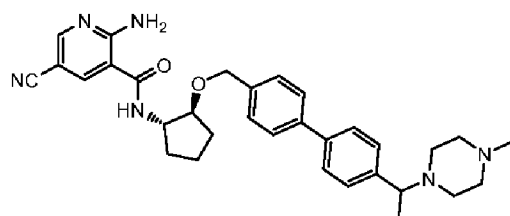


[1265] MS (ESI, m/z): 532.3 $[\text{M}+\text{H}]^+$

[1266] Example 233. 2-amino-5-cyano-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1267] Using 2-amino-5-cyanonicotinic acid, the title compound was obtained as described for the synthesis of intermediate 20.

[1268]

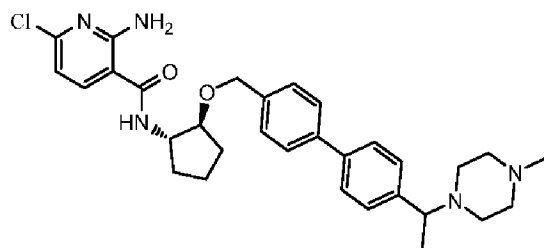


[1269] MS (ESI, m/z): 539.3 $[\text{M}+\text{H}]^+$

[1270] Example 234. 2-amino-6-chloro-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1271] Using 2-amino-6-chloronicotinic acid, the title compound was obtained as described for the synthesis of intermediate 20.

[1272]



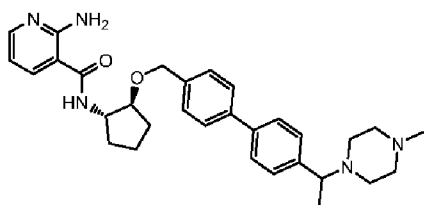
[1273] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.56 (br dd, $J=13.11$, 7.24 Hz, 1 H) 1.66 (d, $J=7.04$ Hz, 3 H) 1.70 - 1.85 (m, 3 H) 2.01 (br dd, $J=13.11$, 6.46 Hz, 1 H) 2.07 - 2.19 (m, 2 H) 2.90 (s, 3 H) 3.09 - 3.21 (m, 2 H) 3.39 - 3.58 (m, 4 H) 3.87 - 3.96 (m, 1 H) 4.19 (br d, $J=6.65$ Hz, 1 H) 4.35 (br d, $J=4.70$ Hz, 1 H) 4.57 - 4.73 (m, 2 H) 6.56 (d, $J=7.83$ Hz, 1 H) 7.42 (m, $J=8.22$ Hz, 2 H) 7.52 (d, $J=8.22$ Hz, 2 H) 7.56 (d, $J=8.22$ Hz, 2 H) 7.66 (m, $J=8.22$ Hz, 2 H) 7.73 (d, $J=8.22$ Hz, 1 H) ;

[1274] MS (ESI, m/z): 548.3 $[\text{M}+\text{H}]^+$

[1275] Example 235. 2-amino-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1276] Using 2-aminonicotinic acid, the title compound was obtained as described for the synthesis of intermediate 20.

[1277]



[1278] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.58 - 1.64 (m, 1 H) 1.66 (d, $J=7.04$ Hz, 3 H) 1.74 - 1.85 (m, 3 H) 1.97 - 2.05 (m, 1 H) 2.13 - 2.20 (m, 1 H) 2.89 (s, 3 H) 3.02 - 3.27 (m, 4 H) 3.46 (br s, 4 H) 3.93 - 4.00 (m, 1 H) 4.20 (q, $J=6.46$ Hz, 1 H) 4.35 - 4.42 (m, 1 H) 4.65 (s, 2 H) 6.95 (t, $J=6.75$ Hz, 1 H) 7.43 (d, $J=8.22$ Hz, 2 H) 7.52 (m, $J=8.22$ Hz, 2 H) 7.58 (m, $J=8.22$ Hz, 2 H) 7.67 (d, $J=8.22$ Hz, 2 H) 7.99 (dd, $J=6.46$, 1.17 Hz, 1 H) 8.33 (dd, $J=7.34$, 1.47 Hz, 1 H) ;

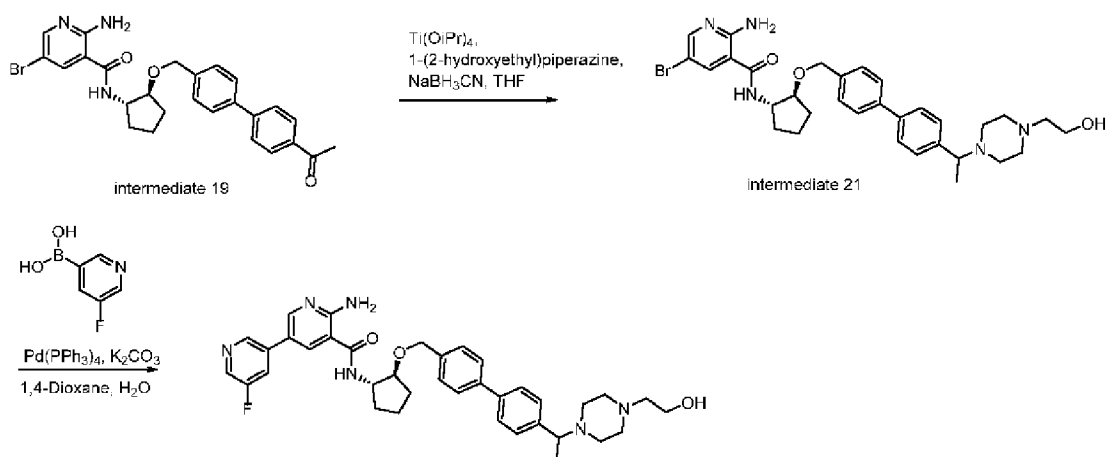
[1279] MS (ESI, m/z): 514.3 $[\text{M}+\text{H}]^+$

[1280] Example 236.

6-amino-5'-fluoro-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

[1281] Scheme for the preparation of the Compound of Example 236:

[1282]



[1283] Intermediate 21. Using 1-(2-hydroxyethyl)piperazine, the title compound was obtained as described for the intermediate 20.

[1284] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.42 (d, $J=6.46$ Hz, 2 H) 1.51 - 1.58 (m, 1 H) 1.71 - 1.81 (m, 3 H) 1.97 - 2.04 (m, 1 H) 2.08 - 2.15 (m, 1 H) 2.61 (br s, 2 H) 3.47 (br d, $J=5.28$ Hz, 1 H) 3.67 (t, $J=5.87$ Hz, 2 H) 3.91 (dt, $J=6.46$, 4.70 Hz, 1 H) 4.35 (td, $J=7.34$, 4.70 Hz, 1 H) 4.59 - 4.67 (m, 2 H) 7.37 (br d, $J=8.22$ Hz, 2 H) 7.39 (br d, $J=8.22$ Hz, 2 H) 7.54 (d, $J=7.63$ Hz, 4 H) 7.90 (d, $J=2.35$ Hz, 1 H) 8.05 (d, $J=2.35$ Hz, 1 H);

[1285] MS (ESI+) m/z 622.2/624.2 $[\text{M}+\text{H}]^+$

[1286] Example 236.

6-amino-5'-fluoro-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

[1287] Using intermediate 21, the title compound was obtained as described for the example 230.

[1288] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.63 (br dd, $J=13.89$, 6.85 Hz, 1 H) 1.72 (br d, $J=6.65$ Hz, 3 H) 1.76 - 1.87 (m, 3 H) 2.04 (br dd, $J=12.72$, 6.46 Hz, 1 H) 2.13 - 2.23 (m, 1 H) 3.52 - 3.68 (m, 4 H) 3.84 (br t, $J=4.89$ Hz, 2 H) 4.00 (br d, $J=3.91$ Hz, 1 H) 4.35 (br d, $J=6.65$ Hz, 1 H) 4.39 - 4.49 (m, 2 H) 4.61 - 4.73 (m, 2 H) 7.43 (br d, $J=7.83$ Hz, 2 H) 7.53 (br t, $J=9.39$ Hz, 4 H) 7.63 (br d, $J=8.22$ Hz, 2 H) 7.98 (br d, $J=9.78$ Hz, 1 H) 8.43 (s, 1 H) 8.52 (s, 1 H) 8.61 (s, 1 H) 8.71 (s, 1 H);

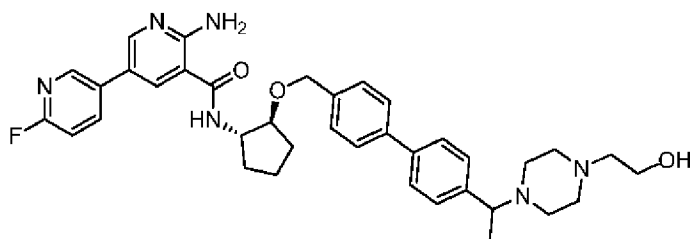
[1289] MS (ESI+) m/z 639.3 $[\text{M}+\text{H}]^+$

[1290] Example 237.

6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

[1291] Using 6-fluoropyridine-3-boronic acid, the title compound was obtained as described for the example 236.

[1292]



[1293] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.62 (br dd, $J=13.30$, 6.65 Hz, 1 H) 1.68 (br d, $J=7.04$ Hz, 3 H) 1.81 (br d, $J=7.43$ Hz, 3 H) 1.98 - 2.08 (m, 1 H) 2.12 - 2.23 (m, 1 H) 3.17 - 3.28 (m, 4 H) 3.53 (br s, 4 H) 3.84 (br d, $J=4.30$ Hz, 2 H) 3.99 (br s, 1 H) 4.25 (br d, $J=7.04$ Hz, 1 H) 4.42 (br d, $J=4.70$ Hz, 1 H) 4.62 - 4.72 (m, 2 H) 7.16 (br d, $J=7.83$ Hz, 1 H) 7.42 (br d, $J=7.83$ Hz, 2 H) 7.47 - 7.59 (m, 4 H) 7.62 (br d, $J=7.83$ Hz, 2 H) 8.19 (br t, $J=8.02$ Hz, 1 H) 8.34 (s, 1 H) 8.47 (br s, 1 H) 8.56 (s, 1 H);

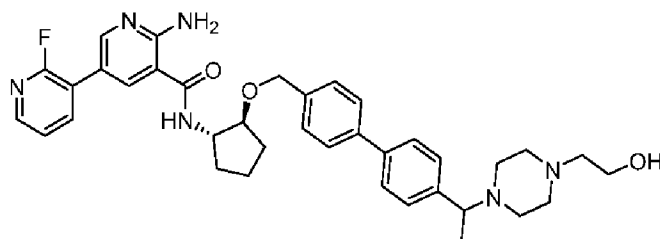
[1294] MS (ESI+) m/z 639.3 $[\text{M}+\text{H}]^+$

[1295] Example 238.

6-amino-2'-fluoro-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

[1296] Using 2-fluoropyridine-3-boronic acid, the title compound was obtained as described for the example 236.

[1297]



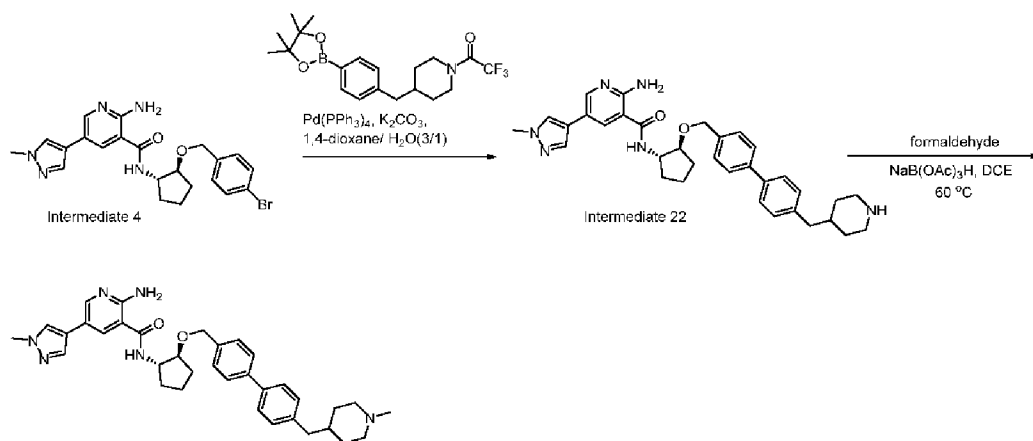
[1298] MS (ESI+) m/z 639.3 $[\text{M}+\text{H}]^+$

[1299] Example 239.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((1-methylpiperidin-4-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1300] Scheme for the preparation of the Compound of Example 239:

[1301]



[1302] Intermediate 22.

[1303] Using 4-(4-(1-trifluoroacetyl)piperidino)methyl)phenylboronic acid pinacol ester, the title compound was obtained as described for the example 134.

[1304] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.39 - 1.48 (m, 2 H) 1.63 (br dd, *J*=13.50, 7.04 Hz, 1 H) 1.76 - 1.86 (m, 4 H) 1.86 - 1.95 (m, 3 H) 2.04 (br dd, *J*=13.21, 6.75 Hz, 1 H) 2.18 (br dd, *J*=13.50, 5.87 Hz, 1 H) 2.64 (br d, *J*=6.46 Hz, 2 H) 2.90 - 2.98 (m, 2 H) 3.33 (s, 3 H) 3.36 (br d, *J*=12.33 Hz, 3 H) 3.89 (s, 3 H) 3.97 - 4.03 (m, 1 H) 4.37 - 4.45 (m, 1 H) 4.63 - 4.70 (m, 2 H) 7.23 (br d, *J*=8.22 Hz, 2 H) 7.40 (d, *J*=8.22 Hz, 2 H) 7.48 (d, *J*=8.22 Hz, 2 H) 7.52 (d, *J*=8.22 Hz, 2 H) 7.85 (s, 1 H) 7.97 (s, 1 H) 8.19 (d, *J*=1.76 Hz, 1 H) 8.51 (d, *J*=2.35 Hz, 1 H);

[1305] MS (ESI, *m/z*): 564.8 [M+H]⁺

[1306] Example 239.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((1-methylpiperidin-4-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1307] Using intermediate 22 and formaldehyde, the title compound was obtained as described for the example 214.

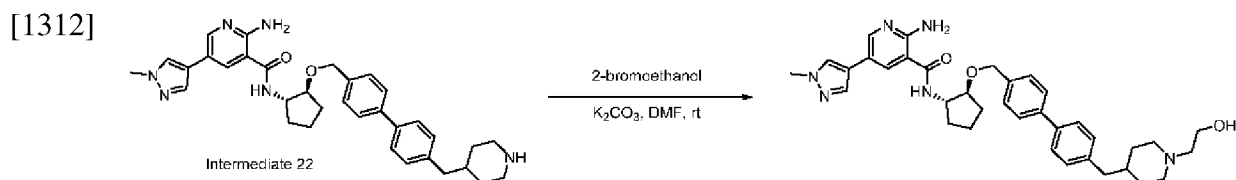
[1308] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.42 - 1.54 (m, 2 H) 1.63 (br dd, *J*=13.50, 7.04 Hz, 1 H) 1.75 - 1.88 (m, 4 H) 1.92 (br d, *J*=14.67 Hz, 2 H) 2.00 - 2.08 (m, 1 H) 2.17 (br dd, *J*=13.50, 5.87 Hz, 1 H) 2.64 (br d, *J*=7.04 Hz, 2 H) 2.82 (s, 3 H) 2.89 - 2.98 (m, 2 H) 3.47 (br d, *J*=12.33 Hz, 2 H) 3.89 (s, 3 H) 3.94 - 4.05 (m, 1 H) 4.36 - 4.46 (m, 1 H) 4.61 - 4.69 (m, 2 H) 7.22 (d, *J*=8.22 Hz, 2 H) 7.39 (br d, *J*=8.22 Hz, 2 H) 7.47 (br d, *J*=8.22 Hz, 2 H) 7.51 (br d, *J*=8.22 Hz, 2 H) 7.84 (s, 1 H) 7.96 (s, 1 H) 8.18 (d, *J*=1.76 Hz, 1 H) 8.49 (d, *J*=2.35 Hz, 1 H);

[1309] MS (ESI, *m/z*): 579.8 [M+H]⁺

[1310] Example 240.

2-amino-N-((1S,2S)-2-((4'-((1-(2-hydroxyethyl)piperidin-4-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1311] Scheme for the preparation of the Compound of Example 240:



[1313] To a mixture of intermediate 22 (30 mg, 0.05 mmol) and K₂CO₃ (22 mg, 0.16 mmol) in 0.4 ml of DMF was added 2-bromoethanol (6 μl, 0.08 mmol). The mixture was stirred at room temperature for 4 hr and then water was added. The mixture was extracted with EtOAc, washed with brine, dried over MgSO₄. After concentration under vacuum, the crude residue was purified by preparative HPLC to afford 27 mg of

the title compound.

[1314] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.26 (br d, *J*=13.50 Hz, 2 H) 1.56 - 1.74 (m, 4 H) 1.74 - 1.89 (m, 4 H) 2.04 (br dd, *J*=13.21, 6.16 Hz, 1 H) 2.20 (br dd, *J*=13.50, 7.04 Hz, 1 H) 2.64 (br d, *J*=7.04 Hz, 2 H) 2.77 (br t, *J*=12.62 Hz, 2 H) 3.05 - 3.13 (m, 2 H) 3.47 (br d, *J*=12.33 Hz, 2 H) 3.75 - 3.81 (m, 2 H) 3.92 (s, 3 H) 4.01 - 4.07 (m, 1 H) 4.40 - 4.47 (m, 1 H) 4.62 - 4.72 (m, 2 H) 7.10 (br d, *J*=7.63 Hz, 1 H) 7.20 - 7.26 (m, 3 H) 7.27 - 7.33 (m, 2 H) 7.41 (br d, *J*=7.63 Hz, 2 H) 7.87 - 7.90 (m, 1 H) 7.88 (s, 1 H) 8.03 (s, 1 H) 8.23 (d, *J*=1.76 Hz, 1 H) 8.60 (br s, 1 H);

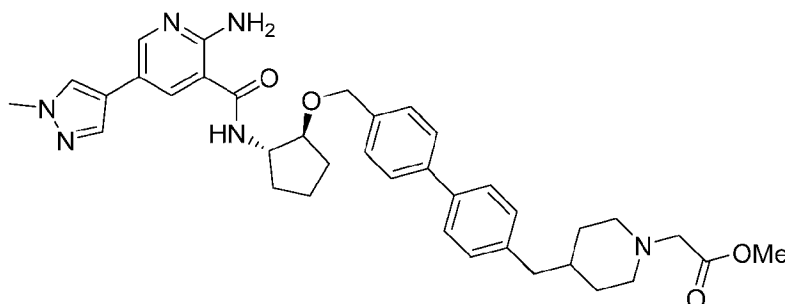
[1315] MS (ESI, *m/z*): 609.8 [M+H]⁺

[1316] Example 241. methyl

2-(4-((4'-(((1*S*,2*S*)-2-(2-amino-5-(1-methyl-1*H*-pyrazol-4-yl)nicotinamido)cyclopentyl)oxy)methyl)-[1,1'-biphenyl]-4-yl)methyl)piperidin-1-yl)acetate

[1317] Using intermediate 22 and methyl bromoacetate, the title compound was obtained as described for the example 240.

[1318]



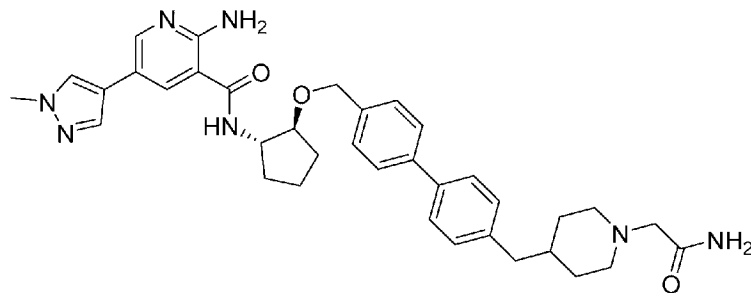
[1319] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.32 (br s, 2 H) 1.61 - 1.71 (m, 4 H) 1.79 - 1.89 (m, 4 H) 2.01 - 2.06 (m, 1 H) 2.20 (br dd, *J*=13.79, 6.75 Hz, 1 H) 2.66 (br s, 2 H) 2.85 (br s, 2 H) 3.49 (br s, 2 H) 3.79 (s, 3 H) 3.92 (s, 3 H) 4.01 (br s, 2 H) 4.02 - 4.06 (m, 1 H) 4.44 (br dd, *J*=11.15, 7.04 Hz, 1 H) 4.63 - 4.73 (m, 2 H) 7.11 (br d, *J*=7.63 Hz, 1 H) 7.23 - 7.30 (m, 4 H) 7.41 (br d, *J*=8.22 Hz, 2 H) 7.88 (s, 1 H) 8.02 - 8.04 (m, 1 H) 8.23 (d, *J*=1.76 Hz, 1 H) 8.60 (s, 1 H);

[1320] MS (ESI, *m/z*): 637.7 [M+H]⁺

[1321] Example 242. 2-amino-N-(((1*S*,2*S*)-2-((4'-((1-(2-amino-2-oxoethyl)piperidin-4-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1*H*-pyrazol-4-yl)nicotinamide

[1322] Using intermediate 22 and bromoacetamide, the title compound was obtained as described for the example 240.

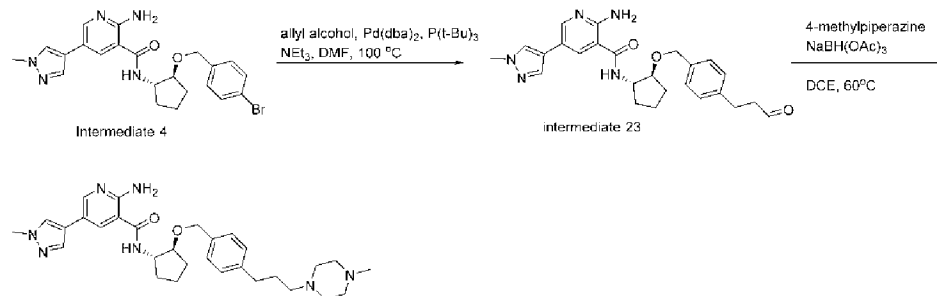
[1323]

[1324] MS (ESI, m/z): 622.8 [M+H]⁺

[1325] Example 243. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(3-(4-methylpiperazin-1-yl)propyl)benzyl)oxy)cyclopentyl)nicotinamide

[1326] Scheme for the preparation of the Compound of Example 243

[1327]



[1328] Intermediate 23.

[1329] A mixture of intermediate 4 (300 mg, 0.64 mmol), Pd(dba)₂ (7 mg, 0.01 mmol), P(t-bu)₃ (8 mg, 0.04 mmol) in DMF (3 ml) was degassed with nitrogen and TEA (0.133 ml, 0.96 mmol), allyl alcohol (0.11 ml, 1.28 mmol) were added. The mixture was heated at 100 °C for 1h. After cooling, the mixture was partitioned between EA and water. The organic layer was separated and washed with water, brine dried over MgSO₄ and concentrated in vacuo. The crude material was purified by flash chromatography on silica gel with Et₂O-hexane mixtures as eluents to give 150 mg of off-white solid.

[1330] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.64 (br dd, *J*=13.21, 6.75 Hz, 1 H) 1.75 (br d, *J*=7.63 Hz, 1 H) 1.79 - 1.85 (m, 2 H) 1.94 - 2.04 (m, 3 H) 2.16 (br d, *J*=6.46 Hz, 1 H) 2.64 (br t, *J*=7.63 Hz, 2 H) 2.89 (s, 3 H) 3.02 - 3.07 (m, 2 H) 3.40 (br s, 2 H) 3.46 (br s, 4 H) 3.93 (s, 3 H) 3.96 - 4.00 (m, 1 H) 4.36 - 4.42 (m, 1 H) 4.54 - 4.65 (m, 3 H) 7.16 (d, *J*=8.22 Hz, 2 H) 7.27 (d, *J*=8.22 Hz, 2 H) 7.84 - 7.89 (m, 1 H) 8.03 (s, 1 H) 8.23 (d, *J*=1.76 Hz, 1 H) 8.56 (d, *J*=2.35 Hz, 1 H);

[1331] MS (ESI, m/z): 532.5 [M+H]⁺

[1332] Example 243.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(3-(4-methylpiperazin-1-yl)propyl)benzyl)oxy)cyclopentyl)nicotinamide

[1333] Using intermediate 23, the title compound was obtained as described for the example 172.

[1334] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.64 (br dd, $J=13.21$, 6.75 Hz, 1 H) 1.75 (br d, $J=7.63$ Hz, 1 H) 1.79 - 1.85 (m, 2 H) 1.94 - 2.04 (m, 3 H) 2.16 (br d, $J=6.46$ Hz, 1 H) 2.64 (br t, $J=7.63$ Hz, 2 H) 2.89 (s, 3 H) 3.02 - 3.07 (m, 2 H) 3.40 (br s, 2 H) 3.46 (br s, 4 H) 3.93 (s, 3 H) 3.96 - 4.00 (m, 1 H) 4.36 - 4.42 (m, 1 H) 4.54 - 4.65 (m, 3 H) 7.16 (d, $J=8.22$ Hz, 2 H) 7.27 (d, $J=8.22$ Hz, 2 H) 7.84 - 7.89 (m, 1 H) 8.03 (s, 1 H) 8.23 (d, $J=1.76$ Hz, 1 H) 8.56 (d, $J=2.35$ Hz, 1 H);

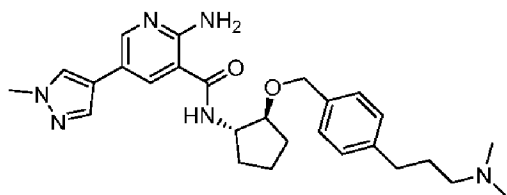
[1335] MS (ESI, m/z): 532.4 $[\text{M}+\text{H}]^+$

[1336] Example 244.

2-amino-N-((1S,2S)-2-((4-(3-(dimethylamino)propyl)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1337] Using intermediate 23 and dimethylamine (50% in THF), the title compound was obtained as described for the example 243.

[1338]



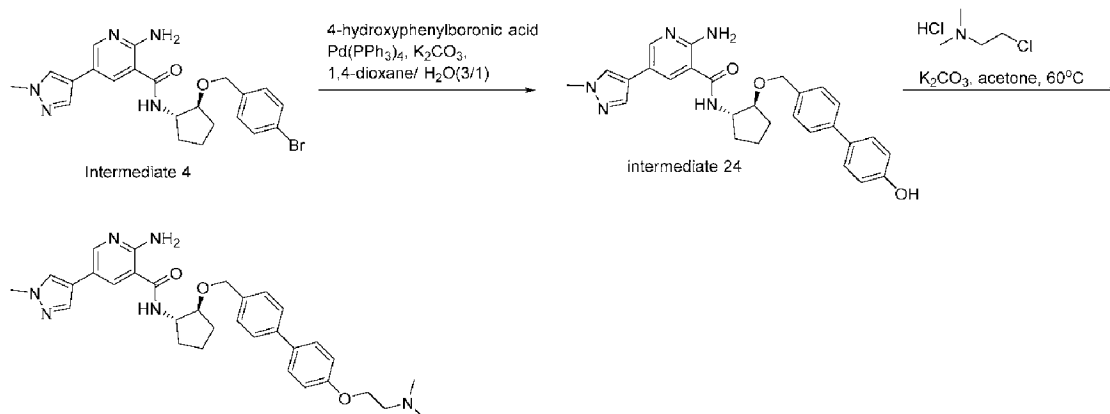
[1339] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.63 - 1.68 (m, 1 H) 1.73 - 1.78 (m, 1 H) 1.80 - 1.83 (m, 3 H) 1.96 - 2.05 (m, 3 H) 2.17 (br d, $J=6.46$ Hz, 1 H) 2.65 (br t, $J=7.63$ Hz, 2 H) 2.84 (s, 6 H) 3.06 - 3.14 (m, 2 H) 3.94 (s, 3 H) 3.98 (br s, 1 H) 4.39 (br s, 1 H) 4.55 - 4.67 (m, 3 H) 7.18 (br d, $J=7.63$ Hz, 2 H) 7.29 (br d, $J=7.63$ Hz, 2 H) 7.87 - 7.89 (m, 1 H) 8.04 (s, 1 H) 8.23 (d, $J=1.76$ Hz, 1 H) 8.57 (d, $J=2.35$ Hz, 1 H);

[1340] MS (ESI, m/z): 477.5 $[\text{M}+\text{H}]^+$

[1341] Example 245. 2-amino-N-((1S,2S)-2-((4'-(2-(dimethylamino)ethoxy)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1342] Scheme for the preparation of the Compound of Example 245

[1343]



[1344] Intermediate 24.

[1345] To a mixture of intermediate 4 (300 mg, 0.64 mmol) and (4-hydroxyphenyl)boronic

acid (132 mg, 0.96 mmol) in 4 ml of 1,4-dioxane/ water (3/1) was added K_2CO_3 (264 mg, 1.91 mmol) followed by $Pd(PPh_3)_4$ (37 mg, 0.03 mmol). The reaction mixture was heated at 100 °C for 3 hrs, cooled to room temperature, and extracted with EtOAc, dried over anhydrous $MgSO_4$ and concentrated under vacuum. After concentration under vacuum, the crude material was purified by flash chromatography on silica gel with DCM-MeOH mixtures as eluents to give 250 m g of off-white solid.

[1346] 1H NMR (600 MHz, CD_3OD) δ ppm 1.60 (br dd, $J=13.21$, 7.34 Hz, 1 H) 1.74 - 1.87 (m, 3 H) 2.04 (br dd, $J=12.62$, 7.34 Hz, 1 H) 2.10 - 2.20 (m, 1 H) 3.88 (s, 3 H) 3.92 - 4.00 (m, 1 H) 4.35 - 4.44 (m, 1 H) 4.57 (d, $J=12.33$ Hz, 1 H) 4.66 (d, $J=12.33$ Hz, 2 H) 6.78 (m, $J=8.22$ Hz, 2 H) 7.33 (t, $J=9.10$ Hz, 4 H) 7.43 (m, $J=8.22$ Hz, 2 H) 7.82 (s, 1 H) 7.91 (s, 1 H) 8.15 (d, $J=2.35$ Hz, 1 H) 8.43 (d, $J=1.76$ Hz, 1 H);

[1347] MS (ESI, m/z): 484.3 $[M+H]^+$

[1348] Example 245.

2-amino-N-((1S,2S)-2-((4'-(2-(dimethylamino)ethoxy)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1349] A mixture of intermediate 24 (30 mg, 0.06 mmol) and K_2CO_3 (43 mg, 0.31 mmol) was heated at 60 °C for 12 hrs, cooled to room temperature, and extracted with EtOAc, dried over anhydrous $MgSO_4$ and concentrated under vacuum. After concentration under vacuum, the crude residue was purified by preparative HPLC to afford 30 mg of the title compound

[1350] 1H NMR (400 MHz, CD_3OD) δ ppm 1.57 - 1.68 (m, 1 H) 1.81 (br d, $J=7.83$ Hz, 3 H) 2.01 (br d, $J=19.56$ Hz, 1 H) 2.16 (br d, $J=12.91$ Hz, 1 H) 2.99 (s, 6 H) 3.61 (br s, 2 H) 3.89 (s, 3 H) 3.99 (br s, 1 H) 4.37 (br d, $J=3.52$ Hz, 3 H) 4.64 (s, 2 H) 7.05 (br d, $J=8.22$ Hz, 2 H) 7.38 (br d, $J=7.83$ Hz, 2 H) 7.50 (br t, $J=7.43$ Hz, 3 H) 7.84 (s, 1 H) 7.96 (s, 1 H) 8.19 (br s, 1 H) 8.48 (s, 1 H);

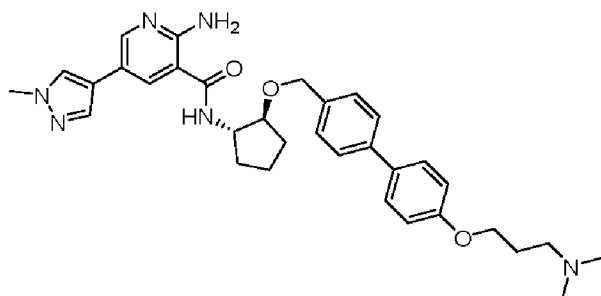
[1351] MS (ESI, m/z): 555.4 $[M+H]^+$

[1352] Example 246.

2-amino-N-((1S,2S)-2-((4'-(3-(dimethylamino)propoxy)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1353] Using (3-chloropropyl)dimethylamine, title compound was obtained as described for the example 245.

[1354]



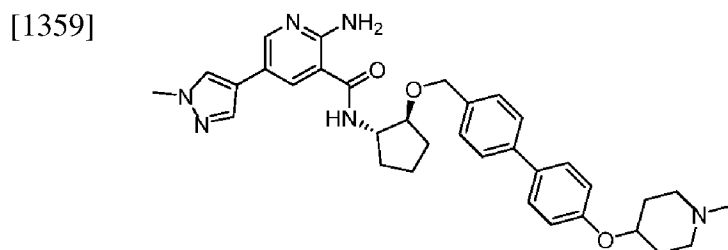
[1355] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.62 (br dd, $J=13.21, 7.34$ Hz, 1 H) 1.73 - 1.86 (m, 3 H) 2.04 (br dd, $J=12.91, 7.63$ Hz, 1 H) 2.16 (br dd, $J=13.21, 6.16$ Hz, 1 H) 2.19 - 2.28 (m, 2 H) 2.94 (s, 6 H) 3.32 - 3.41 (m, 2 H) 3.88 (s, 3 H) 3.93 - 4.05 (m, 1 H) 4.13 (t, $J=5.87$ Hz, 2 H) 4.36 - 4.43 (m, 1 H) 4.58 - 4.68 (m, 2 H) 6.97 (d, $J=8.80$ Hz, 2 H) 7.37 (d, $J=8.22$ Hz, 2 H) 7.46 (t, $J=8.51$ Hz, 4 H) 7.82 (s, 1 H) 7.93 (s, 1 H) 8.17 (d, $J=2.35$ Hz, 1 H) 8.43 (d, $J=1.76$ Hz, 1 H);

[1356] MS (ESI, m/z): 569.4 $[\text{M}+\text{H}]^+$

[1357] Example 247.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((1-methylpiperidin-4-yl)oxy)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

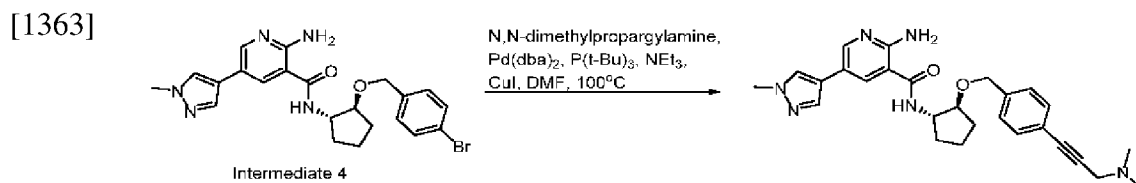
[1358] Using 4-bromo-1-methylpiperidine, title compound was obtained as described for the example 245.



[1360] MS (ESI, m/z): 581.5 $[\text{M}+\text{H}]^+$

[1361] Example 248. 2-amino-N-((1S,2S)-2-((4-(3-(dimethylamino)prop-1-yn-1-yl)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1362] Scheme for the preparation of the Compound of Example 248



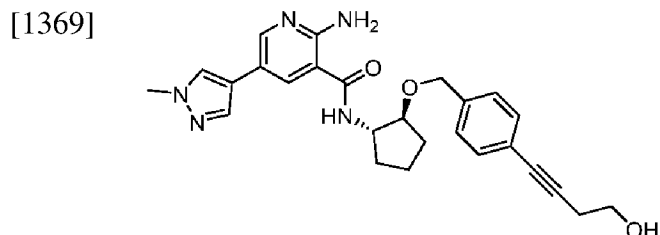
[1364] A mixture of intermediate 4 (40 mg, 0.09 mmol), $\text{Pd}(\text{dba})_2$ (1 mg, 2 mol %), $\text{P}(\text{t-bu})_3$ (1 mg, 6 mol %) in DMF (3 ml) was degassed with nitrogen and TEA (0.018 ml, 0.13 mmol), N,N-dimethylpropargylamine (0.016 ml, 0.17 mmol) were added. The mixture was heated at 100°C for 12 hrs. After cooling, the mixture was partitioned between EA and water. The organic layer was separated and washed with water, brine dried over MgSO_4 and concentrated in vacuo. After concentration under vacuum, the crude residue was purified by preparative HPLC to afford 10 mg of the title compound.

[1365] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.63 (s, 2 H) 1.78 (br dd, $J=14.28, 6.85$ Hz, 2 H) 1.99 (br dd, $J=12.91, 6.65$ Hz, 1 H) 2.09 - 2.18 (m, 1 H) 2.35 (s, 3 H) 3.12 - 3.18 (m, 1 H) 3.32 - 3.34 (m, 4 H) 3.42 - 3.50 (m, 2 H) 3.58 (br d, $J=7.04$ Hz, 1 H) 3.90 (s, 3 H) 4.32 - 4.42 (m, 1 H) 4.61 (s, 2 H) 7.27 - 7.40 (m, 4 H) 7.76 (s, 1 H) 7.87 (s, 1 H) 7.98 (s, 1 H) 8.24 (s, 1 H);

[1366] MS (ESI, m/z): 473.4 [M+H]⁺

[1367] Example 249. 2-amino-N-((1S,2S)-2-((4-(4-hydroxybut-1-yn-1-yl)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1368] Using 3-butyn-1-ol, title compound was obtained as described for the example 248.

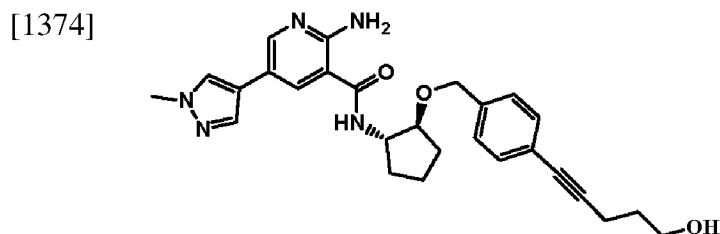


[1370] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.62 (br dd, *J*=13.21, 7.34 Hz, 1 H) 1.70 - 1.77 (m, 1 H) 1.77 - 1.84 (m, 3 H) 2.01 (br dd, *J*=12.62, 7.34 Hz, 1 H) 2.15 (br dd, *J*=13.21, 6.16 Hz, 1 H) 2.57 (t, *J*=6.75 Hz, 2 H) 3.69 (t, *J*=6.75 Hz, 2 H) 3.94 (s, 3 H) 4.32 - 4.40 (m, 1 H) 4.54 - 4.63 (m, 2 H) 7.23 - 7.31 (m, 4 H) 7.87 (s, 1 H) 8.01 (s, 1 H) 8.23 (d, *J*=2.35 Hz, 1 H) 8.50 (d, *J*=1.76 Hz, 1 H);

[1371] MS (ESI, m/z): 460.6 [M+H]⁺

[1372] Example 250. 2-amino-N-((1S,2S)-2-((4-(5-hydroxypent-1-yn-1-yl)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1373] Using 4-pentyn-1-ol, title compound was obtained as described for the example 248.

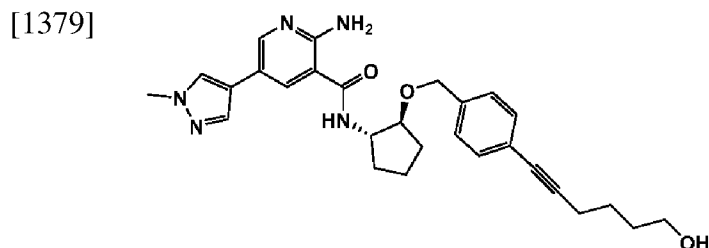


[1375] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.62 (br dd, *J*=12.91, 7.04 Hz, 1 H) 1.69 - 1.78 (m, 3 H) 1.78 - 1.86 (m, 2 H) 2.01 (br dd, *J*=12.91, 7.63 Hz, 1 H) 2.16 (br d, *J*=5.87 Hz, 1 H) 2.45 (t, *J*=7.04 Hz, 2 H) 3.66 (t, *J*=6.46 Hz, 2 H) 3.88 - 4.00 (m, 4 H) 4.31 - 4.41 (m, 1 H) 4.51 - 4.65 (m, 2 H) 7.26 (s, 4 H) 7.87 (s, 1 H) 8.01 (s, 1 H) 8.23 (d, *J*=1.76 Hz, 1 H) 8.51 (d, *J*=2.35 Hz, 1 H);

[1376] MS (ESI, m/z): 474.2 [M+H]⁺

[1377] Example 251. 2-amino-N-((1S,2S)-2-((4-(6-hydroxyhex-1-yn-1-yl)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1378] Using 5-hexyn-1-ol, title compound was obtained as described for the example 248.

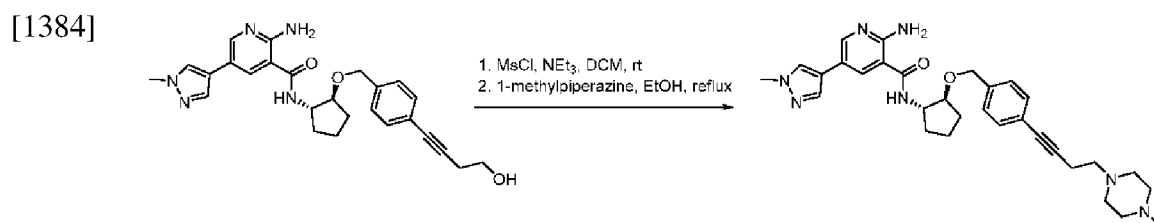


[1380] ^1H NMR (600 MHz, CD_3OD) δ ppm 0.00 - 0.00 (m, 1 H) 1.54 - 1.69 (m, 8 H) 1.72 - 1.78 (m, 1 H) 1.78 - 1.86 (m, 3 H) 1.91 (br d, $J=7.63$ Hz, 1 H) 1.97 - 2.05 (m, 1 H) 2.12 - 2.20 (m, 1 H) 2.24 - 2.30 (m, 2 H) 2.32 (br d, $J=3.52$ Hz, 1 H) 2.40 (t, $J=7.04$ Hz, 1 H) 2.45 (t, $J=6.75$ Hz, 1 H) 2.43 - 2.43 (m, 1 H) 3.55 (t, $J=6.46$ Hz, 2 H) 3.56 - 3.60 (m, 1 H) 3.94 (d, $J=1.17$ Hz, 3 H) 4.35 - 4.41 (m, 2 H) 4.43 (t, $J=6.46$ Hz, 1 H) 4.54 - 4.65 (m, 2 H) 4.68 - 4.68 (m, 1 H) 4.69 - 4.69 (m, 1 H) 7.26 (d, $J=7.04$ Hz, 3 H) 7.87 (s, 1 H) 8.01 (s, 1 H) 8.19 - 8.26 (m, 1 H) 8.48 - 8.53 (m, 1 H);

[1381] MS (ESI, m/z): 488.3 $[\text{M}+\text{H}]^+$

[1382] Example 252. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(4-(4-methylpiperazin-1-yl)but-1-yn-1-yl)benzyl)oxy)cyclopentyl)nicotinamide

[1383] Scheme for the preparation of the Compound of Example 252



[1385] To a mixture of compound 249 (30 mg, 0.07 mmol) and triethylamine (27 μL , 0.2 mmol) in DCM (0.3 mL) was added methanesulfonyl chloride (12 μL , 0.16 mmol). The mixture was stirred at room temperature for 2 hrs. After completion of conversion, the volatile was removed under reduced pressure. The crude residue was diluted with EtOH (0.3 mL) and 1-methylpiperazine (16 μL , 0.13 mmol) was added. The mixture was refluxed for 2 hrs. After cooling, the crude residue was purified by preparative HPLC to afford 20 mg of the title compound.

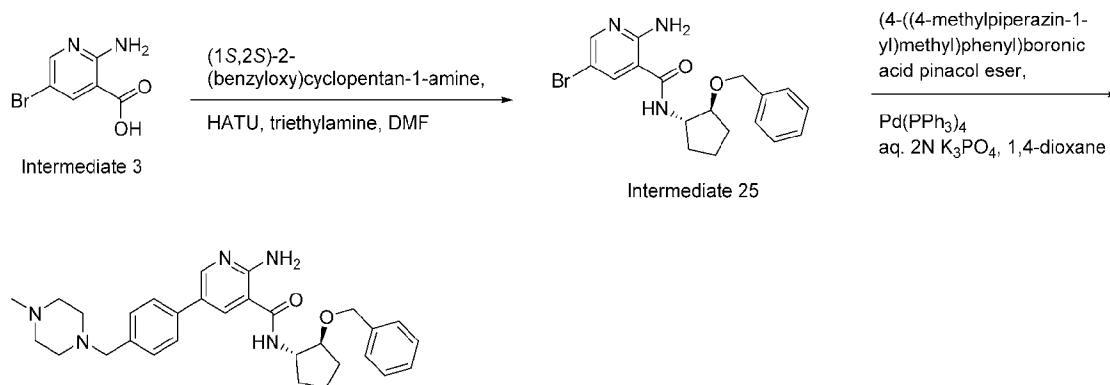
[1386] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.63 (br dd, $J=13.21$, 6.75 Hz, 1 H) 1.75 (br d, $J=5.28$ Hz, 1 H) 1.80 - 1.84 (m, 2 H) 1.98 - 2.02 (m, 1 H) 2.16 (br dd, $J=13.79$, 6.75 Hz, 1 H) 2.78 (br s, 2 H) 2.89 - 2.93 (m, 3 H) 3.44 (br s, 4 H) 3.55 (br s, 2 H) 3.94 (s, 3 H) 3.95 - 3.99 (m, 1 H) 4.38 (br dd, $J=11.15$, 7.04 Hz, 1 H) 4.60 (s, 2 H) 7.26 - 7.35 (m, 4 H) 7.88 (s, 1 H) 8.02 (s, 1 H) 8.23 (d, $J=2.35$ Hz, 1 H) 8.55 (d, $J=1.76$ Hz, 1 H);

[1387] MS (ESI, m/z): 542.5 $[\text{M}+\text{H}]^+$

[1388] Example 253. 2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(4-((4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide

[1389] Scheme for the preparation of the Compound of Example 253:

[1390]



[1391] Intermediate 25.

[1392] To a mixture of intermediate 3 (300 mg, 1.38 mmol) and triethylamine (168 mg, 1.66 mmol) in 7 ml of DMF was added HATU (524 mg, 1.66 mmol) followed by (1S,2S)-2-(benzyloxy)cyclopentan-1-amine (263 mg, 1.38 mmol). The mixture was stirred at room temperature for 1 hr and then saturated sodium bicarbonate solution was added. The mixture was extracted with EtOAc, washed with brine, dried over MgSO₄, and concentrated in vacuo. The crude product was purified through silicagel column chromatography to give 326 mg of off-white solid.

[1393] ¹H NMR (400 MHz, CDCl₃) δ ppm 1.47 (dt, *J*=13.99, 6.90 Hz, 1 H) 1.72 - 1.82 (m, 2 H) 1.83 - 1.92 (m, 1 H) 1.92 - 2.01 (m, 2 H) 2.22 - 2.34 (m, 1 H) 3.79 - 3.88 (m, 1 H) 4.32 (dd, *J*=7.04, 4.70 Hz, 1 H) 4.56 - 4.68 (m, 2 H) 5.81 (br d, *J*=6.65 Hz, 1 H) 6.35 (br s, 2 H) 7.26 - 7.38 (m, 4 H) 7.53 (d, *J*=2.35 Hz, 1 H) 8.17 (d, *J*=2.35 Hz, 1 H);

[1394] MS (ESI, *m/z*): 390.2/392.2 [M+H]⁺

[1395] Example 253.

2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(4-((4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide

[1396] To a mixture of intermediate 25 (40 mg, 0.1 mmol) and (4-((4-methylpiperazin-1-yl)methyl)phenyl)boronic acid pinacol ester (51 mg, 0.16 mmol) in 1 ml of 1,4-dioxane was added 0.15 ml of aq. 2N K₃PO₄ followed by Pd(PPh₃)₄ (8 mg, 0.007 mmol). The reaction mixture was heated at 100 °C for 3 hrs, cooled to room temperature, and extracted with EtOAc, dried over anhydrous MgSO₄ and concentrated under vacuum. The crude residue was purified by preparative HPLC to afford 23 mg of the title compound.

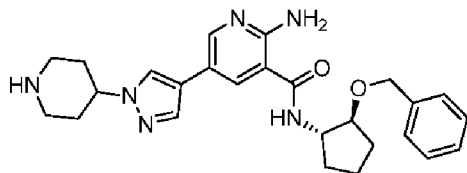
[1397] ¹H NMR (400 MHz, METHANOL-*d*₄) δ ppm 1.57 (br dd, *J*=13.30, 7.04 Hz, 1 H) 1.66 - 1.87 (m, 3 H) 1.97 (dt, *J*=13.01, 6.60 Hz, 1 H) 2.13 (br dd, *J*=13.11, 6.85 Hz, 1 H) 2.95 (s, 3 H) 3.44 - 3.62 (m, 4 H) 3.87 - 3.97 (m, 1 H) 4.17 (s, 2 H) 4.31 - 4.39 (m, 1 H) 4.60 (s, 2 H) 6.25 (d, *J*=9.00 Hz, 1 H) 7.21 - 7.35 (m, 5 H) 7.43 (d, *J*=8.22 Hz, 2 H) 7.58 (d, *J*=8.61 Hz, 2 H) 8.08 (d, *J*=9.00 Hz, 1 H);

[1398] MS (ESI, *m/z*): 500.3 [M+H]⁺

[1399] Example 254. 2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide

[1400] Using (1-(piperidin-4-yl)-1H-pyrazol-4-yl)boronic acid pinacol ester, the title compound was obtained as described for the example 201.

[1401]

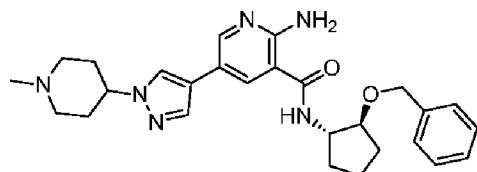


[1402] MS (ESI, m/z): 461.3 [M+H]⁺

[1403] Example 255. 2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide

[1404] Using (1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)boronic acid pinacol ester, the title compound was obtained as described for the example 253.

[1405]

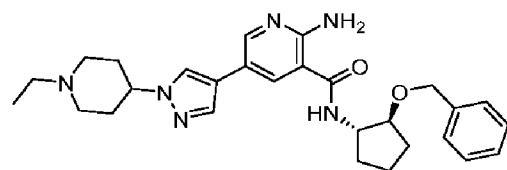


[1406] MS (ESI, m/z): 475.3 [M+H]⁺

[1407] Example 256. 2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(1-(1-ethylpiperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide

[1408] Using (1-(1-ethylpiperidin-4-yl)-1H-pyrazol-4-yl)boronic acid pinacol ester, the title compound was obtained as described for the example 253.

[1409]

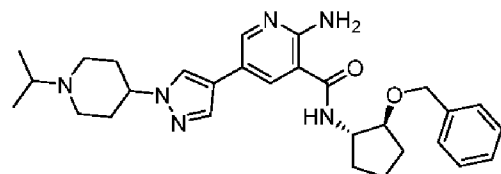


[1410] MS (ESI, m/z): 489.3 [M+H]⁺

[1411] Example 257. 2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(1-(1-isopropylpiperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide

[1412] Using (1-(1-isopropylpiperidin-4-yl)-1H-pyrazol-4-yl)boronic acid pinacol ester, the title compound was obtained as described for the example 253.

[1413]

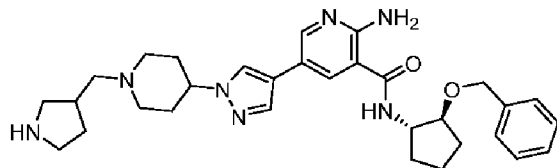


[1414] MS (ESI, m/z): 503.3 [M+H]⁺

[1415] Example 258. 2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(1-(1-(pyrrolidin-3-ylmethyl)piperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide

[1416] Using (1-(1-(pyrrolidin-3-ylmethyl)piperidin-4-yl)-1H-pyrazol-4-yl)boronic acid pinacol ester, the title compound was obtained as described for the example 253.

[1417]

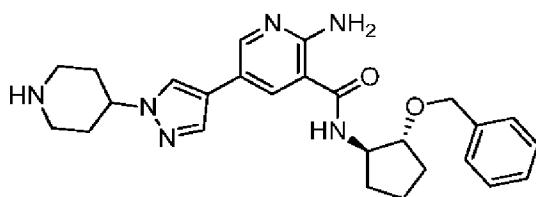


[1418] MS (ESI, m/z): 544.3 [M+H]⁺

[1419] Example 259. 2-amino-N-((1R,2R)-2-(benzyloxy)cyclopentyl)-5-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide

[1420] Using (1R,2R)-2-(benzyloxy)cyclopentan-1-amine and (1-(piperidin-4-yl)-1H-pyrazol-4-yl)boronic acid pinacol ester, the title compound was obtained as described for the example 253.

[1421]

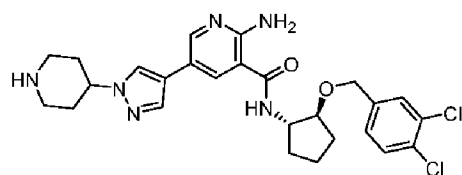


[1422] MS (ESI, m/z): 461.3 [M+H]⁺

[1423] Example 260. 2-amino-N-((1S,2S)-2-((3,4-dichlorobenzyl)oxy)cyclopentyl)-5-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide

[1424] Using (1S,2S)-2-((3,4-dichlorobenzyl)oxy)cyclopentan-1-amine and (1-(piperidin-4-yl)-1H-pyrazol-4-yl)boronic acid pinacol ester, the title compound was obtained as described for the example 253.

[1425]

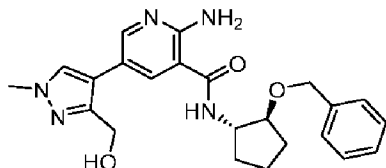


[1426] MS (ESI, m/z): 529.2 [M+H]⁺

[1427] Example 261. 2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(3-(hydroxymethyl)-1-methyl-1H-pyrazol-4-yl)nicotinamide

[1428] Using (3-(hydroxymethyl)-1-methyl-1H-pyrazol-4-yl)boronic acid pinacol ester, the title compound was obtained as described for the example 253.

[1429]

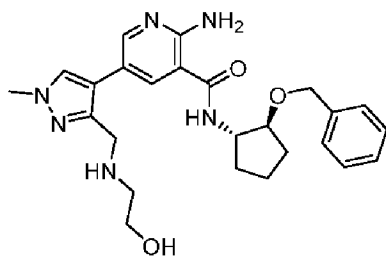


[1430] MS (ESI, m/z): 422.2 [M+H]⁺

[1431] Example 262. 2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(3-(((2-hydroxyethyl)amino)methyl)-1-methyl-1H-pyrazol-4-yl)nicotinamide

[1432] Using (3-(((2-hydroxyethyl)amino)methyl)-1-methyl-1H-pyrazol-4-yl)boronic acid pinacol ester, the title compound was obtained as described for the example 253.

[1433]

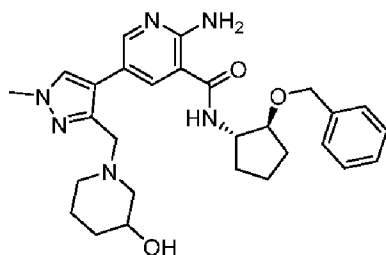


[1434] MS (ESI, m/z): 465.3 [M+H]⁺

[1435] Example 263. 2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(3-((3-hydroxypiperidin-1-yl)methyl)-1-methyl-1H-pyrazol-4-yl)nicotinamide

[1436] Using (3-((3-hydroxypiperidin-1-yl)methyl)-1-methyl-1H-pyrazol-4-yl)boronic acid pinacol ester, the title compound was obtained as described for the example 253.

[1437]

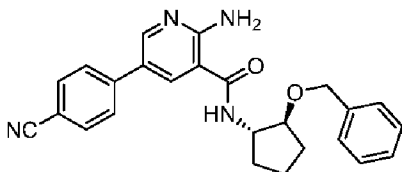


[1438] MS (ESI, m/z): 505.3 [M+H]⁺

[1439] Example 264. 2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(4-cyanophenyl)nicotinamide

[1440] Using (4-cyanophenyl)boronic acid, the title compound was obtained as described for the example 253.

[1441]



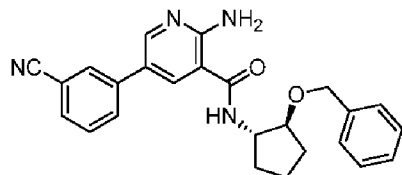
[1442] ¹H NMR (400 MHz, CDCl₃) 1.59 (m, 2 H) 1.85 (m, 4 H) 2.10 (m, 2 H) 2.24 (m, 1 H) 4.17 (br d, J=7.04 Hz, 1 H) 4.28 (br d, J=7.04 Hz, 1 H) 4.43 - 4.54 (m, 1 H) 4.56 - 4.67 (m, 2 H) 7.13 - 7.19 (m, 1 H) 7.13 - 7.19 (m, 1 H) 7.13 - 7.19 (m, 2 H) 7.19 - 7.24 (m, 2 H) 7.35 (br d, J=7.43 Hz, 2 H) 7.64 (m, J=8.22 Hz, 2 H) 7.73 (m, J=8.22 Hz, 2 H) 7.80 (s, 1 H) 7.85 - 7.91 (m, 1 H) 8.27 (s, 1 H) 8.58 (br s, 2 H) 11.76 - 11.97 (m, 2 H);

[1443] MS (ESI, m/z): 413.2 [M+H]⁺

[1444] Example 265. 2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(3-cyanophenyl)nicotinamide

[1445] Using (3-cyanophenyl)boronic acid, the title compound was obtained as described for the example 253.

[1446]



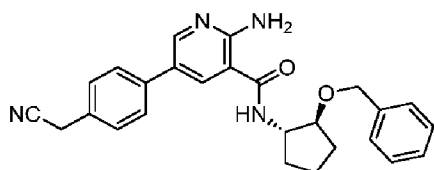
[1447] ^1H NMR (400 MHz, CDCl_3) 1.54 - 1.70 (m, 2 H) 1.70 - 1.95 (m, 4 H) 2.07 (br s, 2 H) 2.23 (br s, 2 H) 4.08 (br d, $J=5.87$ Hz, 1 H) 4.33 (br s, 1 H) 4.61 (q, $J=11.74$ Hz, 2 H) 7.14 - 7.20 (m, 1 H) 7.20 - 7.29 (m, 2 H) 7.29 - 7.38 (m, 2 H) 7.53 - 7.63 (m, 1 H) 7.70 (br d, $J=7.43$ Hz, 1 H) 7.75 (br d, $J=7.43$ Hz, 1 H) 7.87 (s, 1 H) 7.91 (s, 1 H) 8.26 (s, 1 H) 8.87 (br s, 2 H) 11.40 - 11.54 (m, 1 H);

[1448] MS (ESI, m/z): 413.2 $[\text{M}+\text{H}]^+$

[1449] Example 266. 2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(4-(cyanomethyl)phenyl)nicotinamide

[1450] Using (4-(cyanomethyl)phenyl)boronic acid, the title compound was obtained as described for the example 253.

[1451]



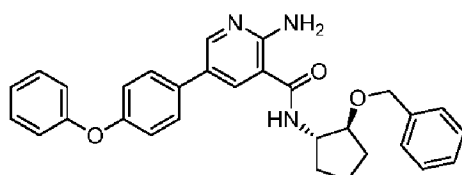
[1452] ^1H NMR (400 MHz, CDCl_3) 1.54 - 1.64 (m, 1 H) 1.70 (br s, 1 H) 1.83 (br s, 2 H) 1.97 - 2.05 (m, 2 H) 3.11 (br s, 1 H) 3.79 (s, 2 H) 4.35 (br s, 1 H) 4.64 (s, 2 H) 7.14 (br s, 1 H) 7.18 - 7.24 (m, 3 H) 7.39 (br t, $J=7.83$ Hz, 2 H) 7.55 (br d, $J=7.83$ Hz, 1 H) 7.59 (s, 1 H) 8.00 (br s, 1 H) 8.34 (s, 1 H) 8.55 - 8.67 (m, 1 H);

[1453] MS (ESI, m/z): 427.2 $[\text{M}+\text{H}]^+$

[1454] Example 267. 2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(4-phenoxyphenyl)nicotinamide

[1455] Using (4-phenoxyphenyl)boronic acid, the title compound was obtained as described for the example 253.

[1456]



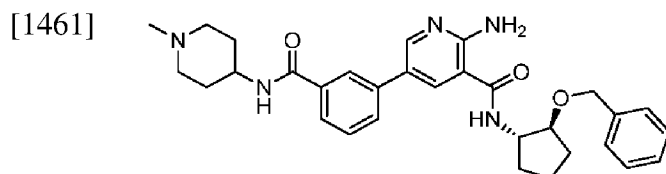
[1457] ^1H NMR (400 MHz, CDCl_3) 1.23 (m, 2 H) 1.56 (m, 2 H) 1.75 (m, 4 H) 2.07 (br s, 2 H) 2.24 (br s, 2 H) 4.12 (br d, $J=5.87$ Hz, 1 H) 4.29 (br s, 1 H) 4.56 - 4.66 (m, 2 H) 7.04 (br t, $J=6.85$ Hz, 3 H) 7.17 (br d, $J=7.43$ Hz, 1 H) 7.22 - 7.26 (m, 4 H) 7.30 - 7.39 (m, 3 H) 7.39 - 7.44 (m, 2 H) 7.50 (s, 1 H) 7.74 (s, 1 H) 8.18 (s, 1 H) 8.45 (br s, 2 H) 11.28 (br s, 1 H);

[1458] MS (ESI, m/z): 480.2 $[\text{M}+\text{H}]^+$

[1459] Example 268. 2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(4-phenoxyphenyl)nicotinamide

)-5-(3-((1-methylpiperidin-4-yl)carbamoyl)phenyl)nicotinamide

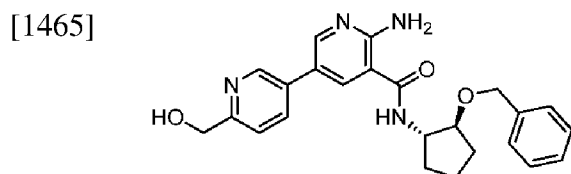
[1460] Using (3-((1-methylpiperidin-4-yl)carbamoyl)phenyl)boronic acid, the title compound was obtained as described for the example 253.



[1462] MS (ESI, m/z): 528.3 [M+H]⁺

[1463] Example 269. 6-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-6'-((hydroxymethyl)-[3,3'-bipyridine]-5-carboxamide

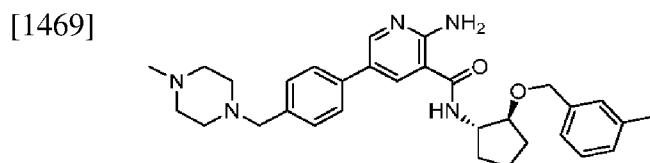
[1464] Using (6-(hydroxymethyl)pyridin-3-yl)boronic acid, the title compound was obtained as described for the example 253.



[1466] MS (ESI, m/z): 420.2 [M+H]⁺

[1467] Example 270. 2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-((4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide

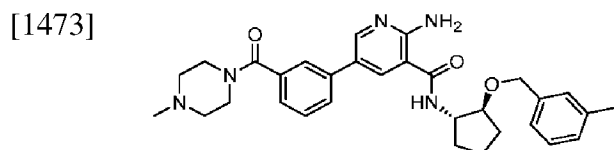
[1468] Using (1S,2S)-2-((3-methylbenzyl)oxy)cyclopentan-1-amine and (4-((4-methylpiperazin-1-yl)methyl)phenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 253.



[1470] MS (ESI, m/z): 514.3 [M+H]⁺

[1471] Example 271. 2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(3-(4-methylpiperazine-1-carbonyl)phenyl)nicotinamide

[1472] Using (1S,2S)-2-((3-methylbenzyl)oxy)cyclopentan-1-amine and (4-methylpiperazin-1-yl)(3-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)methane, the title compound was obtained as described for the example 253.



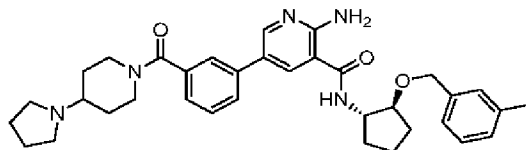
[1474] MS (ESI, m/z): 528.3 [M+H]⁺

[1475] Example 272. 2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(3-(4-methylpiperazine-1-carbonyl)phenyl)nicotinamide

)-5-(3-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)nicotinamide

- [1476] Using (1S,2S)-2-((3-methylbenzyl)oxy)cyclopentan-1-amine and (4-(pyrrolidin-1-yl)piperidin-1-yl)(3-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)methanone, the title compound was obtained as described for the example 253.

[1477]

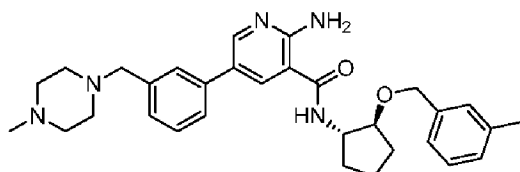


- [1478] MS (ESI, m/z): 582.3 [M+H]⁺

Example 273. 2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(3-(4-(4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide

- [1480] Using (1S,2S)-2-((3-methylbenzyl)oxy)cyclopentan-1-amine and 1-methyl-4-(3-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)piperazine, the title compound was obtained as described for the example 253.

[1481]

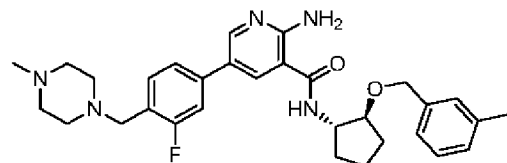


- [1482] MS (ESI, m/z): 514.3 [M+H]⁺

Example 274. 2-amino-5-(3-fluoro-4-((4-methylpiperazin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)nicotinamide

- [1484] Using (1S,2S)-2-((3-methylbenzyl)oxy)cyclopentan-1-amine and 1-(2-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)-4-methylpiperazine, the title compound was obtained as described for the example 253.

[1485]

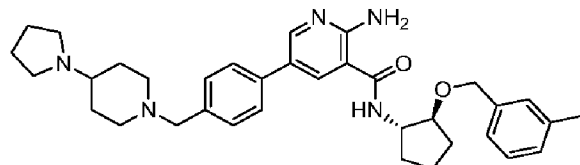


- [1486] MS (ESI, m/z): 532.3 [M+H]⁺

Example 275. 2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(4-(pyrrolidin-1-yl)piperidin-1-yl)methyl)phenyl)nicotinamide

- [1488] Using (1S,2S)-2-((3-methylbenzyl)oxy)cyclopentan-1-amine and 4-(pyrrolidin-1-yl)-1-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)piperidine, the title compound was obtained as described for the example 253.

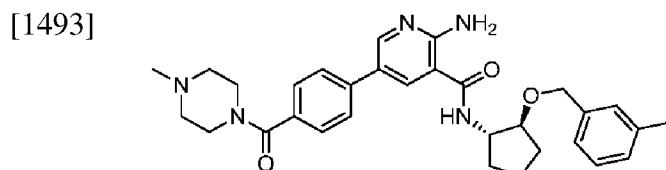
[1489]



- [1490] MS (ESI, m/z): 568.4 [M+H]⁺

[1491] Example 276. 2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(4-methylpiperazine-1-carbonyl)phenyl)nicotinamide

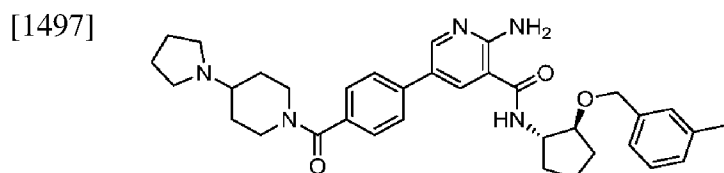
[1492] Using (1S,2S)-2-((3-methylbenzyl)oxy)cyclopentan-1-amine and (4-methylpiperazin-1-yl)(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)methanone, the title compound was obtained as described for the example 253.



[1494] MS (ESI, m/z): 528.3 [M+H]⁺

[1495] Example 277. 2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)nicotinamide

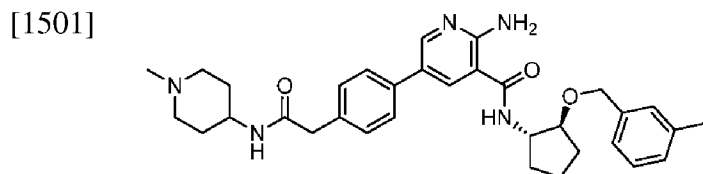
[1496] Using (1S,2S)-2-((3-methylbenzyl)oxy)cyclopentan-1-amine and (4-(pyrrolidin-1-yl)piperidin-1-yl)(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)methanone, the title compound was obtained as described for the example 253.



[1498] MS (ESI, m/z): 582.3 [M+H]⁺

[1499] Example 278. 2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(2-((1-methylpiperidin-4-yl)amino)-2-oxoethyl)phenyl)nicotinamide

[1500] Using (1S,2S)-2-((3-methylbenzyl)oxy)cyclopentan-1-amine and N-(1-methylpiperidin-4-yl)-2-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)acetamide, the title compound was obtained as described for the example 253.

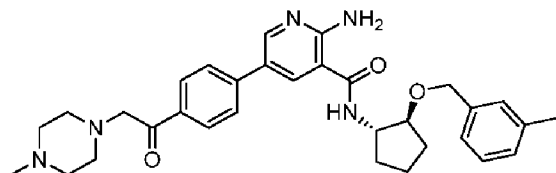


[1502] MS (ESI, m/z): 556.3 [M+H]⁺

[1503] Example 279. 2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(2-(4-methylpiperazin-1-yl)acetyl)phenyl)nicotinamide

[1504] Using (1S,2S)-2-((3-methylbenzyl)oxy)cyclopentan-1-amine and 2-(4-methylpiperazin-1-yl)-1-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)ethan-1-one, the title compound was obtained as described for the example 253.

[1505]



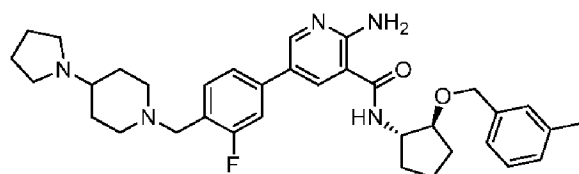
[1506]

[1507] MS (ESI, m/z): 542.3 [M+H]⁺

[1508] Example 280. 2-amino-5-(3-fluoro-4-((4-(pyrrolidin-1-yl)piperidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)nicotinamide

[1509] (1S,2S)-2-((3-methylbenzyl)oxy)cyclopentan-1-amine and 1-(2-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)-4-(pyrrolidin-1-yl)piperidine, the title compound was obtained as described for the example 253.

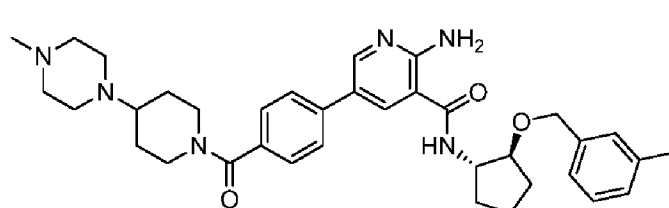
[1510]

[1511] MS (ESI, m/z): 586.4 [M+H]⁺

[1512] Example 281. 2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(4-(4-methylpiperazin-1-yl)piperidine-1-carbonyl)phenyl)nicotinamide

[1513] Using (1S,2S)-2-((3-methylbenzyl)oxy)cyclopentan-1-amine and (4-(4-methylpiperazin-1-yl)piperidin-1-yl)(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)methanone, the title compound was obtained as described for the example 253.

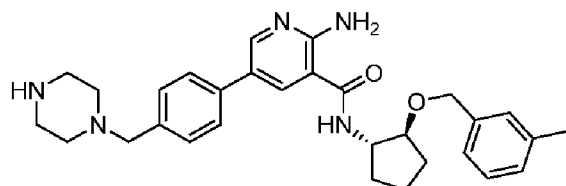
[1514]

[1515] MS (ESI, m/z): 611.4 [M+H]⁺

[1516] Example 282. 2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(piperazin-1-ylmethyl)phenyl)nicotinamide

[1517] Using (1S,2S)-2-((3-methylbenzyl)oxy)cyclopentan-1-amine and 1-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)piperazine, the title compound was obtained as described for the example 253.

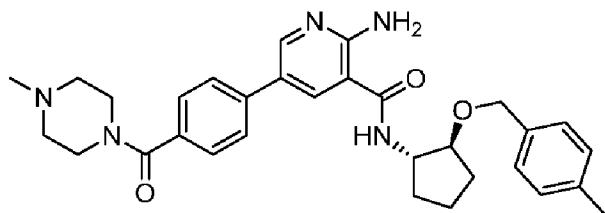
[1518]

[1519] MS (ESI, m/z): 500.3 [M+H]⁺

[1520] Example 283. 2-amino-N-((1S,2S)-2-((4-methylbenzyl)oxy)cyclopentyl)-5-(4-(4-methylpiperazine-1-carbonyl)phenyl)nicotinamide

[1521] Using (1S,2S)-2-((4-methylbenzyl)oxy)cyclopentan-1-amine and (4-methylpiperazin-1-yl)(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)methanone, the title compound was obtained as described for the example 253.

[1522]

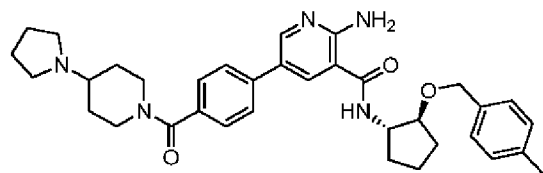


[1523] MS (ESI, m/z): 528.3 [M+H]⁺

[1524] Example 284. 2-amino-N-((1S,2S)-2-((4-methylbenzyl)oxy)cyclopentyl)-5-(4-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)nicotinamide

[1525] Using (1S,2S)-2-((4-methylbenzyl)oxy)cyclopentan-1-amine and (4-(pyrrolidin-1-yl)piperidin-1-yl)(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)methanone, the title compound was obtained as described for the example 253.

[1526]

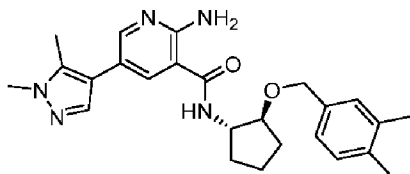


[1527] MS (ESI, m/z): 582.3 [M+H]⁺

[1528] Example 285. 2-amino-5-(1,5-dimethyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

[1529] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (1,5-dimethyl-1H-pyrazol-4-yl)boronic acid pinacol ester, the title compound was obtained as described for the example 253.

[1530]

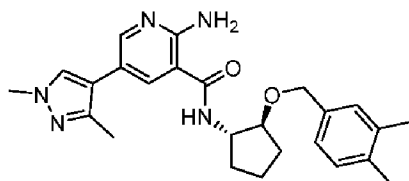


[1531] MS (ESI, m/z): 434.3 [M+H]⁺

[1532] Example 286. 2-amino-5-(1,3-dimethyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

[1533] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (1,3-dimethyl-1H-pyrazol-4-yl)boronic acid pinacol ester, the title compound was obtained as described for the example 253.

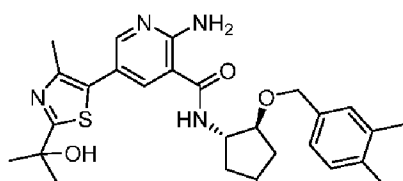
[1534]

[1535] MS (ESI, m/z): 434.3 [M+H]⁺[1536] Example 287.

2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(2-(2-hydroxypropan-2-yl)-4-methylthiazol-5-yl)nicotinamide

[1537] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (2-(2-hydroxypropan-2-yl)-4-methylthiazol-5-yl)boronic acid pinacol ester, the title compound was obtained as described for the example 253.

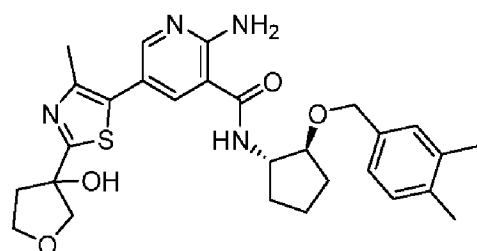
[1538]

[1539] MS (ESI, m/z): 495.2 [M+H]⁺

[1540] Example 288. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(2-(3-hydroxytetrahydrofuran-3-yl)-4-methylthiazol-5-yl)nicotinamide

[1541] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (2-(3-hydroxytetrahydrofuran-3-yl)-4-methylthiazol-5-yl)boronic acid pinacol ester, the title compound was obtained as described for the example 253.

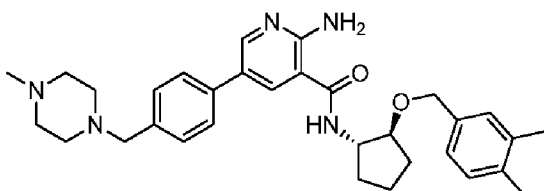
[1542]

[1543] MS (ESI, m/z): 523.2 [M+H]⁺

[1544] Example 289. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide

[1545] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (4-((4-methylpiperazin-1-yl)methyl)phenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 253.

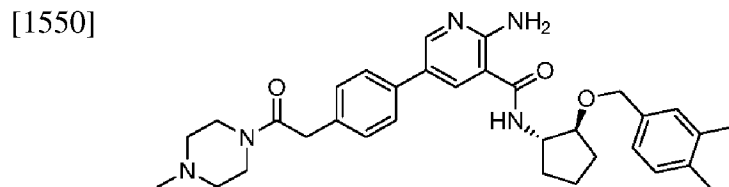
[1546]



[1547] MS (ESI, m/z): 528.3 [M+H]⁺

[1548] Example 290. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(2-(4-methylpiperazin-1-yl)-2-oxoethyl)phenyl)nicotinamide

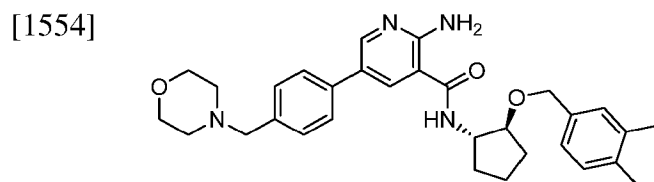
[1549] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 1-(4-(4-methylpiperazin-1-yl)-2-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)ethan-1-one, the title compound was obtained as described for the example 253.



[1551] MS (ESI, m/z): 556.3 [M+H]⁺

[1552] Example 291. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(morpholinomethyl)phenyl)nicotinamide

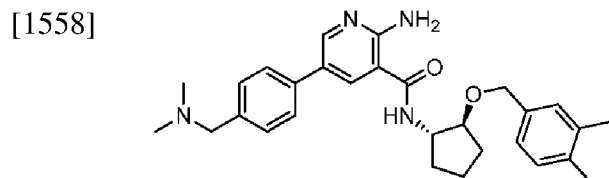
[1553] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 4-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)morpholine, the title compound was obtained as described for the example 253.



[1555] MS (ESI, m/z): 515.3 [M+H]⁺

[1556] Example 292. 2-amino-5-(4-((dimethylamino)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

[1557] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (4-((dimethylamino)methyl)phenyl)boronic acid, the title compound was obtained as described for the example 253.

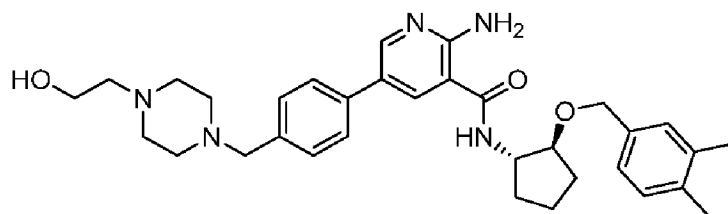


[1559] MS (ESI, m/z): 473.3 [M+H]⁺

[1560] Example 293. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)phenyl)nicotinamide

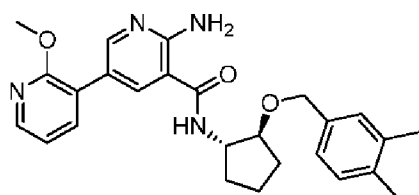
[1561] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 2-(4-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)piperazin-1-yl)ethan-1-ol, the title compound was obtained as described for the example 253.

[1562]

[1563] MS (ESI, m/z): 558.3 [M+H]⁺[1564] Example 294. 6-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-2'-methoxy-[3,3'-bipyridine]-5-carboxamide

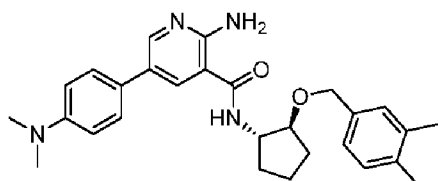
[1565] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (2-methoxyphenyl)boronic acid, the title compound was obtained as described for the example 253.

[1566]

[1567] MS (ESI, m/z): 447.2 [M+H]⁺[1568] Example 295. 2-amino-5-(4-(dimethylamino)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

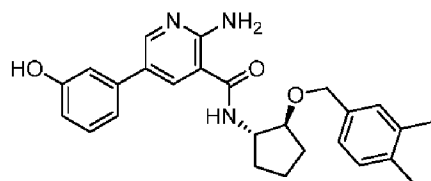
[1569] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (4-(dimethylamino)phenyl)boronic acid, the title compound was obtained as described for the example 253.

[1570]

[1571] MS (ESI, m/z): 459.3 [M+H]⁺[1572] Example 296. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-hydroxyphenyl)nicotinamide

[1573] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (3-hydroxyphenyl)boronic acid, the title compound was obtained as described for the example 253.

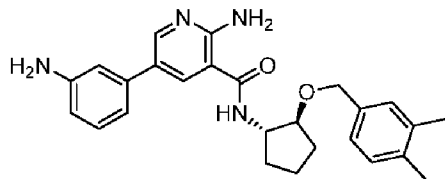
[1574]

[1575] MS (ESI, m/z): 432.2 [M+H]⁺[1576] Example 297. 2-amino-5-(3-aminophenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

[1577] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (3-aminophenyl)boronic acid, the title compound was obtained as described for the example 253.

[1578]

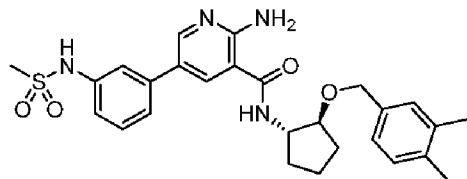


[1579] MS (ESI, m/z): 431.2 [M+H]⁺

[1580] Example 298. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(methylsulfonamido)phenyl)nicotinamide

[1581] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (3-(methylsulfonamido)phenyl)boronic acid, the title compound was obtained as described for the example 253.

[1582]

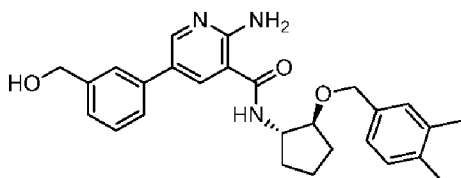


[1583] MS (ESI, m/z): 509.2 [M+H]⁺

[1584] Example 299. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(hydroxymethyl)phenyl)nicotinamide

[1585] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (3-(hydroxymethyl)phenyl)boronic acid, the title compound was obtained as described for the example 253.

[1586]

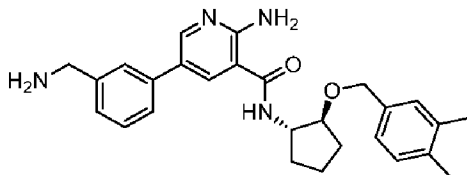


[1587] MS (ESI, m/z): 446.2 [M+H]⁺

[1588] Example 300. 2-amino-5-(3-(aminomethyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

[1589] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (3-(aminomethyl)phenyl)boronic acid, the title compound was obtained as described for the example 253.

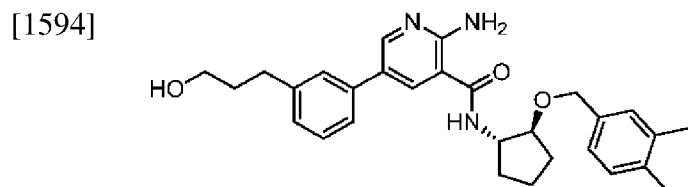
[1590]



[1591] MS (ESI, m/z): 445.3 [M+H]⁺

[1592] Example 301. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(3-hydroxypropyl)phenyl)nicotinamide

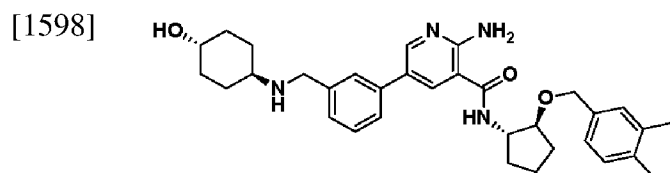
[1593] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (3-(3-hydroxypropyl)phenyl)boronic acid, the title compound was obtained as described for the example 253.



[1595] MS (ESI, m/z): 474.3 [M+H]⁺

[1596] Example 302. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(((1r,4S)-4-hydroxycyclohexyl)amino)methyl)phenyl)nicotinamide

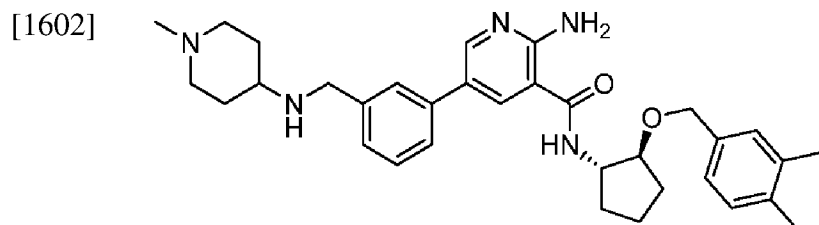
[1597] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (1r,4r)-4-((3-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)amino)cyclohexan-1-ol, the title compound was obtained as described for the example 253



[1599] MS (ESI, m/z): 543.3 [M+H]⁺

[1600] Example 303. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(((1-methylpiperidin-4-yl)amino)methyl)phenyl)nicotinamide

[1601] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 1-methyl-N-(3-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)piperidin-4-amine, the title compound was obtained as described for the example 253.

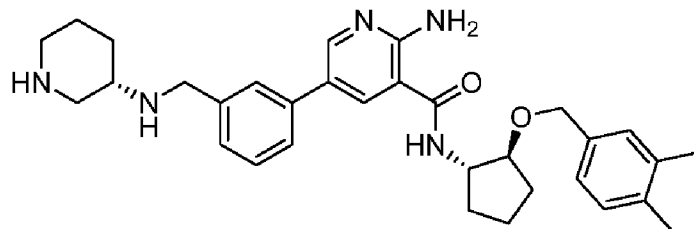


[1603] MS (ESI, m/z): 542.3 [M+H]⁺

[1604] Example 304. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(((S)-piperidin-3-yl)amino)methyl)phenyl)nicotinamide

[1605] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (S)-N-(3-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)piperidin-3-amine, the title compound was obtained as described for the example 253.

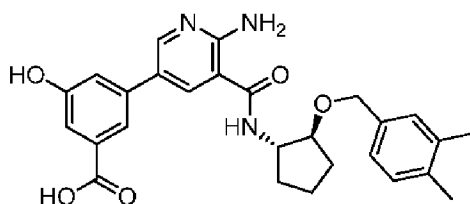
[1606]

[1607] MS (ESI, m/z): 528.3 [M+H]⁺

[1608] Example 305. 3-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)-5-hydroxybenzoic acid

[1609] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 3-borono-5-hydroxybenzoic acid, the title compound was obtained as described for the example 253.

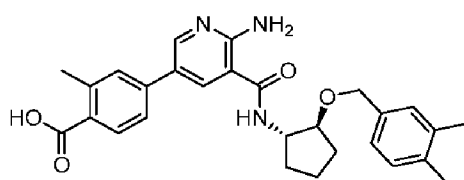
[1610]

[1611] MS (ESI, m/z): 476.2 [M+H]⁺

[1612] Example 306. 4-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)-2-methylbenzoic acid

[1613] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 4-borono-2-methylbenzoic acid, the title compound was obtained as described for the example 253.

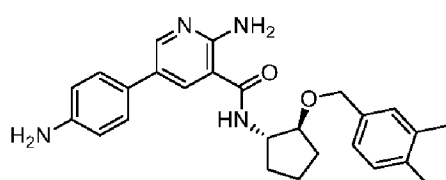
[1614]

[1615] MS (ESI, m/z): 474.2 [M+H]⁺

[1616] Example 307. 2-amino-5-(4-aminophenyl)-N-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

[1617] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (4-aminophenyl)boronic acid, the title compound was obtained as described for the example 253.

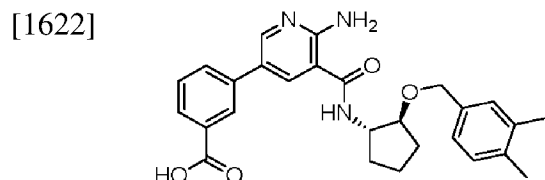
[1618]



[1619] MS (ESI, m/z): 431.2 [M+H]⁺

[1620] Example 308. 3-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)benzoic acid

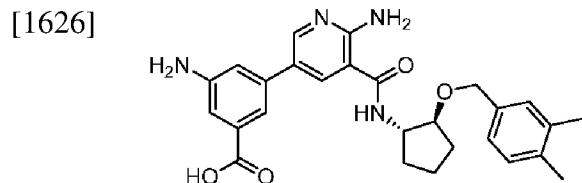
[1621] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 3-boronobenzoic acid, the title compound was obtained as described for the example 253.



[1623] MS (ESI, m/z): 460.2 [M+H]⁺

[1624] Example 309. 3-amino-5-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)benzoic acid

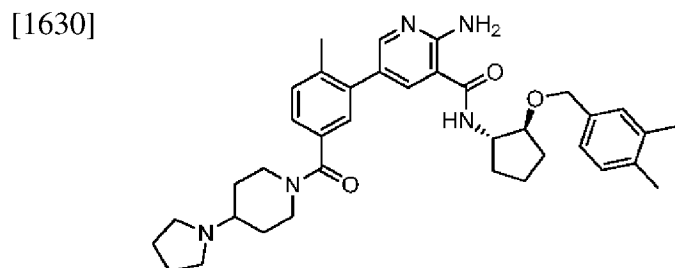
[1625] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 3-amino-5-boronobenzoic acid, the title compound was obtained as described for the example 253.



[1627] MS (ESI, m/z): 475.2 [M+H]⁺

[1628] Example 310. 2-amino-N-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(2-methyl-5-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)nicotinamide

[1629] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (4-methyl-3-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)(4-(pyrrolidin-1-yl)piperidin-1-yl)methanone, the title compound was obtained as described for the example 253.



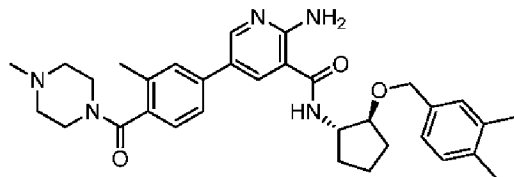
[1631] MS (ESI, m/z): 610.4 [M+H]⁺

[1632] Example 311. 2-amino-N-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-methyl-4-(4-methylpiperazine-1-carbonyl)phenyl)nicotinamide

[1633] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and

(2-methyl-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)(4-methylpiperazin-1-yl)methanone, the title compound was obtained as described for the example 253.

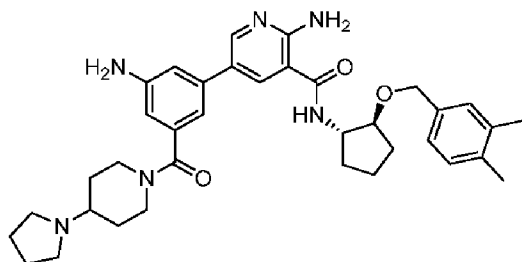
[1634]

[1635] MS (ESI, m/z): 556.3 [M+H]⁺[1636] Example 312.

2-amino-5-(3-amino-5-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

[1637] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (3-amino-5-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)(4-(pyrrolidin-1-yl)piperidin-1-yl)methanone, the title compound was obtained as described for the example 253.

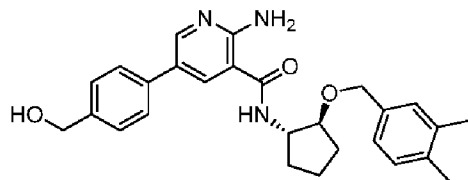
[1638]

[1639] MS (ESI, m/z): 611.4 [M+H]⁺

[1640] Example 313. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(hydroxymethyl)phenyl)nicotinamide

[1641] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (4-(hydroxymethyl)phenyl)boronic acid, the title compound was obtained as described for the example 253.

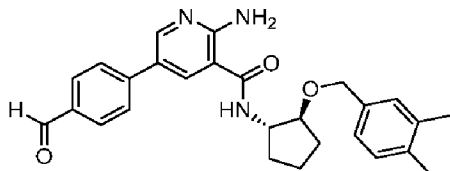
[1642]

[1643] MS (ESI, m/z): 446.2 [M+H]⁺

[1644] Example 314. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-formylphenyl)nicotinamide

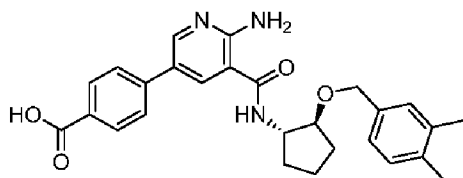
[1645] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (4-formylphenyl)boronic acid, the title compound was obtained as described for the example 253.

[1646]

[1647] MS (ESI, m/z): 444.2 [M+H]⁺[1648] Example 315. 4-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)benzoic acid

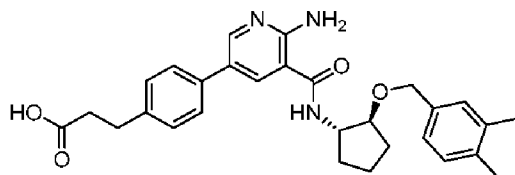
[1649] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 4-boronobenzoic acid, the title compound was obtained as described for the example 253.

[1650]

[1651] MS (ESI, m/z): 460.2 [M+H]⁺[1652] Example 316. 3-(4-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)phenyl)propanoic acid

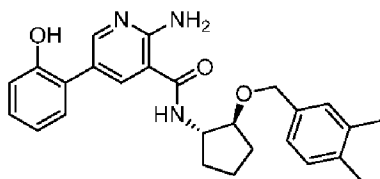
[1653] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 3-(4-boronophenyl)propanoic acid, the title compound was obtained as described for the example 253.

[1654]

[1655] MS (ESI, m/z): 488.3 [M+H]⁺[1656] Example 317. 2-amino-N-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(2-hydroxyphenyl)nicotinamide

[1657] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (2-hydroxyphenyl)boronic acid, the title compound was obtained as described for the example 253.

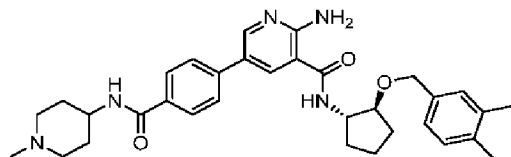
[1658]

[1659] MS (ESI, m/z): 432.22 [M+H]⁺[1660] Example 318. 2-amino-N-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(2-hydroxyphenyl)nicotinamide

)-5-(4-((1-methylpiperidin-4-yl)carbamoyl)phenyl)nicotinamide

- [1661] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and N-(1-methylpiperidin-4-yl)-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzamide, the title compound was obtained as described for the example 253.

[1662]

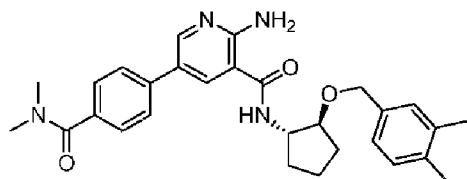


- [1663] MS (ESI, m/z): 556.3 [M+H]⁺

[1664] Example 319. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(dimethylcarbamoyl)phenyl)nicotinamide

- [1665] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (4-(dimethylcarbamoyl)phenyl)boronic acid, the title compound was obtained as described for the example 253.

[1666]

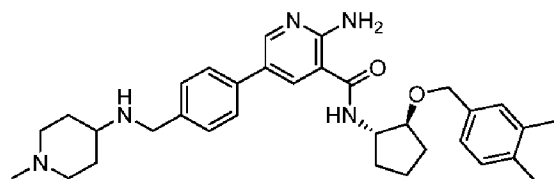


- [1667] MS (ESI, m/z): 487.3 [M+H]⁺

[1668] Example 320. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(((1-methylpiperidin-4-yl)amino)methyl)phenyl)nicotinamide

- [1669] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 1-methyl-N-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)piperidin-4-amine, the title compound was obtained as described for the example 253.

[1670]

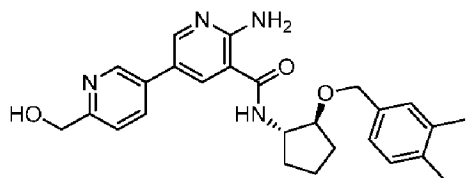


- [1671] MS (ESI, m/z): 542.3 [M+H]⁺

[1672] Example 321. 6-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-6'-(hydroxymethyl)-[3,3'-bipyridine]-5-carboxamide

- [1673] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (6-(hydroxymethyl)pyridin-3-yl)boronic acid, the title compound was obtained as described for the example 253.

[1674]

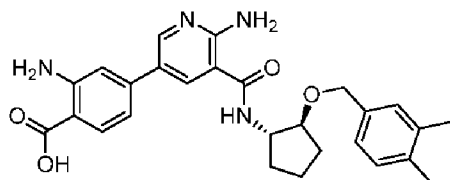


[1675] MS (ESI, m/z): 447.2 [M+H]⁺

[1676] Example 322. 2-amino-4-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)benzoic acid

[1677] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 2-amino-4-boronobenzoic acid, the title compound was obtained as described for the example 253.

[1678]

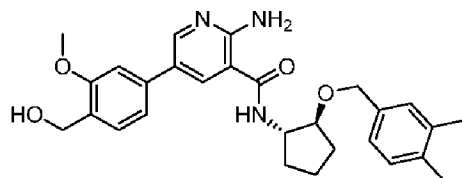


[1679] MS (ESI, m/z): 475.2 [M+H]⁺

[1680] Example 323. 2-amino-N-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(hydroxymethyl)-3-methoxyphenyl)nicotinamide

[1681] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (2-methoxy-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)methanol, the title compound was obtained as described for the example 253.

[1682]

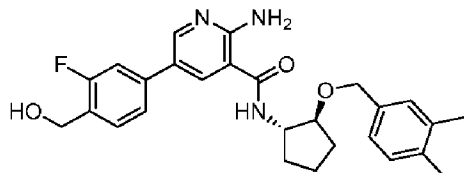


[1683] MS (ESI, m/z): 476.3 [M+H]⁺

[1684] Example 324. 2-amino-N-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-fluoro-4-(hydroxymethyl)phenyl)nicotinamide

[1685] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (3-fluoro-4-(hydroxymethyl)phenyl)boronic acid, the title compound was obtained as described for the example 253.

[1686]

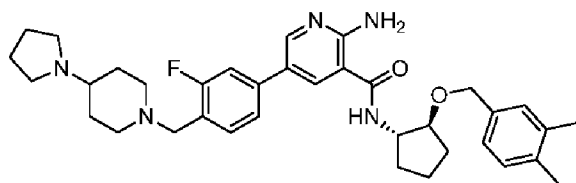


[1687] MS (ESI, m/z): 464.2 [M+H]⁺

[1688] Example 325. 2-amino-N-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-fluoro-4-((4-(pyrrolidin-1-yl)piperidin-1-yl)methyl)phenyl)nicotinamide

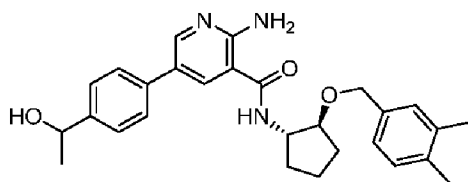
[1689] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 1-(2-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)-4-(pyrrolidin-1-yl)piperidine, the title compound was obtained as described for the example 253.

[1690]

[1691] MS (ESI, m/z): 600.4 [M+H]⁺[1692] Example 326. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(1-hydroxyethyl)phenyl)nicotinamide

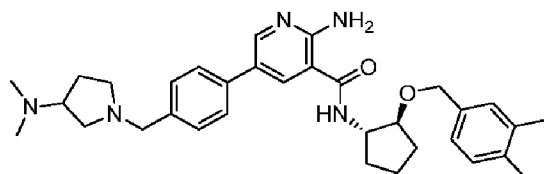
[1693] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (4-(1-hydroxyethyl)phenyl)boronic acid, the title compound was obtained as described for the example 253.

[1694]

[1695] MS (ESI, m/z): 460.3 [M+H]⁺[1696] Example 327. 2-amino-5-(4-((3-(dimethylamino)pyrrolidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

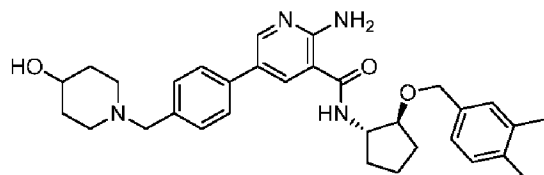
[1697] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and N,N-dimethyl-1-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)pyrrolidin-3-amine, the title compound was obtained as described for the example 253.

[1698]

[1699] MS (ESI, m/z): 542.3 [M+H]⁺[1700] Example 328. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((4-hydroxypiperidin-1-yl)methyl)phenyl)nicotinamide

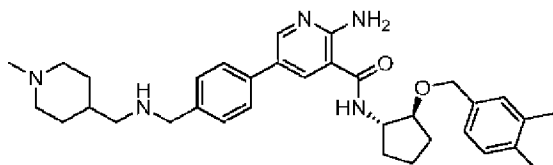
[1701] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 1-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)piperidin-4-ol, the title compound was obtained as described for the example 253.

[1702]

[1703] MS (ESI, m/z): 529.3 [M+H]⁺[1704] Example 329. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(((1-methylpiperidin-4-yl)methyl)amino)methyl)phenyl)nicotinamide

[1705] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 1-(1-methylpiperidin-4-yl)-N-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl) methanamine, the title compound was obtained as described for the example 253.

[1706]

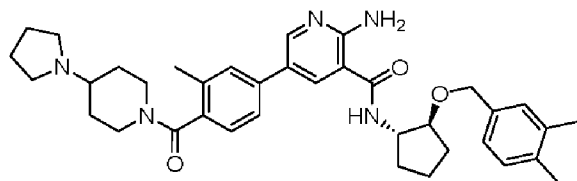


[1707] MS (ESI, m/z): 556.4 [M+H]⁺

[1708] Example 330. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-methyl-4-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)nicotinamide

[1709] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (2-methyl-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)(4-(pyrrolidin-1-yl)piperidin-1-yl)methanone, the title compound was obtained as described for the example 253.

[1710]



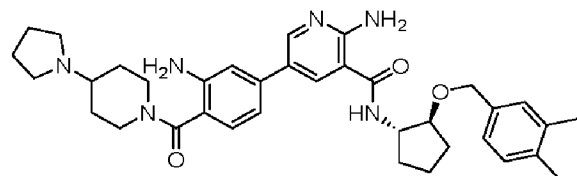
[1711] MS (ESI, m/z): 610.4 [M+H]⁺

[1712] Example 331.

2-amino-5-(3-amino-4-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

[1713] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (2-amino-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)(4-(pyrrolidin-1-yl)piperidin-1-yl)methanone, the title compound was obtained as described for the example 253.

[1714]



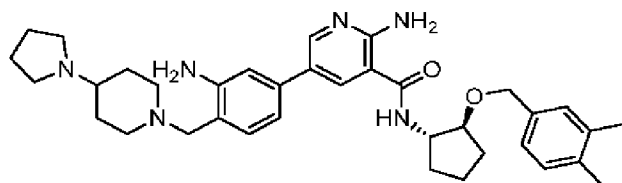
[1715] MS (ESI, m/z): 611.4 [M+H]⁺

[1716] Example 332.

2-amino-5-(3-amino-4-((4-(pyrrolidin-1-yl)piperidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

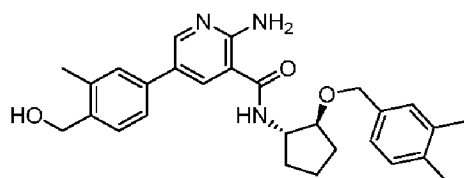
[1717] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 2-((4-(pyrrolidin-1-yl)piperidin-1-yl)methyl)-5-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)aniline, the title compound was obtained as described for the example 253.

[1718]

[1719] MS (ESI, m/z): 597.4 [M+H]⁺[1720] Example 333. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(hydroxymethyl)-3-methylphenyl)nicotinamide

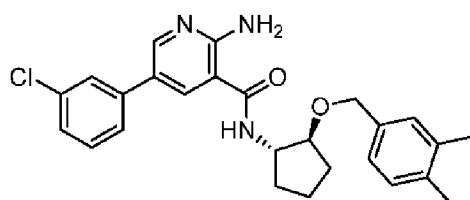
[1721] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (2-methyl-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)methanol, the title compound was obtained as described for the example 253.

[1722]

[1723] MS (ESI, m/z): 460.3 [M+H]⁺[1724] Example 334. 2-amino-5-(3-chlorophenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

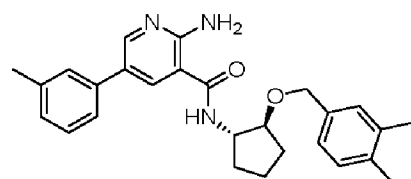
[1725] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (3-chlorophenyl)boronic acid, the title compound was obtained as described for the example 253.

[1726]

[1727] MS (ESI, m/z): 450 [M+H]⁺[1728] Example 335. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(m-tolyl)nicotinamide

[1729] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and m-tolylboronic acid, the title compound was obtained as described for the example 253.

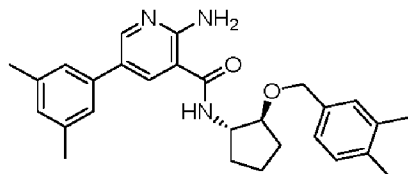
[1730]

[1731] MS (ESI, m/z): 430.2 [M+H]⁺[1732] Example 336. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3,5-dimethylphenyl)nicotinamide

[1733] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and

(3,5-dimethylphenyl)boronic acid, the title compound was obtained as described for the example 253.

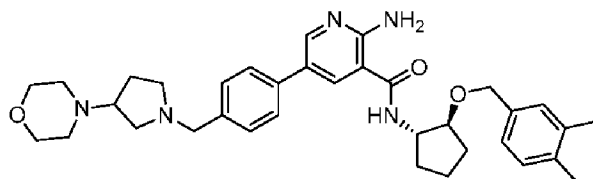
[1734]

[1735] MS (ESI, m/z): 444.3 [M+H]⁺

[1736] Example 337. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((3-morpholinopyrrolidin-1-yl)methyl)phenyl)nicotinamide

[1737] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 4-(1-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)pyrrolidin-3-yl)morpholine, the title compound was obtained as described for the example 253.

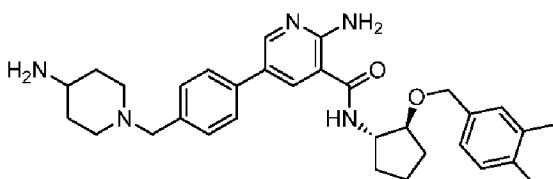
[1738]

[1739] MS (ESI, m/z): 584.4 [M+H]⁺

[1740] Example 338. 2-amino-5-(4-((4-aminopiperidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

[1741] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 1-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)piperidin-4-amine, the title compound was obtained as described for the example 253.

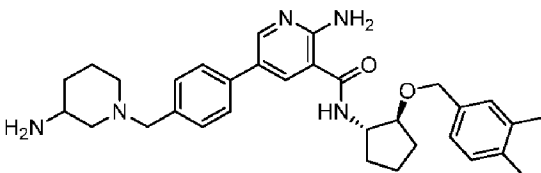
[1742]

[1743] MS (ESI, m/z): 528.3 [M+H]⁺

[1744] Example 339. 2-amino-5-(4-((3-aminopiperidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

[1745] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 1-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)piperidin-3-amine, the title compound was obtained as described for the example 253.

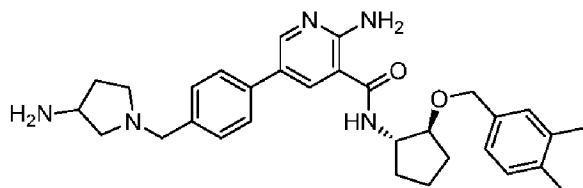
[1746]

[1747] MS (ESI, m/z): 528.3 [M+H]⁺

[1748] Example 340. 2-amino-5-(4-((3-aminopyrrolidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

[1749] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 1-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)pyrrolidin-3-amine, the title compound was obtained as described for the example 253.

[1750]

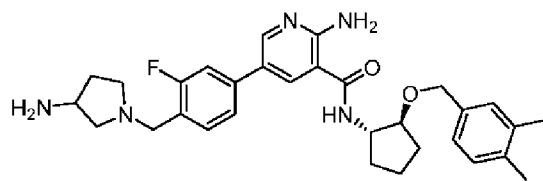


[1751] MS (ESI, m/z): 514.3 [M+H]⁺

[1752] Example 341. 2-amino-5-(4-((3-aminopyrrolidin-1-yl)methyl)-3-fluorophenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

[1753] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 1-(2-fluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)pyrrolidin-3-amine, the title compound was obtained as described for the example 253.

[1754]



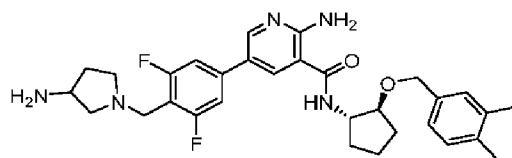
[1755] MS (ESI, m/z): 532.3 [M+H]⁺

[1756] Example 342.

2-amino-5-(4-((3-aminopyrrolidin-1-yl)methyl)-3,5-difluorophenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

[1757] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 1-(2,6-difluoro-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)pyrrolidin-3-amine, the title compound was obtained as described for the example 253.

[1758]

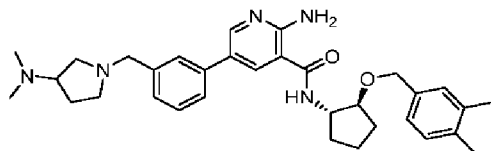


[1759] MS (ESI, m/z): 550.3 [M+H]⁺

[1760] Example 343. 2-amino-5-(3-((3-(dimethylamino)pyrrolidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

[1761] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and N,N-dimethyl-1-(3-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)pyrrolidin-3-amine, the title compound was obtained as described for the example 253.

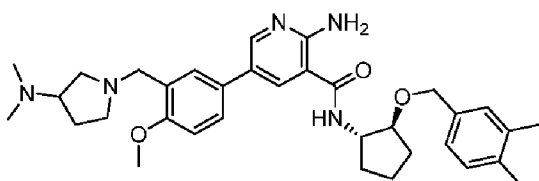
[1762]

[1763] MS (ESI, m/z): 542.3 [M+H]⁺

[1764] Example 344. 2-amino-5-(3-(((3-(dimethylamino)pyrrolidin-1-yl)methyl)-4-methoxyphenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

[1765] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 1-(2-methoxy-5-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)-N,N-dimethylpyrrolidin-3-amine, the title compound was obtained as described for the example 253.

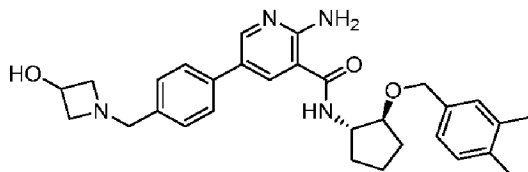
[1766]

[1767] MS (ESI, m/z): 572.4 [M+H]⁺

[1768] Example 345. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((3-hydroxyazetidin-1-yl)methyl)phenyl)nicotinamide

[1769] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 1-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)azetidin-3-ol, the title compound was obtained as described for the example 253.

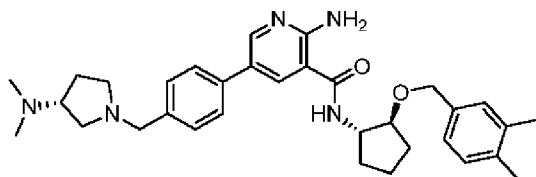
[1770]

[1771] MS (ESI, m/z): 501.3 [M+H]⁺[1772] Example 346.

2-amino-5-(4-(((R)-3-(dimethylamino)pyrrolidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

[1773] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (R)-N,N-dimethyl-1-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)pyrrolidin-3-amine, the title compound was obtained as described for the example 253.

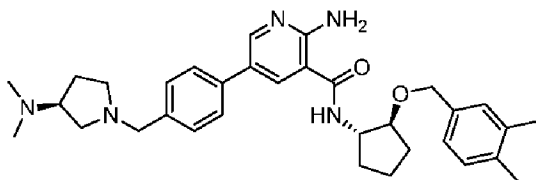
[1774]

[1775] MS (ESI, m/z): 542.3 [M+H]⁺[1776] Example 347.

2-amino-5-(4-(((S)-3-(dimethylamino)pyrrolidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

[1777] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (S)-N,N-dimethyl-1-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)pyrrolidin-3-amine, the title compound was obtained as described for the example 253.

[1778]

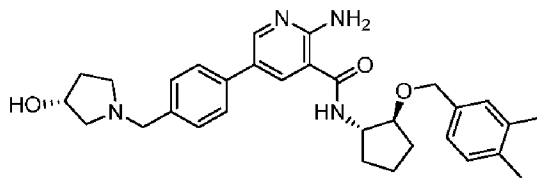


[1779] MS (ESI, m/z): 542.3 [M+H]⁺

[1780] Example 348. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(((R)-3-hydroxypyrrolidin-1-yl)methyl)phenyl)nicotinamide

[1781] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (R)-1-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)pyrrolidin-3-ol, the title compound was obtained as described for the example 253.

[1782]



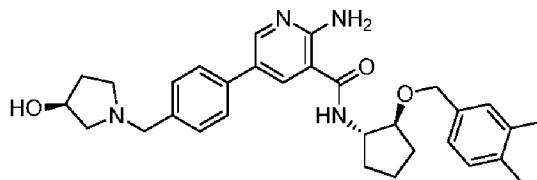
[1783] MS (ESI, m/z): 515.3 [M+H]⁺

[1784] Example 349.

2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(((S)-3-hydroxypyrrolidin-1-yl)methyl)phenyl)nicotinamide

[1785] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (S)-1-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)pyrrolidin-3-ol, the title compound was obtained as described for the example 253.

[1786]

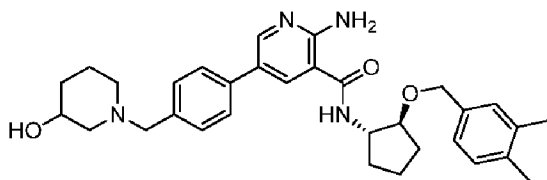


[1787] MS (ESI, m/z): 515.3 [M+H]⁺

[1788] Example 350. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((3-hydroxypiperidin-1-yl)methyl)phenyl)nicotinamide

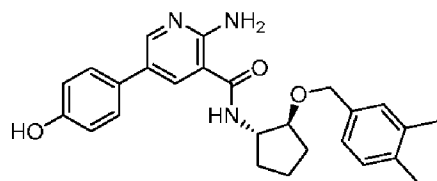
[1789] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 1-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)piperidin-3-ol, the title compound was obtained as described for the example 253.

[1790]

[1791] MS (ESI, m/z): 529.3 [M+H]⁺[1792] Example 351. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-hydroxyphenyl)nicotinamide

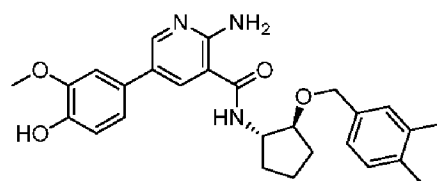
[1793] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (4-hydroxyphenyl)boronic acid, the title compound was obtained as described for the example 253.

[1794]

[1795] MS (ESI, m/z): 432.2 [M+H]⁺[1796] Example 352. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-hydroxy-3-methoxyphenyl)nicotinamide

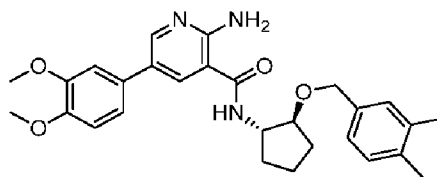
[1797] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (4-hydroxy-3-methoxyphenyl)boronic acid, the title compound was obtained as described for the example 253.

[1798]

[1799] MS (ESI, m/z): 462.23 [M+H]⁺[1800] Example 353. 2-amino-5-(3,4-dimethoxyphenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

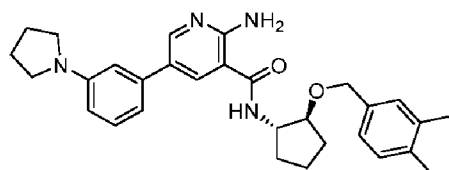
[1801] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (3,4-dimethoxyphenyl)boronic acid, the title compound was obtained as described for the example 253.

[1802]

[1803] MS (ESI, m/z): 476.3 [M+H]⁺[1804] Example 354. 2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(pyrrolidin-1-yl)phenyl)nicotinamide

[1805] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and (3-(pyrrolidin-1-yl)phenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 253.

[1806]

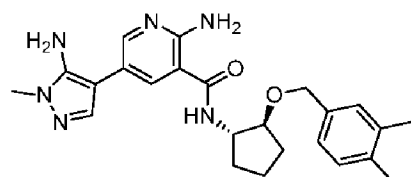


[1807] MS (ESI, m/z): 485.3 [M+H]⁺

[1808] Example 355. 2-amino-5-(5-amino-1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

[1809] Using (1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentan-1-amine and 1-methyl-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-1H-pyrazol-5-amine, the title compound was obtained as described for the example 253.

[1810]

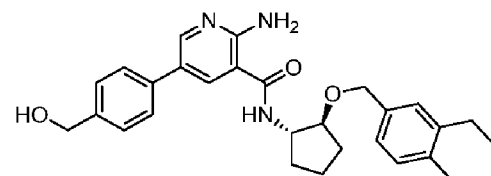


[1811] MS (ESI, m/z): 435.2 [M+H]⁺

[1812] Example 356. 2-amino-N-((1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentyl)-5-(4-(hydroxymethyl)phenyl)nicotinamide

[1813] Using (1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentan-1-amine and (4-(hydroxymethyl)phenyl)boronic acid, the title compound was obtained as described for the example 253.

[1814]

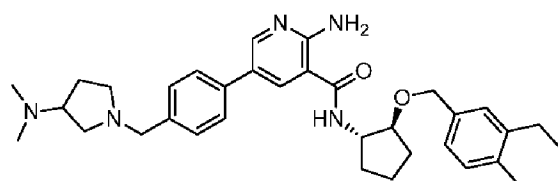


[1815] MS (ESI, m/z): 460.3 [M+H]⁺

[1816] Example 357. 2-amino-5-(4-((3-(dimethylamino)pyrrolidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentyl)nicotinamide

[1817] Using (1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentan-1-amine and N,N-dimethyl-1-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)pyrrolidin-3-amine, the title compound was obtained as described for the example 253.

[1818]

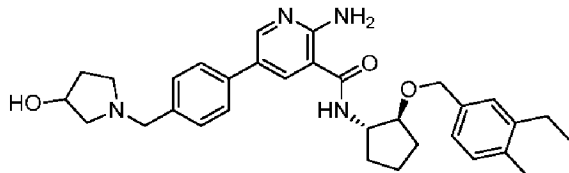


[1819] MS (ESI, m/z): 556.4 [M+H]⁺

[1820] Example 358. 2-amino-N-((1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentyl)-5-(4-((3-hydroxypyrrolidin-1-yl)methyl)phenyl)nicotinamide

[1821] Using (1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentan-1-amine and 1-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)pyrrolidin-3-ol, the title compound was obtained as described for the example 253.

[1822]

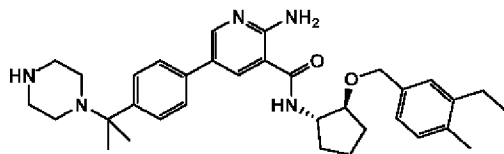


[1823] MS (ESI, m/z): 529.3 [M+H]⁺

[1824] Example 359. 2-amino-N-((1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentyl)-5-(4-(2-(piperazin-1-yl)propan-2-yl)phenyl)nicotinamide

[1825] Using (1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentan-1-amine and 1-(2-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)propan-2-yl)piperazine, the title compound was obtained as described for the example 253.

[1826]



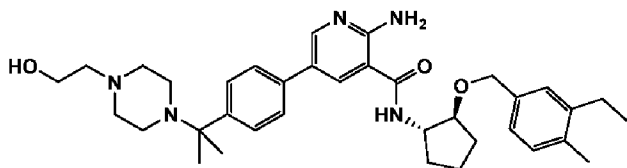
[1827] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.11 (t, J=7.63 Hz, 3 H) 1.50 (s, 6 H) 1.58 - 1.67 (m, 1 H) 1.70 - 1.88 (m, 3 H) 1.98 - 2.06 (m, 1 H) 2.10-2.17 (m, 1H) 2.17 (s, 3 H) 2.49 - 2.57 (q, J=7.63 Hz, 2 H) 2.84 (br s, 4 H) 3.24 (t, J=4.70 Hz, 4 H) 3.91 - 4.00 (m, 1 H) 4.40 (br d, J=4.70 Hz, 1 H) 4.49 - 4.61 (m, 2 H) 6.98 - 7.05 (m, 2 H) 7.09 (s, 1 H) 7.64 - 7.80 (m, 4 H) 8.31 (d, J=2.35 Hz, 1 H) 8.57 (d, J=1.96 Hz, 1 H);

[1828] MS (ESI, m/z): 556.4 [M+H]⁺

[1829] Example 360. 2-amino-N-((1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentyl)-5-(4-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)phenyl)nicotinamide

[1830] Using (1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentan-1-amine and 2-(4-(2-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)propan-2-yl)piperazin-1-yl)ethan-1-ol, the title compound was obtained as described for the example 253.

[1831]



[1832] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.11 (t, J=7.43 Hz, 3 H) 1.57 (s, 3 H) 1.61-1.64 (m, 1H) 1.64 (s, 3 H) 1.69 - 1.89 (m, 3 H) 2.01 (br dd, J=13.11, 6.06 Hz, 1 H) 2.10 - 2.29 (m, 4 H) 2.53 (q, J=7.56 Hz, 2 H) 2.88 - 3.13 (m, 4 H) 3.22 - 3.28 (m, 1 H) 3.33 -

3.39 (m, 2 H) 3.43 (br s, 2 H) 3.83 - 3.90 (m, 1 H) 3.92 - 4.00 (m, 1 H) 4.35 - 4.45 (m, 1 H) 4.47 - 4.62 (m, 2 H) 6.95 - 7.07 (m, 2 H) 7.09 (s, 1 H) 7.65 - 7.84 (m, 4 H) 8.29 - 8.36 (m, 1 H) 8.56 - 8.64 (m, 1 H);

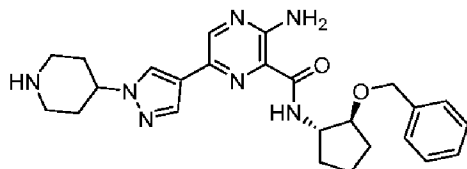
[1833] MS (ESI, m/z): 600.3 [M+H]⁺

[1834] Example 361. 3-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-6-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)pyrazine-2-carboxamide

[1835] Using

3-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-6-bromopyrazine-2-carboxamide and (1-(piperidin-4-yl)-1H-pyrazol-4-yl)boronic acid pinacol ester, the title compound was obtained as described for the example 253.

[1836]



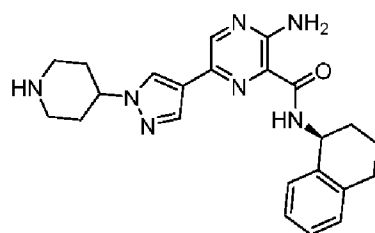
[1837] MS (ESI, m/z): 462.3 [M+H]⁺

[1838] Example 362. (S)-3-amino-6-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)-N-(1,2,3,4-tetrahydronaphthalen-1-yl)pyrazine-2-carboxamide

[1839] Using

(S)-3-amino-6-bromo-N-(1,2,3,4-tetrahydronaphthalen-1-yl)pyrazine-2-carboxamide and (1-(piperidin-4-yl)-1H-pyrazol-4-yl)boronic acid pinacol ester, the title compound was obtained as described for the example 253.

[1840]



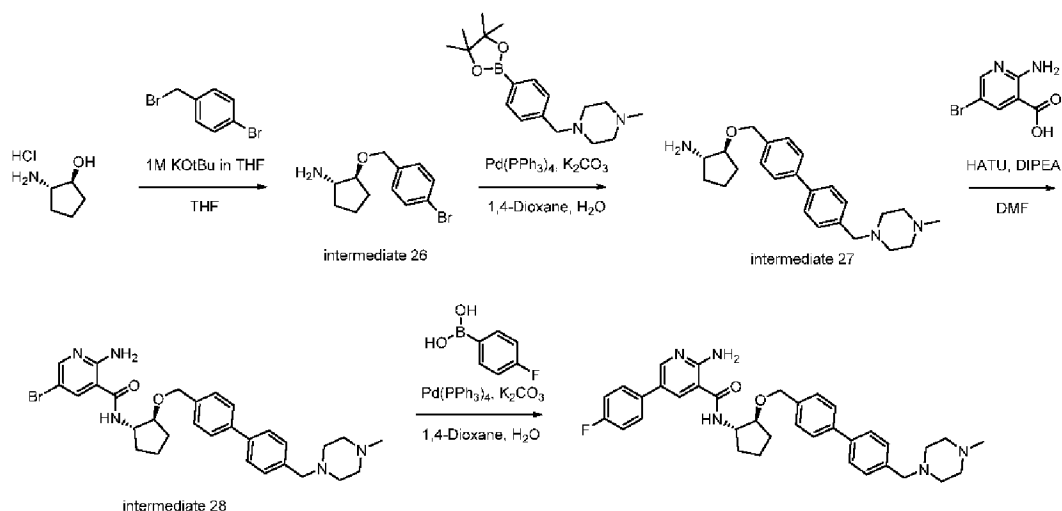
[1841] MS (ESI, m/z): 418.2 [M+H]⁺

[1842] Example 363.

2-amino-5-(4-fluorophenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1843] Scheme for the preparation of the Compound of Example 363:

[1844]



[1845] Intermediate 26.

[1846] To a solution of trans-(1S,2S)-2-Aminocyclopentanol hydrochloride (8.0 mmol) in DMF (5 ml) was added 1M potassium tert-butoxide in THF (20 ml) at room temperature. The mixture was allowed to stir for 30 min. After being allowed to stir for 30 min, 4-bromobenzyl bromide (9.6 mmol) was added to the mixture, and then allowed to stir for additional 2 h at room temperature. The reaction mixture was then quenched with water and extracted with EtOAc. The separated organic layer was dried over MgSO_4 , filtered and concentrated in vacuo. The concentrated residue was used in the next step without further purification.

[1847] ^1H NMR (600 MHz, CDCl_3) δ ppm 1.29 - 1.35 (m, 1 H) 1.57 - 1.65 (m, 1 H) 1.65 - 1.77 (m, 2 H) 1.96 (br dd, $J=12.62$, 6.75 Hz, 2 H) 3.20 - 3.27 (m, 1 H) 3.51 (br d, $J=5.28$ Hz, 1 H) 4.40 - 4.46 (m, 1 H) 4.46 - 4.54 (m, 1 H) 7.21 (br t, $J=7.63$ Hz, 2 H) 7.40 - 7.48 (m, 2 H);

[1848] MS (ESI+) m/z 270 $[\text{M}+\text{H}]^+$

[1849] Intermediate 27.

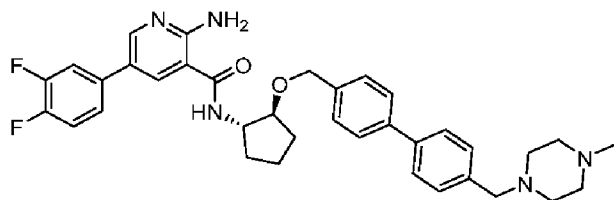
[1850] To a solution of intermediate 26 (0.851 mmol) in 1,4-dioxane (4 ml) and water (1 ml) was added

1-methyl-4-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)benzyl)piperazine (0.851 mmol), tetrakis(triphenylphosphine)palladium(0) (0.0851 mmol) and potassium carbonate (0.851 mmol). The mixture was heated to 100 °C and allowed to stir for overnight. After being cooled to room temperature, the reaction mixture was diluted with water (10 mL) and extracted with ethyl acetate (10 mL). The separated organic layer was dried over MgSO_4 , filtered and concentrated in vacuo. The concentrated residue was purified by flash column chromatography to afford the desired compound (265 mg, 0.7 mmol).

[1851] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.36 - 1.45 (m, 1 H) 1.63 - 1.78 (m, 3 H) 1.97 - 2.07 (m, 2 H) 2.26 (s, 3 H) 2.30 - 2.71 (br s, 8 H) 3.24 (td, $J=7.48$, 4.99 Hz, 1 H) 3.55

- (s, 2 H) 3.67 - 3.74 (m, 1 H) 4.53 (d, $J=11.74$ Hz, 1 H) 4.60 (d, $J=11.74$ Hz, 1 H) 7.38 (d, $J=8.22$ Hz, 2 H) 7.42 (d, $J=8.22$ Hz, 2 H) 7.55 - 7.58 (m, 2 H) 7.58 - 7.61 (m, 2 H);
- [1852] MS (ESI+) m/z 380 $[M+H]^+$
- [1853] Intermediate 28.
- [1854] To a solution of intermediate 27 (0.685 mmol) and 2-amino-5-bromonicotinic acid (0.685 mmol) in N,N-dimethylformamide (5 mL) was added diisopropylethylamine (3.425 mmol) and HATU (1.027 mmol) at room temperature. The reaction mixture was allowed to stir for overnight, concentrated *in vacuo*, diluted with EtOAc and washed with brine. The separated organic layer was dried over $MgSO_4$, filtered and concentrated in *vacuo*. The concentrated residue was purified by flash column chromatography to afford the desired compound (0.653 mmol) as a pale yellow oil.
- [1855] 1H NMR (600 MHz, CD_3OD) δ ppm 1.49 - 1.57 (m, 1 H) 1.68 - 1.78 (m, 3 H) 1.95 - 2.01 (m, 1 H) 2.07 - 2.13 (m, 1 H) 2.41 (s, 3 H) 2.49 - 2.79 (br s, 8 H) 3.56 (s, 2 H) 3.91 (dt, $J=6.90, 4.48$ Hz, 1 H) 4.34 (td, $J=7.48, 4.40$ Hz, 1 H) 4.57 - 4.65 (m, 2 H) 7.35 (br d, $J=8.22$ Hz, 2 H) 7.37 (br d, $J=8.22$ Hz, 2 H) 7.52 (d, $J=7.63$ Hz, 4 H) 7.90 (d, $J=2.35$ Hz, 1 H) 8.04 (d, $J=2.35$ Hz, 1 H);
- [1856] MS (ESI+) m/z 579 $[M+H]^+$
- [1857] Example 363.
2-amino-5-(4-fluorophenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
- [1858] To a solution of intermediate 28 (0.076 mmol) in 1,4-dioxane (4 ml) and water (1 ml) was added (4-fluorophenyl)boronic acid (0.076 mmol), tetrakis(triphenylphosphine)palladium(0) (0.0076 mmol) and potassium carbonate (0.076 mmol). The mixture was heated to 100 °C and allowed to stir for overnight. After being cooled to room temperature, the reaction mixture was diluted with water (10 mL) and extracted with ethyl acetate (10 mL). The separated organic layer was dried over $MgSO_4$, filtered and concentrated in *vacuo*. The concentrated residue was purified by preparative HPLC to afford the compound of Example 363.
- [1859] 1H NMR (400MHz, CD_3OD) δ 8.57 (s, 1H), 8.23 (s, 1H), 7.64-7.47 (m, 8H), 7.42 (d, 2H), 7.17 (t, 2H), 4.66 (qd, 2H), 4.45-4.39 (m, 1H), 4.25 (s, 1H), 4.09-3.90 (m, 1H), 3.62 (s, 1H), 3.53 (br s, 2H), 3.39 (br s, 2H), 2.94 (s, 3H), 2.19-2.12 (m, 1H), 2.05-1.97 (m, 1H), 1.83-1.75 (m, 3H), 1.66-1.57 (m, 1H);
- [1860] MS (ESI+) m/z 594 $[M+H]^+$
- [1861] Example 364.
2-amino-5-(3,4-difluorophenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
- [1862] Using 3,4-difluorophenylboronic acid, the title compound was obtained as described for the example 363.

[1863]



[1864] ^1H NMR (400MHz, CD_3OD) δ 8.54 (s, 1H), 8.26 (s, 1H), 7.71-7.52 (m, 8H), 7.42-7.33 (m, 3H), 4.65 (qd, 2H), 4.41 (m, 1H), 4.32 (s, 2H), 3.98 (m, 1H), 3.57 (br s, 2H), 3.48 (br s, 2H), 2.94 (s, 3H), 2.18-2.05 (m, 1H), 2.04-1.99 (m, 1H), 1.81-1.73 (m, 3H), 1.66-1.59 (m, 1H);

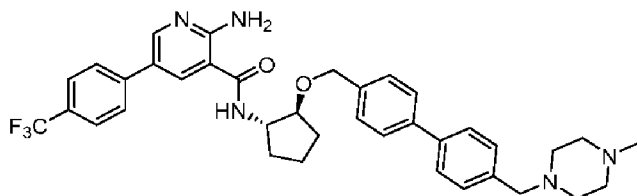
[1865] MS (ESI+) m/z 612 $[\text{M}+\text{H}]^+$

[1866] Example 365.

2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-(trifluoromethyl)phenyl)nicotinamide

[1867] Using 4-trifluoromethylphenylboronic acid, the title compound was obtained as described for the example 363.

[1868]



[1869] ^1H NMR (400MHz, CD_3OD) δ 8.65 (s, 1H), 8.36 (s, 1H), 7.83 (d, $J = 8.0$ Hz, 2H), 7.75 (d, $J = 12.0$ Hz, 2H), 7.62 (d, $J = 8.0$ Hz, 2H), 7.54-7.50 (m, 4H), 7.42 (d, $J = 8.0$ Hz, 2H), 4.69-4.62 (qd, 2H), 4.44-4.39 (m, 1H), 4.27 (s, 2H), 4.02-4.00 (m, 1H), 3.54 (br s, 2H), 3.42 (br s, 2H), 2.94 (s, 3H), 2.21-2.05 (m, 1H), 2.05-1.97 (m, 1H), 1.87-1.76 (m, 3H), 1.68-1.59 (m, 1H);

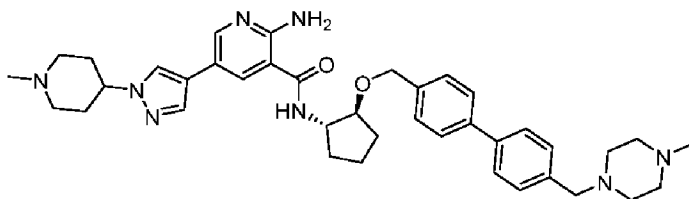
[1870] MS (ESI+) m/z 644 $[\text{M}+\text{H}]^+$

[1871] Example 366.

2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide

[1872] Using 1-methyl-4-[4-(tetramethyl-1,3,2-dioxaborolan-2-yl)-1H-pyrazol-1-yl]piperidine, the title compound was obtained as described for the example 363.

[1873]



[1874] ^1H NMR (400MHz, CD_3OD) δ 8.57 (s, 1H), 8.21 (s, 1H), 8.15 (s, 1H), 7.92 (s, 1H), 7.63 (d, $J = 8.0$ Hz, 2H), 7.57-7.50 (m, 4H), 7.42 (d, $J = 8.0$ Hz, 2H), 4.66 (s, 2H),

4.59-4.53 (m, 1H), 4.43-4.38 (m, 1H), 4.25 (s, 2H), 4.12-4.01 (m, 2H), 3.69-3.66 (d, 2H), 3.53 (br s, 2H), 3.39 (br s, 2H), 3.25-3.20 (m, 1H), 2.93 (s, 3H), 2.92 (s, 3H), 2.41-2.33 (m, 4H), 2.19-1.97 (m, 2H), 1.84-1.76 (m, 3H), 1.69-1.60 (m, 1H);

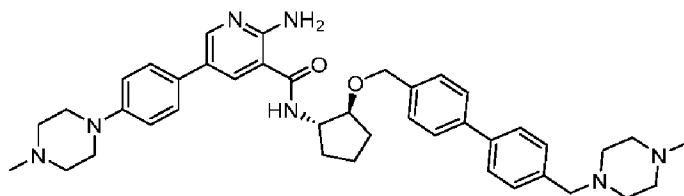
[1875] MS (ESI+) m/z 663 [M+H]⁺

[1876] Example 367.

2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-(4-methylpiperazin-1-yl)phenyl)nicotinamide

[1877] Using 4-(4-Methylpiperazin-1-yl)phenylboronic acid, the title compound was obtained as described for the example 363.

[1878]



[1879] ¹H NMR (400MHz, CD₃OD) δ 8.59 (s, 1H), 8.18 (s, 1H), 7.64-7.50 (m, 8H), 7.43 (d, J = 8.0 Hz, 2H), 7.11 (d, J = 8.0 Hz, 2H), 4.66 (s, 2H), 4.43-4.39 (m, 1H), 4.25 (s, 2H), 4.03-4.00 (m, 1H), 3.92 (d, J = 1.2 Hz, 2H), 3.62 (d, J = 1.2 Hz, 2H), 3.52 (br s, 2H), 3.39 (br s, 2H), 3.26-3.20 (m, 2H), 3.12-3.06 (m, 2H), 2.96 (s, 3H), 2.93 (s, 3H), 2.18-2.13 (m, 1H), 2.05-1.92 (m, 1H), 1.83-1.76 (m, 3H), 1.66-1.59 (m, 1H);

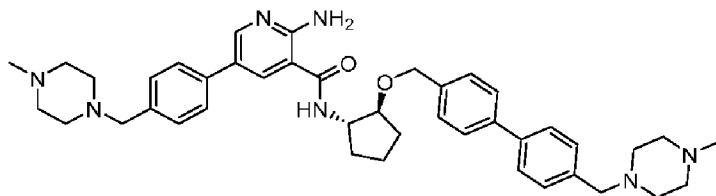
[1880] MS (ESI+) m/z 674 [M+H]⁺

[1881] Example 368.

2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-(4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide

[1882] Using 4-((4-methylpiperazin-1-yl)methyl)phenylboronic acid, the title compound was obtained as described for the example 363.

[1883]



[1884] ¹H NMR (400MHz, CD₃OD) δ 8.66 (s, 1H), 8.29 (s, 1H), 7.73 (d, J = 8.0 Hz, 2H), 7.65-7.52 (m, 8H), 7.43 (d, J = 8.0 Hz, 2H), 4.66 (s, 2H), 4.42 (m, 1H), 4.31 (s, 2H), 4.21 (s, 2H), 4.02 (m, 1H), 3.53 (br s, 8H), 3.46 (br s, 4H), 3.29 (br s, 4H), 2.94 (s, 3H), 2.93 (s, 3H), 2.23-2.10 (m, 1H), 2.04-1.98 (m, 1H), 1.88-1.75 (m, 3H), 1.67-1.60 (m, 1H);

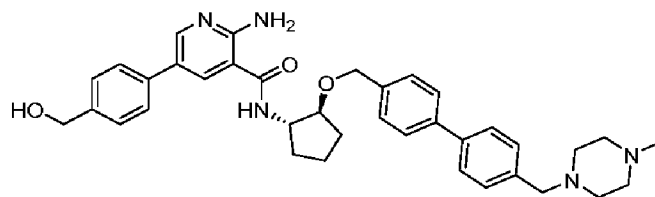
[1885] MS (ESI+) m/z 688 [M+H]⁺

[1886] Example 369.

2-amino-5-(4-(hydroxymethyl)phenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1887] Using 4-(Hydroxymethyl)phenylboronic acid, the title compound was obtained as described for the example 363.

[1888]



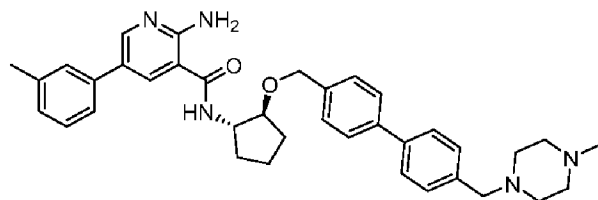
[1889] ^1H NMR (400MHz, CD_3OD) δ 8.63 (s, 1H), 8.26 (s, 1H), 7.70 (d, $J = 8.0$ Hz, 1H), 7.61-7.53 (m, 5H), 7.46-7.41 (m, 6H), 4.66 (s, 2H), 4.64 (s, 2H), 4.42 (m, 1H), 3.99 (m, 1H), 3.91 (s, 2H), 3.35 (br s, 2H), 3.00 (br s, 2H), 2.88 (s, 3H), 2.22-2.10 (m, 1H), 2.04 (m, 1H), 1.85-1.74 (m, 3H), 1.63 (m, 1H);

[1890] MS (ESI+) m/z 606 $[\text{M}+\text{H}]^+$

[1891] Example 370. 2-amino-N-((1S,2S)-2-(((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(m-tolyl)nicotinamide

[1892] Using 3-tolylboronic acid, the title compound was obtained as described for the example 363.

[1893]



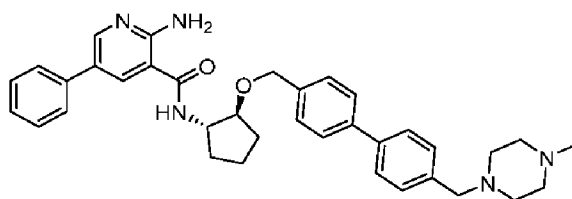
[1894] ^1H NMR (400MHz, CD_3OD) δ 8.62 (s, 1H), 8.23 (s, 1H), 7.72-7.32 (m, 11H), 7.24 (d, $J = 8.0$ Hz, 1H), 4.66 (s, 2H), 4.41 (m, 1H), 4.06 (s, 2H), 4.00 (m, 1H), 3.43 (br s, 2H), 3.17 (br s, 2H), 2.90 (s, 3H), 2.39 (s, 3H), 2.18 (m, 1H), 2.04 (m, 1H), 1.89-1.75 (m, 3H), 1.65-1.60 (m, 1H);

[1895] MS (ESI+) m/z 590 $[\text{M}+\text{H}]^+$

[1896] Example 371. 2-amino-N-((1S,2S)-2-(((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-phenyl)nicotinamide

[1897] Using phenylboronic acid, the title compound was obtained as described for the example 363.

[1898]



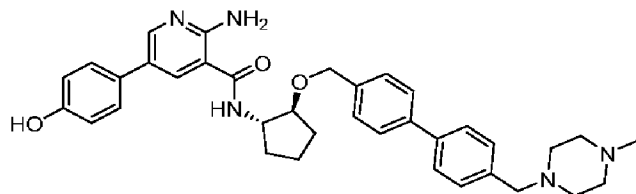
[1899] MS (ESI+) m/z 576 $[\text{M}+\text{H}]^+$

[1900] Example 372.

2-amino-5-(4-hydroxyphenyl)-N-((1S,2S)-2-(((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1901] Using 4-hydroxyphenylboronic acid, the title compound was obtained as described for the example 363.

[1902]



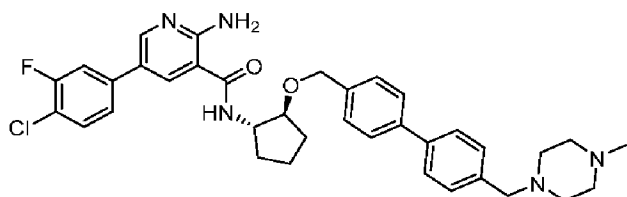
[1903] MS (ESI+) m/z 592 [M+H]⁺

[1904] Example 373.

2-amino-5-(4-chloro-3-fluorophenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1905] Using 4-chloro-3-fluorophenylboronic acid, the title compound was obtained as described for the example 363.

[1906]

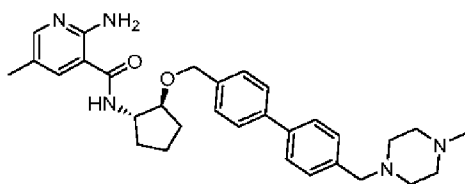


[1907] MS (ESI+) m/z 629 [M+H]⁺

[1908] Example 374. 2-amino-5-methyl-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1909] Using trimethylboroxine, the title compound was obtained as described for the example 363.

[1910]



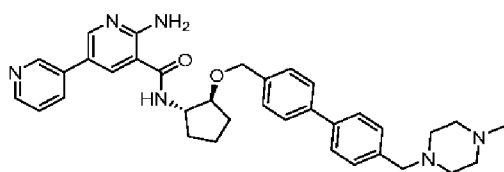
[1911] MS (ESI+) m/z 514 [M+H]⁺

[1912] Example 375.

6-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

[1913] Using 3-pyridylboronic acid, the title compound was obtained as described for the example 363.

[1914]



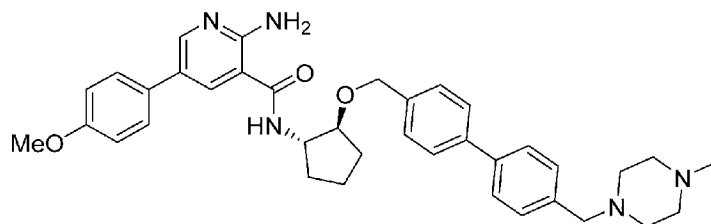
[1915] MS (ESI+) m/z 577 [M+H]⁺

[1916] Example 376.

2-amino-5-(4-methoxyphenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1917] Using 4-methoxyphenylboronic acid, the title compound was obtained as described for the example 363.

[1918]

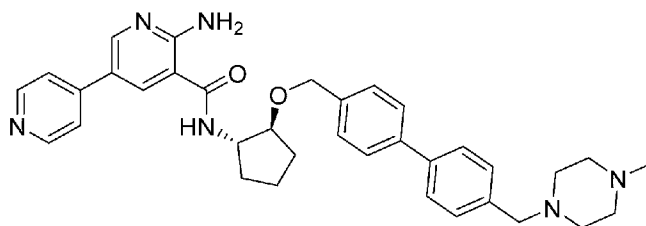


[1919] MS (ESI+) m/z 606 $[M+H]^+$

[1920] Example 377. 6-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,4'-bipyridine]-5-carboxamide

[1921] Using 4-pyridylboronic acid, the title compound was obtained as described for the example 363.

[1922]



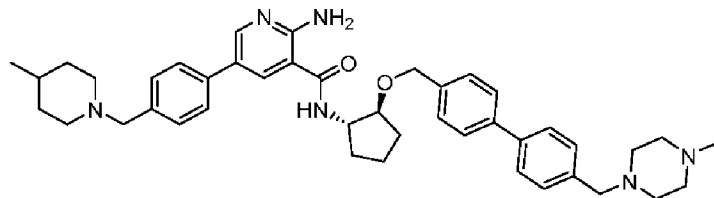
[1923] MS (ESI+) m/z 577 $[M+H]^+$

[1924] Example 378.

2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-((4-methylpiperidin-1-yl)methyl)phenyl)nicotinamide

[1925] Using (4-((4-methylpiperidin-1-yl)methyl)phenyl)boronic acid, the title compound was obtained as described for the example 363.

[1926]



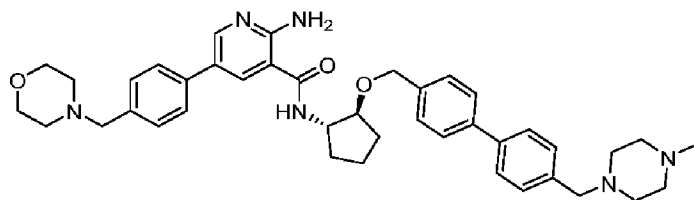
[1927] MS (ESI+) m/z 687 $[M+H]^+$

[1928] Example 379.

2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-(morpholinomethyl)phenyl)nicotinamide

[1929] Using (4-(morpholinomethyl)phenyl)boronic acid, the title compound was obtained as described for the example 363.

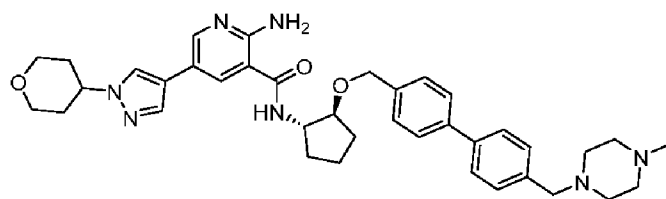
[1930]

[1931] MS (ESI+) m/z 675 [M+H]⁺[1932] Example 380.

2-amino-N-((1S,2S)-2-(((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-(tetrahydro-2H-pyran-4-yl)-1H-pyrazol-4-yl)nicotinamide

[1933] Using 1-(Tetrahydro-pyran-4-yl)-1H-pyrazole-4-boronic acid pinacol ester, the title compound was obtained as described for the example 363.

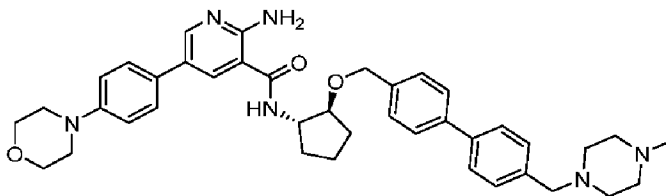
[1934]

[1935] MS (ESI+) m/z 650 [M+H]⁺

[1936] Example 381. 2-amino-N-((1S,2S)-2-(((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-morpholinophenyl)nicotinamide

[1937] Using 4-morpholinophenylboronic acid, the title compound was obtained as described for the example 363.

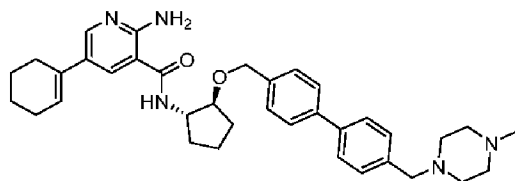
[1938]

[1939] MS (ESI+) m/z 661 [M+H]⁺[1940] Example 382.

2-amino-5-(cyclohex-1-en-1-yl)-N-((1S,2S)-2-(((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1941] Using 1-cyclohexenylboronic acid, the title compound was obtained as described for the example 363.

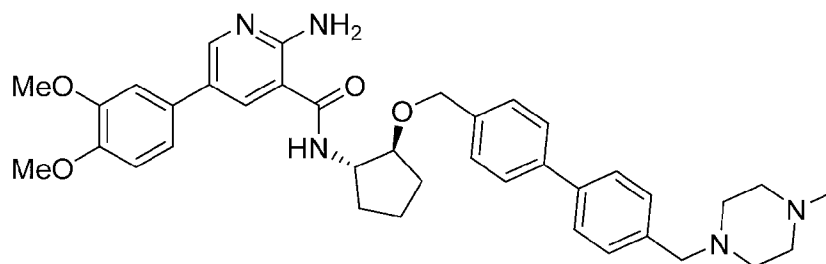
[1942]

[1943] MS (ESI+) m/z 580 [M+H]⁺[1944] Example 383.

2-amino-5-(3,4-dimethoxyphenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

[1945] Using 3,4-dimethoxyphenylboronic acid, the title compound was obtained as described for the example 363.

[1946]



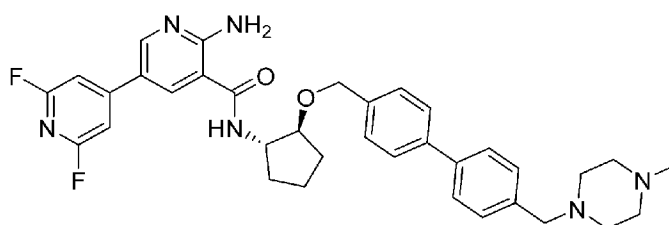
[1947] MS (ESI+) m/z 636 [M+H]⁺

[1948] Example 384.

6-amino-2',6'-difluoro-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,4'-bipyridine]-5-carboxamide

[1949] Using 2,6-difluoropyridine-4-boronic acid, the title compound was obtained as described for the example 363.

[1950]



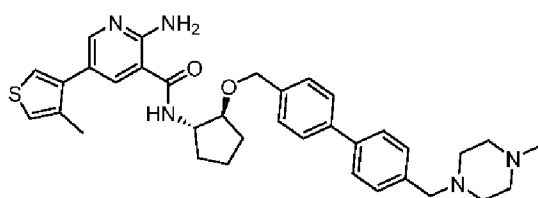
[1951] MS (ESI+) m/z 613 [M+H]⁺

[1952] Example 385.

2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-methylthiophen-3-yl)nicotinamide

[1953] Using 4-Methyl-3-thienylboronic acid, the title compound was obtained as described for the example 363.

[1954]



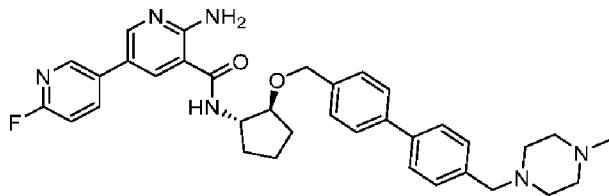
[1955] MS (ESI+) m/z 596 [M+H]⁺

[1956] Example 386.

6-amino-6'-fluoro-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

[1957] Using 6-fluoro-3-pyridinylboronic acid, the title compound was obtained as described for the example 363.

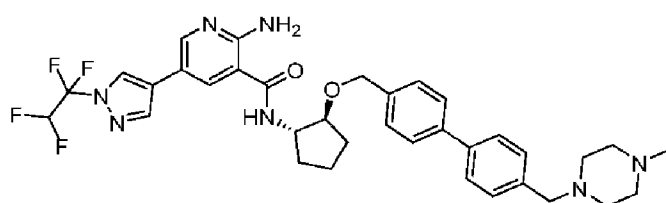
[1958]

[1959] MS (ESI+) m/z 595 $[M+H]^+$ [1960] Example 387.

2-amino-N-((1S,2S)-2-((4'-(4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-(1,1,2,2-tetrafluoroethyl)-1H-pyrazol-4-yl)nicotinamide

[1961] Using (1-(1,1,2,2-tetrafluoroethyl)-1H-pyrazol-4-yl)boronic acid, the title compound was obtained as described for the example 363.

[1962]



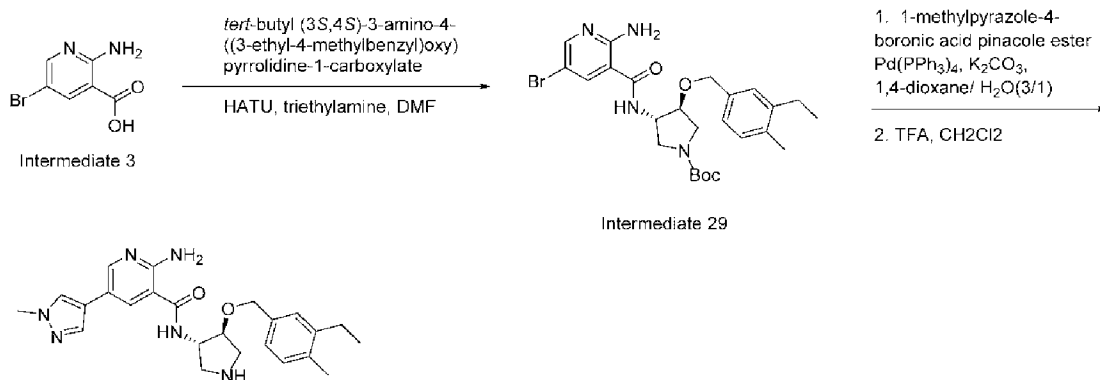
[1963] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.64 (br dd, $J=14.09$, 7.04 Hz, 1 H) 1.75 - 1.88 (m, 3 H) 2.04 (br dd, $J=12.33$, 7.63 Hz, 1 H) 2.15 - 2.23 (m, 1 H) 2.87 (s, 3 H) 2.90 - 3.06 (m, 4 H) 3.33 (br s, 4 H) 3.86 (s, 2 H) 3.98 - 4.04 (m, 1 H) 4.39 - 4.44 (m, 1 H) 4.62 - 4.69 (m, 2 H) 6.75 - 6.98 (m, 1 H) 7.39 - 7.45 (m, 4 H) 7.55 (br d, $J=8.22$ Hz, 2 H) 7.57 (br d, $J=8.22$ Hz, 2 H) 8.20 (s, 1 H) 8.33 (d, $J=1.76$ Hz, 1 H) 8.58 (d, $J=1.76$ Hz, 1 H) 8.60 (s, 1 H);

[1964] MS (ESI+) m/z 666.3 $[M+H]^+$

[1965] Example 388. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1966] Scheme for the preparation of the Compound of Example 388:

[1967]



[1968] Intermediate 29.

[1969] To a mixture of intermediate 3 (420 mg, 1.94 mmol) and triethylamine (0.40 ml, 2.90 mmol) in 10 ml of DMF was added HATU (884 mg, 2.32 mmol) followed by tert-butyl (3S,4S)-3-amino-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidine-1-carboxylate (647

mg, 1.94 mmol). The mixture was stirred at room temperature for 1 hr and then saturated sodium bicarbonate solution was added. The mixture was extracted with EtOAc, washed with brine, dried over MgSO_4 , and concentrated in vacuo. The crude product was purified through silicagel column chromatography to give 800 mg of off-white solid.

[1970] ^1H NMR (600 MHz, CDCl_3) δ ppm 1.14 - 1.22 (t, 3 H) 1.41 (br s, 9 H) 2.27 (s, 3 H) 2.55 - 2.64 (q, 2 H) 3.37 - 3.66 (m, 4 H) 3.78 (dd, $J=12.03$, 5.58 Hz, 1 H) 4.10 (br s, 1 H) 4.50 - 4.79 (m, 2 H) 6.74 (br s, 2 H) 7.04 - 7.15 (m, 3 H) 7.98 (d, $J=1.76$ Hz, 1 H) 8.43 (br s, 1 H);

[1971] MS (ESI, m/z): 534.3 $[\text{M}+\text{H}]^+$

[1972] Example 388.

2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[1973] To a mixture of intermediate 29 (40 mg, 0.07 mmol) and 1-methylpyrazole-4-boronic acid pinacol ester (23 mg, 0.11 mmol) in 0.4 ml of 1,4-dioxane/ water (3/1) was added K_2CO_3 (31 mg, 0.22 mmol) followed by $\text{Pd}(\text{PPh}_3)_4$ (4 mg, 0.003 mmol). The reaction mixture was heated at 100 °C for 3 hrs, cooled to room temperature, and extracted with EtOAc, dried over anhydrous MgSO_4 and concentrated under vacuum. The crude residue was dissolved with 0.5 ml of CH_2Cl_2 / TFA (10/1) and the mixture was stirred for 2 hrs. After concentration under vacuum, the crude residue was purified by preparative HPLC to afford 23 mg of the title compound.

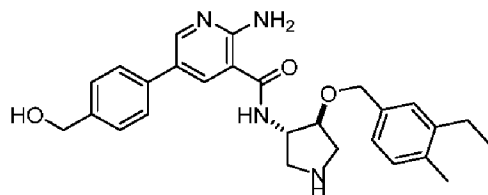
[1974] ^1H NMR (600 MHz, CD_3OD) ppm 1.13 (t, $J=7.34$ Hz, 3 H) 2.23 (s, 2 H) 2.57 (q, $J=7.24$ Hz, 2 H) 2.91 (dd, $J=12.03$, 4.40 Hz, 1 H) 2.97 - 3.04 (m, 1 H) 3.16 - 3.22 (m, 1 H) 3.36 - 3.43 (m, 1 H) 3.91 (s, 3 H) 4.05 - 4.10 (m, 1 H) 4.48 (br s, 1 H) 4.57 (d, $J=11.74$ Hz, 1 H) 4.65 (d, $J=11.74$ Hz, 1 H) 7.06 (s, 2 H) 7.12 (s, 1 H) 7.76 (s, 1 H) 7.89 (s, 1 H) 8.02 (d, $J=2.35$ Hz, 1 H) 8.26 (d, $J=2.35$ Hz, 1 H) ,

[1975] MS (ESI, m/z): 435.5 $[\text{M}+\text{H}]^+$

[1976] Example 389. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-(hydroxymethyl)phenyl)nicotinamide

[1977] Using 4-hydroxymethylphenylboronic acid, the title compound was obtained as described for the example 388.

[1978]



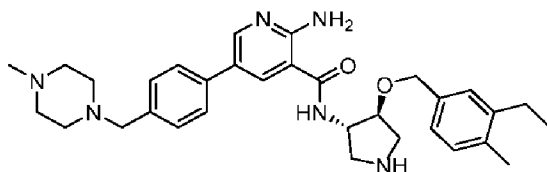
[1979] MS (ESI, m/z): 461.6 $[\text{M}+\text{H}]^+$

[1980] Example 390. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-

3-yl)-5-(4-((4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide

[1981] Using (4-((4-methylpiperazin-1-yl)methyl)phenyl)boronic acid, the title compound was obtained as described for the example 388.

[1982]

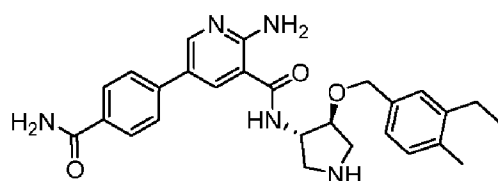


[1983] MS (ESI, m/z): 543.4 [M+H]⁺

[1984] Example 391. 2-amino-5-(4-carbamoylphenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide

[1985] Using (4-carbamoylphenyl)boronic acid, the title compound was obtained as described for the example 388.

[1986]



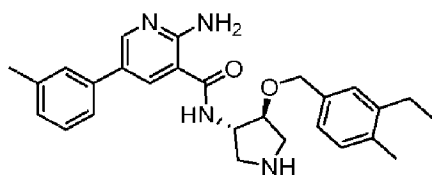
[1987] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.16 (t, *J*=7.63 Hz, 3 H) 2.25 (s, 3 H) 2.19 - 2.19 (m, 1 H) 2.60 (q, *J*=7.70 Hz, 2 H) 3.33 - 3.35 (m, 1 H) 3.43 - 3.64 (m, 2 H) 3.77 (br dd, *J*=12.72, 7.24 Hz, 1 H) 4.36 (br s, 1 H) 4.55 - 4.73 (m, 3 H) 7.10 (s, 2 H) 7.17 (s, 1 H) 7.78 (d, *J*=8.22 Hz, 2 H) 7.99 (d, *J*=8.61 Hz, 2 H) 8.44 (d, *J*=2.35 Hz, 1 H) 8.62 (d, *J*=1.96 Hz, 1 H);

[1988] MS (ESI, m/z): 474.5 [M+H]⁺

[1989] Example 392. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(m-tolyl)nicotinamide

[1990] Using m-tolylboronic acid, the title compound was obtained as described for the example 388.

[1991]



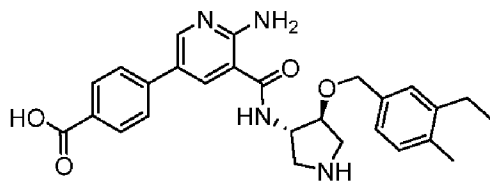
[1992] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.16 (t, *J*=7.43 Hz, 3 H) 2.25 (s, 3 H) 2.41 (s, 3 H) 2.60 (q, *J*=7.56 Hz, 2 H) 3.43 - 3.65 (m, 3 H) 3.77 (dd, *J*=12.52, 7.04 Hz, 1 H) 4.35 (br d, *J*=4.30 Hz, 1 H) 4.62 - 4.74 (m, 3 H) 7.09 (s, 2 H) 7.16 (s, 1 H) 7.25 (br d, *J*=7.43 Hz, 1 H) 7.36 (t, *J*=7.63 Hz, 1 H) 7.42 - 7.51 (m, 2 H) 8.31 (d, *J*=1.96 Hz, 1 H) 8.65 (d, *J*=1.96 Hz, 1 H);

[1993] MS (ESI, m/z): 445.3 [M+H]⁺

[1994] Example 393. 4-(6-amino-5-(((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)carbamoyl)pyridin-3-yl)benzoic acid

[1995] Using 4-carboxyphenylboronic acid, the title compound was obtained as described for the example 388.

[1996]

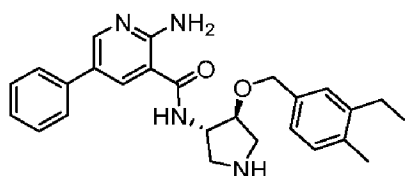


[1997] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.16 (t, $J=7.43$ Hz, 3 H) 2.23 (s, 3 H) 2.59 (q, $J=7.56$ Hz, 2 H) 3.34 - 3.51 (m, 2 H) 3.52 - 3.67 (m, 1 H) 3.76 (br d, $J=7.43$ Hz, 1 H) 4.13 (br s, 1 H) 4.57 - 4.69 (m, 3 H) 7.02 - 7.10 (m, 2 H) 7.14 (s, 1 H) 7.79 (br d, $J=8.22$ Hz, 2 H) 8.13 (br d, $J=8.22$ Hz, 2 H) 8.37 - 8.45 (m, 1 H) 8.73 (d, $J=1.56$ Hz, 1 H); MS (ESI, m/z): 475.4 $[\text{M}+\text{H}]^+$

[1998] Example 394. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-phenylnicotinamide

[1999] Using phenylboronic acid, the title compound was obtained as described for the example 388.

[2000]



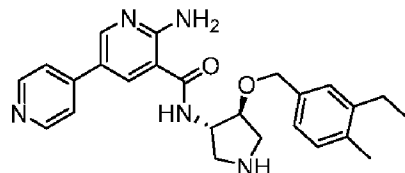
[2001] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.16 (t, $J=7.63$ Hz, 3 H) 2.25 (s, 3 H) 2.61 (q, $J=7.43$ Hz, 2 H) 3.42 - 3.51 (m, 1 H) 3.51 - 3.65 (m, 2 H) 3.77 (dd, $J=12.91, 7.04$ Hz, 1 H) 4.35 (br d, $J=4.30$ Hz, 1 H) 4.57 - 4.76 (m, 3 H) 7.06 - 7.13 (m, 2 H) 7.17 (s, 1 H) 7.35 - 7.58 (m, 3 H) 7.68 (d, $J=7.04$ Hz, 2 H) 8.33 (d, $J=2.35$ Hz, 1 H) 8.74 (d, $J=2.35$ Hz, 1 H);

[2002] MS (ESI, m/z): 431.5 $[\text{M}+\text{H}]^+$

[2003] Example 395. 6-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-[3,4'-bipyridine]-5-carboxamide

[2004] Using pyridine-4-boronic acid, the title compound was obtained as described for the example 388.

[2005]



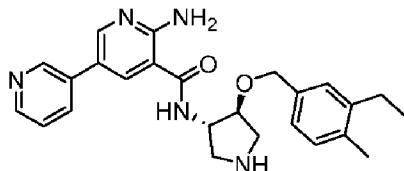
[2006] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.17 (t, $J=7.63$ Hz, 3 H) 2.26 (s, 3 H) 2.62 (q, $J=7.56$ Hz, 2 H) 3.47 (br d, $J=12.52$ Hz, 1 H) 3.52 - 3.67 (m, 2 H) 3.77 (br dd, $J=12.72, 6.85$ Hz, 1 H) 4.34 (br d, $J=3.91$ Hz, 1 H) 4.61 - 4.78 (m, 3 H) 7.07 - 7.13 (m, 2 H) 7.13 - 7.19 (m, 1 H) 7.99 (dd, $J=8.02, 5.67$ Hz, 1 H) 8.56 (d, $J=1.96$ Hz, 1 H) 8.68 - 8.82 (m, 3 H) 9.14 (s, 1 H);

[2007] MS (ESI, m/z): 432.3 [M+H]⁺

[2008] Example 396. 6-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-[3,3'-bipyridine]-5-carboxamide

[2009] Using pyridine-3-boronic acid, the title compound was obtained as described for the example 388.

[2010]



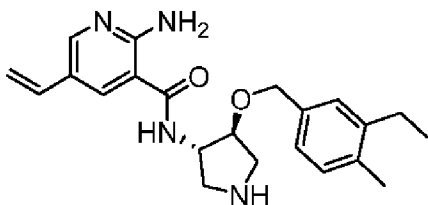
[2011] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.17 (t, *J*=7.63 Hz, 3 H) 2.26 (s, 3 H) 2.62 (q, *J*=7.56 Hz, 2 H) 3.47 (br d, *J*=12.52 Hz, 1 H) 3.52 - 3.67 (m, 2 H) 3.77 (br dd, *J*=12.72, 6.85 Hz, 1 H) 4.34 (br d, *J*=3.91 Hz, 1 H) 4.60 - 4.78 (m, 3 H) 7.07 - 7.13 (m, 2 H) 7.17 (d, *J*=7.06 Hz, 1 H) 7.18 (s, 1 H) 7.99 (dd, *J*=8.02, 5.67 Hz, 1 H) 8.56 (d, *J*=1.96 Hz, 1 H) 8.67 - 8.83 (m, 3 H) 9.14 (s, 1 H);

[2012] MS (ESI, m/z): 432.3 [M+H]⁺

[2013] Example 397. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-vinylnicotinamide

[2014] Using potassium vinyltrifluoroborate, the title compound was obtained as described for the example 388.

[2015]



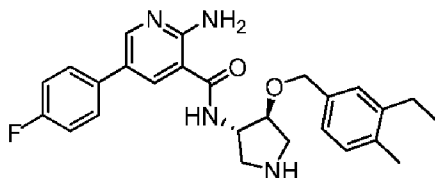
[2016] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.17 (t, *J*=7.43 Hz, 3 H) 2.26 (s, 3 H) 2.61 (q, *J*=7.56 Hz, 2 H) 3.44 - 3.65 (m, 3 H) 3.76 (br dd, *J*=12.91, 7.04 Hz, 1 H) 4.33 (br d, *J*=3.91 Hz, 1 H) 4.59 - 4.74 (m, 3 H) 5.42 (d, *J*=10.96 Hz, 1 H) 5.94 (d, *J*=17.61 Hz, 1 H) 6.66 (dd, *J*=17.80, 11.15 Hz, 1 H) 7.10 (s, 2 H) 7.16 (s, 1 H) 8.02 - 8.08 (m, 1 H) 8.66 (d, *J*=1.96 Hz, 1 H);

[2017] MS (ESI, m/z): 381.3 [M+H]⁺

[2018] Example 398. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-fluorophenyl)nicotinamide

[2019] Using 4-fluorophenylboronic acid, the title compound was obtained as described for the example 388.

[2020]



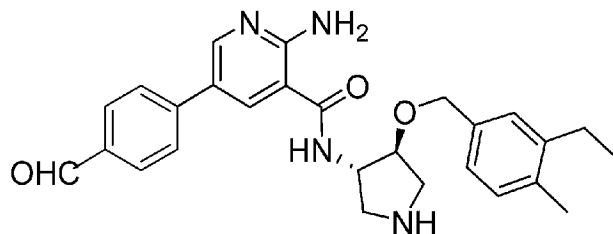
[2021] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.16 (t, $J=7.63$ Hz, 3 H) 2.25 (s, 3 H) 2.60 (q, $J=7.63$ Hz, 2 H) 3.44 - 3.59 (m, 2 H) 3.76 (dd, $J=12.62$, 7.34 Hz, 2 H) 4.25 - 4.38 (m, 1 H) 4.61 - 4.71 (m, 3 H) 7.03 - 7.12 (m, 2 H) 7.14 - 7.24 (m, 3 H) 7.60 - 7.69 (m, 2 H) 8.32 (d, $J=2.35$ Hz, 1 H) 8.48 (d, $J=2.35$ Hz, 1 H);

[2022] MS (ESI, m/z): 499.3 $[\text{M}+\text{H}]^+$

[2023] Example 399. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-formylphenyl)nicotinamide

[2024] Using 4-formylphenylboronic acid, the title compound was obtained as described for the example 388.

[2025]



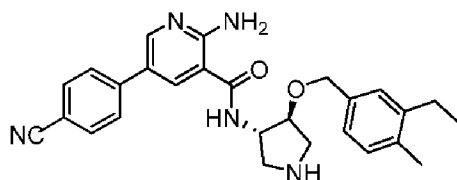
[2026] ^1H NMR (600 MHz, CDCl_3) δ ppm 1.30 (t, $J=7.63$ Hz, 3 H) 2.26 (br s, 3 H) 2.58 (q, $J=7.63$ Hz, 2 H), 3.43 - 3.49 (m, 1 H) 3.50 - 3.65 (m, 2 H) 3.77 (dd, $J=12.62$, 6.75 Hz, 1 H), 4.17 (br s, 1 H) 4.64 (br s, 2 H) 4.77 (br s, 1 H) 6.59 (br s, 2 H) 7.05 - 7.20 (m, 3 H) 7.55 - 7.73 (m, 2 H) 7.86 (br d, $J=5.28$ Hz, 2 H) 8.04 (br s, 1 H) 8.46 (br s, 1 H) 9.86 (br s, 1 H);

[2027] MS (ESI, m/z): 459.5 $[\text{M}+\text{H}]^+$

[2028] Example 400. 2-amino-5-(4-cyanophenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide

[2029] Using 4-cyanophenylboronic acid, the title compound was obtained as described for the example 388.

[2030]



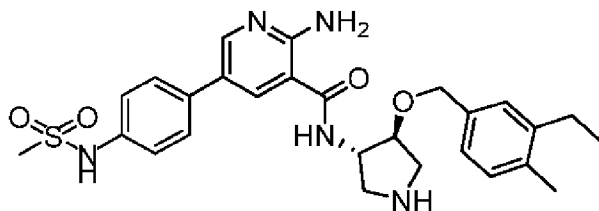
[2031] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.16 (t, $J=7.34$ Hz, 3 H) 2.25 (s, 3 H) 2.60 (q, $J=7.63$ Hz, 2 H) 3.43 - 3.49 (m, 1 H) 3.50 - 3.65 (m, 2 H) 3.77 (dd, $J=12.62$, 6.75 Hz, 1 H) 4.35 (br d, $J=4.11$ Hz, 1 H) 4.62 - 4.74 (m, 3 H) 7.04 - 7.14 (m, 2 H) 7.16 (s, 1 H) 7.78 - 7.84 (m, 2 H) 7.84 - 7.88 (m, 2 H) 8.39 - 8.52 (m, 1 H) 8.59 (d, $J=1.76$ Hz, 1 H);

[2032] MS (ESI, m/z): 456.3 $[\text{M}+\text{H}]^+$

[2033] Example 401. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-(methylsulfonamido)phenyl)nicotinamide

[2034] Using 4-methylsulfonylphenylboronic acid, the title compound was obtained as described for the example 388.

[2035]



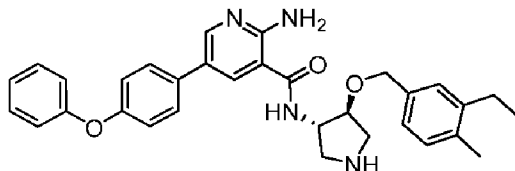
[2036] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.16 (t, $J=7.34$ Hz, 3 H) 2.25 (s, 3 H) 2.60 (q, $J=7.63$ Hz, 2 H) 2.98 (s, 3 H) 3.43 - 3.49 (m, 1 H) 3.50 - 3.65 (m, 2 H) 3.76 (dd, $J=12.62$, 7.34 Hz, 1 H) 4.33 - 4.38 (m, 1 H) 4.62 - 4.71 (m, 3 H) 7.05 - 7.13 (m, 2 H) 7.16 (s, 1 H) 7.36 (d, $J=8.80$ Hz, 2 H) 7.65 (d, $J=8.22$ Hz, 2 H) 8.32 (d, $J=1.76$ Hz, 1 H) 8.59 (d, $J=1.76$ Hz, 1 H);

[2037] MS (ESI, m/z):524.6 $[\text{M}+\text{H}]^+$

[2038] Example 402. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-phenoxyphenyl)nicotinamide

[2039] Using 4-phenoxyphenylboronic acid, the title compound was obtained as described for the example 388.

[2040]



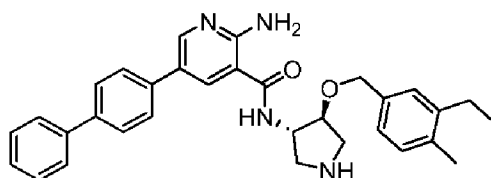
[2041] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.16 (t, $J=7.63$ Hz, 3 H) 2.25 (s, 3 H) 2.56 - 2.65 (m, 2 H) 3.46 (br d, $J=12.33$ Hz, 1 H) 3.52 - 3.61 (m, 2 H) 3.76 (s, 1 H) 4.32 - 4.40 (m, 1 H) 4.62 - 4.73 (m, 3 H) 7.02 (d, $J=7.63$ Hz, 2 H) 7.04 - 7.12 (m, 4 H) 7.13 - 7.19 (m, 2 H) 7.38 (t, $J=7.92$ Hz, 2 H) 7.66 (d, $J=8.80$ Hz, 2 H) 8.29 - 8.34 (m, 1 H) 8.68 (d, $J=1.76$ Hz, 1 H);

[2042] MS (ESI, m/z):523.7 $[\text{M}+\text{H}]^+$

[2043] Example 403. 5-([1,1'-biphenyl]-4-yl)-2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide

[2044] Using 4-biphenylboronic acid, the title compound was obtained as described for the example 388.

[2045]



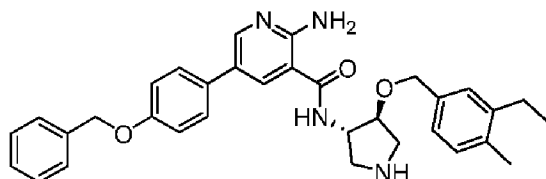
[2046] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.16 (t, $J=7.63$ Hz, 3 H) 2.25 (s, 3 H) 2.60 (q, $J=7.63$ Hz, 2 H) 3.47 (br d, $J=12.91$ Hz, 1 H) 3.51 - 3.62 (m, 2 H) 3.77 (dd, $J=12.33$, 7.04 Hz, 1 H) 4.31 - 4.40 (m, 1 H) 4.63 - 4.73 (m, 3 H) 7.05 - 7.14 (m, 2 H) 7.17 (s, 1 H) 7.34 (s, 1 H) 7.36 (br d, $J=7.63$ Hz, 1 H) 7.45 (t, $J=7.63$ Hz, 2 H) 7.64 (d, $J=7.63$ Hz, 2 H) 7.70 - 7.79 (m, 3 H) 8.40 (d, $J=1.76$ Hz, 1 H) 8.64 (d, $J=2.35$ Hz, 1 H);

[2047] MS (ESI, m/z): 507.4 [M+H]⁺

[2048] Example 404. 2-amino-5-(4-(benzyloxy)phenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide

[2049] Using 4-benzyloxyphenylboronic acid, the title compound was obtained as described for the example 388.

[2050]

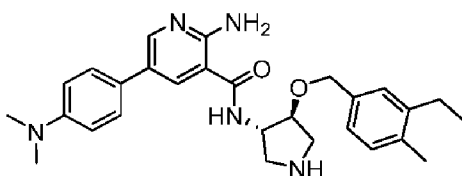


[2051] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.16 (t, *J*=7.63 Hz, 3 H) 2.24 (s, 3 H) 2.60 (q, *J*=7.63 Hz, 2 H) 3.46 (br d, *J*=12.91 Hz, 1 H) 3.49 - 3.60 (m, 2 H) 3.76 (dd, *J*=12.91, 7.04 Hz, 1 H) 4.28 - 4.36 (m, 1 H) 4.60 - 4.73 (m, 3 H) 5.13 (s, 2 H) 7.03 - 7.13 (m, 4 H) 7.16 (s, 1 H) 7.23 - 7.32 (m, 1 H) 7.36 (t, *J*=7.63 Hz, 2 H) 7.43 (d, *J*=7.04 Hz, 2 H) 7.59 (d, *J*=8.80 Hz, 2 H) 8.23 - 8.29 (m, 1 H) 8.60 (d, *J*=1.76 Hz, 1 H);

[2052] MS (ESI, m/z): 537.8 [M+H]⁺

[2053] Example 405. 2-amino-5-(4-(dimethylamino)phenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide

[2054]



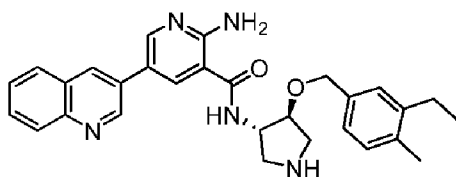
[2055] Using 4-dimethylaminophenylboronic acid, the title compound was obtained as described for the example 388.

[2056] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.16 (t, *J*=7.63 Hz, 3 H) 2.25 (s, 3 H) 2.60 (q, *J*=7.24 Hz, 2 H) 3.07 (s, 6 H) 3.47 (br d, *J*=12.91 Hz, 1 H) 3.57 (ddd, *J*=18.78, 12.91, 3.52 Hz, 2 H) 3.76 (br dd, *J*=12.91, 7.04 Hz, 1 H) 4.32 - 4.37 (m, 1 H) 4.61 - 4.72 (m, 3 H) 7.02 - 7.12 (m, 4 H) 7.16 (s, 1 H) 7.62 (d, *J*=8.80 Hz, 2 H) 8.26 (d, *J*=1.76 Hz, 1 H) 8.69 (d, *J*=1.76 Hz, 1 H);

[2057] MS (ESI, m/z): 474.4 [M+H]⁺

[2058] Example 406. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(quinolin-3-yl)nicotinamide

[2059]



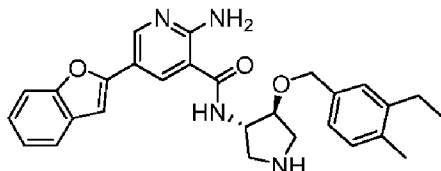
[2060] Using quinoline-3-boronic acid, the title compound was obtained as described for the example 388.

[2061] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.17 (t, *J*=7.34 Hz, 3 H) 2.25 (s, 3 H) 2.61 (q, *J*

=7.24 Hz, 2 H) 3.48 (br d, $J=12.91$ Hz, 1 H) 3.57 - 3.69 (m, 2 H) 3.78 (br dd, $J=12.91$, 7.04 Hz, 1 H) 4.34 - 4.42 (m, 1 H) 4.61 - 4.75 (m, 3 H) 7.05 - 7.15 (m, 2 H) 7.18 (s, 1 H) 7.78 - 7.93 (m, 1 H) 7.93 - 8.09 (m, 1 H) 8.18 (br dd, $J=8.22$, 3.52 Hz, 2 H) 8.63 (d, $J=1.76$ Hz, 1 H) 8.86 (d, $J=2.35$ Hz, 1 H) 8.99 - 9.07 (m, 1 H) 9.37 (d, $J=1.76$ Hz, 1 H); MS (ESI, m/z): 482.6 $[M+H]^+$

[2062] Example 407. 2-amino-5-(benzofuran-2-yl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide

[2063]



[2064] Using benzo[b]furan-2-boronic acid, the title compound was obtained as described for the example 388.

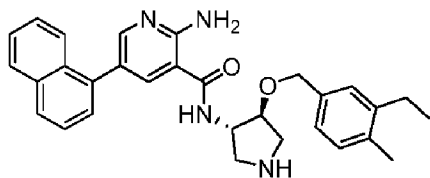
[2065] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.16 (t, $J=7.63$ Hz, 3 H) 2.25 (s, 3 H) 2.61 (q, $J=7.63$ Hz, 2 H) 3.48 (br d, $J=12.33$ Hz, 1 H) 3.53 (br dd, $J=12.91$, 2.93 Hz, 1 H) 3.60 (br dd, $J=12.91$, 4.70 Hz, 1 H) 3.78 (br dd, $J=12.62$, 7.34 Hz, 1 H) 4.37 (br s, 1 H) 4.63 - 4.72 (m, 3 H) 7.04 - 7.14 (m, 2 H) 7.15 - 7.20 (m, 2 H) 7.20 - 7.26 (m, 1 H) 7.29 (br t, $J=7.63$ Hz, 1 H) 7.51 (d, $J=8.22$ Hz, 1 H) 7.58 (br d, $J=7.63$ Hz, 1 H) 8.57 (d, $J=1.76$ Hz, 1 H) 8.60 (d, $J=1.76$ Hz, 1 H);

[2066] MS (ESI, m/z): 471.5 $[M+H]^+$

[2067] Example 408. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(naphthalen-1-yl)nicotinamide

[2068] Using 2-naphthyleneboronic acid, the title compound was obtained as described for the example 388.

[2069]



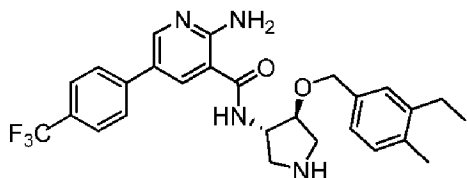
[2070] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.16 (t, $J=7.63$ Hz, 3 H) 2.24 (s, 3 H) 2.60 (q, $J=7.43$ Hz, 2 H) 3.48 (br d, $J=12.91$ Hz, 1 H) 3.53 - 3.69 (m, 2 H) 3.78 (dd, $J=12.91$, 7.04 Hz, 1 H) 4.31 - 4.46 (m, 1 H) 4.55 - 4.72 (m, 3 H) 7.05 - 7.14 (m, 2 H) 7.17 (s, 1 H) 7.47 - 7.58 (m, 2 H) 7.79 (dd, $J=8.22$, 1.76 Hz, 1 H) 7.85 - 8.02 (m, 3 H) 8.16 (s, 1 H) 8.47 (d, $J=1.76$ Hz, 1 H) 8.78 (d, $J=1.76$ Hz, 1 H);

[2071] MS (ESI, m/z): 481.4 $[M+H]^+$

[2072] Example 409. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-(trifluoromethyl)phenyl)nicotinamide

[2073] Using 4-trifluoromethylbenzeneboronic acid, the title compound was obtained as described for the example 388.

[2074]



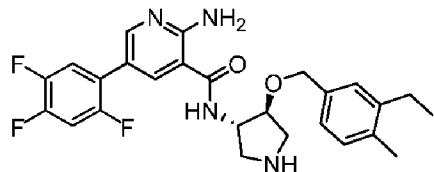
[2075] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.16 (t, $J=7.63$ Hz, 3 H) 2.25 (s, 3 H) 2.61 (q, $J=7.24$ Hz, 2 H) 3.45 (br d, $J=12.32$ Hz, 1 H) 3.49 - 3.62 (m, 2 H) 3.75 (dd, $J=12.62$, 6.75 Hz, 1 H) 4.26 - 4.38 (m, 1 H) 4.61 - 4.72 (m, 3 H) 7.03 - 7.13 (m, 2 H) 7.16 (s, 1 H) 7.33 (td, $J=10.12$, 6.75 Hz, 2 H) 7.53 - 7.69 (m, 2 H) 8.29 (s, 1 H) 8.48 (d, $J=1.76$ Hz, 1 H);

[2076] MS (ESI, m/z): 499.6 $[\text{M}+\text{H}]^+$

[2077] Example 410. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(2,4,5-trifluorophenyl)nicotinamide

[2078] Using 2,4,5-trifluorophenylboronic acid, the title compound was obtained as described for the example 388.

[2079]



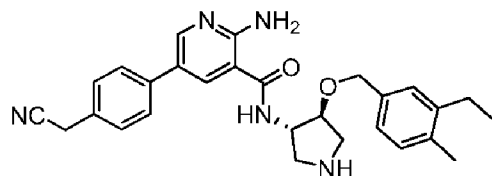
[2080] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.16 (t, $J=7.63$ Hz, 3 H) 2.25 (s, 3 H) 2.61 (q, $J=7.24$ Hz, 2 H) 3.45 (br d, $J=12.32$ Hz, 1 H) 3.49 - 3.62 (m, 2 H) 3.75 (dd, $J=12.62$, 6.75 Hz, 1 H) 4.26 - 4.38 (m, 1 H) 4.61 - 4.72 (m, 3 H) 7.03 - 7.13 (m, 2 H) 7.16 (s, 1 H) 7.33 (td, $J=10.12$, 6.75 Hz, 1 H) 7.53 - 7.63 (m, 1 H) 8.29 (s, 1 H) 8.48 (d, $J=1.76$ Hz, 1 H);

[2081] MS (ESI, m/z): 485.3 $[\text{M}+\text{H}]^+$

[2082] Example 411. 2-amino-5-(4-(cyanomethyl)phenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide

[2083] Using 4-cyanomethylphenylboronic acid, the title compound was obtained as described for the example 388.

[2084]



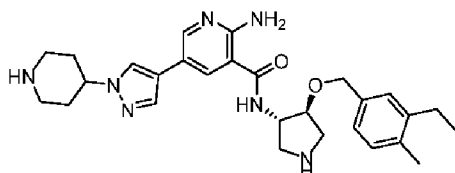
[2085] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.16 (td, $J=7.63$, 2.35 Hz, 3 H) 2.24 (d, $J=4.11$ Hz, 3 H) 2.59 (qd, $J=7.53$, 3.23 Hz, 2 H) 3.45 - 3.56 (m, 1 H) 3.67 - 3.74 (m, 1 H) 3.77 - 3.88 (m, 1 H) 3.93 (s, 2 H) 3.98 (br dd, $J=11.44$, 6.16 Hz, 1 H) 4.11 - 4.28 (m, 1 H) 4.58 - 4.70 (m, 3 H) 7.07 (s, 2 H) 7.14 (s, 1 H) 7.86 (d, $J=2.93$ Hz, 1 H) 8.02 (s, 1 H) 8.19 (d, $J=11.15$ Hz, 1 H) 8.24 (d, $J=1.76$ Hz, 1 H) 8.59 (dd, $J=7.04$, 2.35 Hz, 1 H);

[2086] MS (ESI, m/z): 470.8 [M+H]⁺

[2087] Example 412. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide

[2088] Using 1-(4-N-Boc-piperidine)pyrazole-4-boronic acid, the title compound was obtained as described for the example 388 and following deprotection with TFA.

[2089]

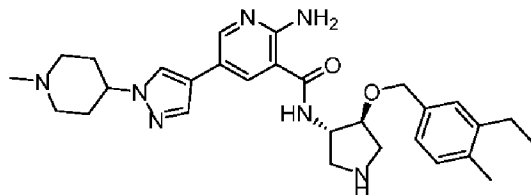


[2090] MS (ESI, m/z): 504.3 [M+H]⁺

[2091] Example 413. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide

[2092] Using 1-(4-N-methylpiperidine)pyrazole-4-boronic acid, the title compound was obtained as described for the example 388.

[2093]

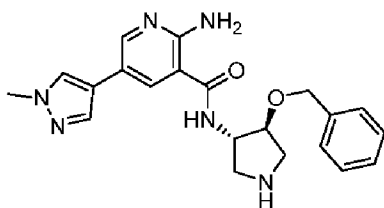


[2094] MS (ESI, m/z): 518.3 [M+H]⁺

[2095] Example 414. 2-amino-N-((3S,4S)-4-(benzyloxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2096] Using tert-butyl (3S,4S)-3-amino-4-(benzyloxy)pyrrolidine-1-carboxylate, the title compound was obtained as described for the example 388.

[2097]

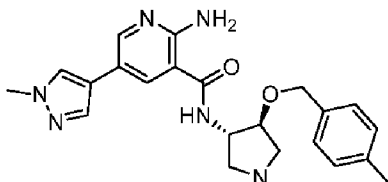


[2098] MS (ESI, m/z): 393.2 [M+H]⁺

[2099] Example 415. 2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-4-((4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide

[2100] Using tert-butyl (3S,4S)-3-amino-4-((4-methylbenzyl)oxy)pyrrolidine-1-carboxylate, the title compound was obtained as described for the example 388.

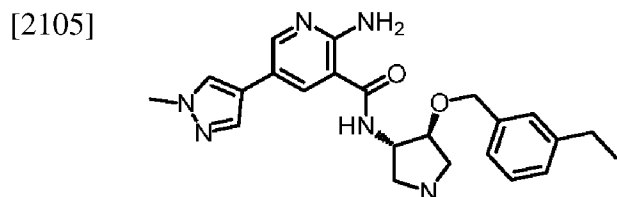
[2101]



[2102] MS (ESI, m/z): 407.2 [M+H]⁺

[2103] Example 416. 2-amino-N-((3S,4S)-4-((3-ethylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

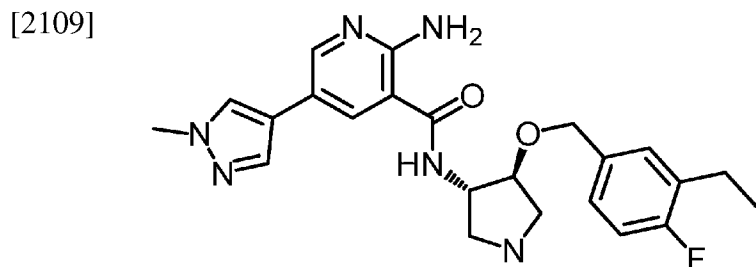
[2104] Using tert-butyl (3S,4S)-3-amino-4-((3-ethylbenzyl)oxy)pyrrolidine-1-carboxylate, the title compound was obtained as described for the example 388.



[2106] MS (ESI, m/z): 421.2 [M+H]⁺

[2107] Example 417. 2-amino-N-((3S,4S)-4-((3-ethyl-4-fluorobenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

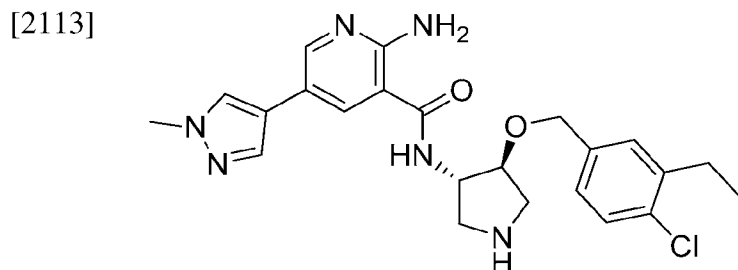
[2108] Using tert-butyl (3S,4S)-3-amino-4-((3-ethyl-4-fluorobenzyl)oxy)pyrrolidine-1-carboxylate, the title compound was obtained as described for the example 388.



[2110] MS (ESI, m/z): 439.2 [M+H]⁺

[2111] Example 418. 2-amino-N-((3S,4S)-4-((4-chloro-3-ethylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

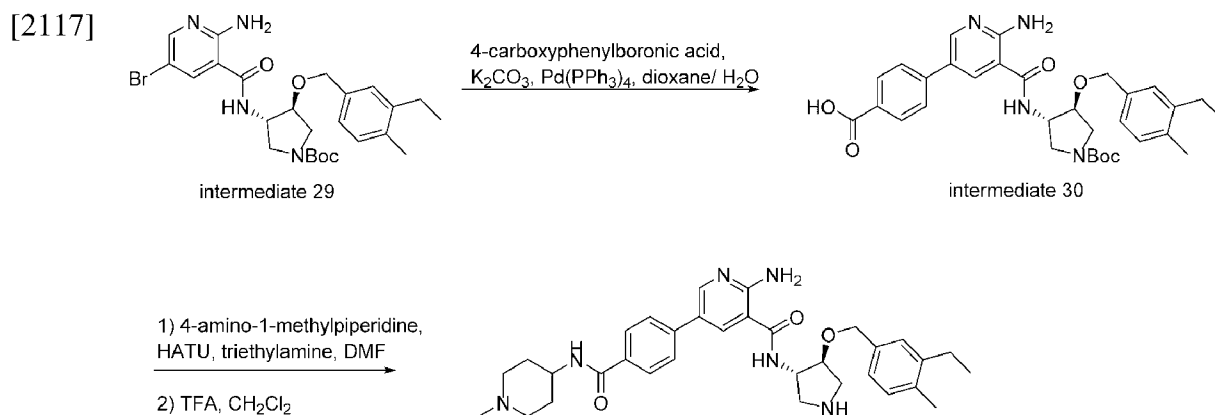
[2112] Using tert-butyl (3S,4S)-3-amino-4-((4-chloro-3-ethylbenzyl)oxy)pyrrolidine-1-carboxylate, the title compound was obtained as described for the example 388.



[2114] MS (ESI, m/z): 455.2 [M+H]⁺

[2115] Example 419. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-((1-methylpiperidin-4-yl)carbamoyl)phenyl)nicotinamide

[2116] Scheme for the preparation of the Compound of Example 419:



[2118] Intermediate 30.

[2119] To a mixture of intermediate 29 (400 mg, 0.7 mmol) and 4-carboxyphenylboronic acid (230 mg, 1.10 mmol) in 4 ml of 1,4-dioxane/ water (3/1) was added K₂CO₃ (310 mg, 2.2 mmol) followed by Pd(PPh₃)₄ (40 mg, 0.03 mmol). The reaction mixture was heated at 100 °C for 3 hrs, cooled to room temperature, and extracted with EtOAc, dried over anhydrous MgSO₄ and concentrated under vacuum. The crude product was purified through silicagel column chromatography to give 350 mg of off-white solid

[2120] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.16 (t, *J*=7.43 Hz, 3 H) 1.46 (br d, *J*=1.96 Hz, 9 H) 2.23 (s, 3 H) 2.59 (q, *J*=7.56 Hz, 2 H) 3.40 - 3.51 (m, 2 H) 3.52 - 3.65 (m, 1 H) 3.76 (br d, *J*=7.43 Hz, 1 H) 4.13 (br s, 1 H) 4.57 - 4.74 (m, 3 H) 7.06 (s, 2 H) 7.14 (s, 1 H) 7.79 (br d, *J*=8.22 Hz, 2 H) 8.13 (br d, *J*=8.22 Hz, 2 H) 8.37 - 8.45 (m, 1 H) 8.73 (d, *J*=1.56 Hz, 1 H);

[2121] MS (ESI, *m/z*): 575.3 [M+H]⁺

[2122] Example 419.

2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-((1-methylpiperidin-4-yl)carbamoyl)phenyl)nicotinamide

[2123] To a mixture of intermediate 30 (12 mg, 0.02 mmol) and triethylamine (0.04 ml, 0.03 mmol) in 0.2 ml of DMF was added HATU (10 mg, 0.03 mmol) followed by 4-amino-1-methylpiperidine (0.03 ml, 0.02 mmol). The mixture was stirred at room temperature for 1 hr and then saturated sodium bicarbonate solution was added. The mixture was extracted with EtOAc, washed with brine, dried over MgSO₄, and concentrated in vacuo. The crude residue was dissolved with 0.5 ml of CH₂Cl₂ / TFA (10/1) and the mixture was stirred for 2 hrs. After concentration under vacuum, the crude residue was purified by preparative HPLC to afford 10 mg of the title compound.

[2124] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.16 (t, *J*=7.63 Hz, 3 H) 1.86 - 1.98 (m, 2 H) 2.23 (br s, 3 H) 2.25 (s, 3 H) 2.61 (q, *J*=7.70 Hz, 2 H) 2.89 (s, 3 H) 3.10 - 3.26 (m, 2 H) 3.47 (br d, *J*=12.52 Hz, 1 H) 3.52 - 3.66 (m, 3 H) 3.77 (dd, *J*=12.72, 6.85 Hz, 1 H) 4.11 - 4.23 (m, 1 H) 4.32 - 4.43 (m, 1 H) 4.53 - 4.77 (m, 3 H) 7.05 - 7.14 (m, 2 H) 7.17 (s, 1

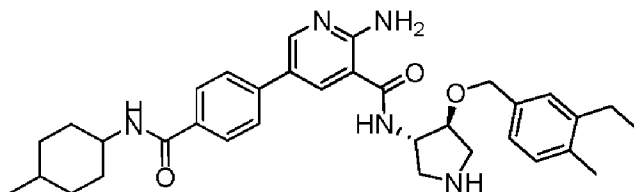
H) 7.81 (d, $J=8.22$ Hz, 2 H) 7.88 - 7.99 (m, 2 H) 8.42 (d, $J=1.96$ Hz, 1 H) 8.74 (d, $J=1.96$ Hz, 1 H);

[2125] MS (ESI, m/z): 571.4 $[M+H]^+$

[2126] Example 420. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-((4-methylcyclohexyl)carbamoyl)phenyl)nicotinamide

[2127] Using 4-methylcyclohexylamine, the title compound was obtained as described for the example 419.

[2128]



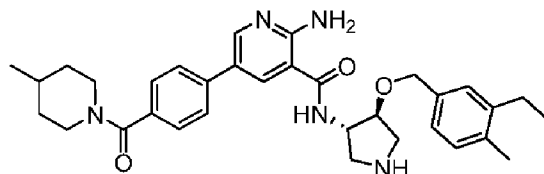
[2129] ^1H NMR (600 MHz, CD_3OD) δ ppm 0.93 (d, $J=6.46$ Hz, 1 H) 1.00 (d, $J=6.46$ Hz, 2 H) 1.09 (br d, $J=14.09$ Hz, 1 H) 1.16 (t, $J=7.63$ Hz, 3 H) 1.38 - 1.48 (m, 2 H) 1.59 - 1.73 (m, 3 H) 1.75 - 1.84 (m, 2 H) 1.96 (br d, $J=11.15$ Hz, 1 H) 2.25 (s, 3 H) 2.60 (q, $J=7.63$ Hz, 2 H) 3.32 - 3.36 (m, 1 H) 3.47 (br d, $J=12.91$ Hz, 1 H) 3.51 - 3.61 (m, 2 H) 3.76 (dd, $J=12.91, 7.04$ Hz, 2 H) 3.99 (br s, 1 H) 4.35 (br s, 1 H) 4.62 - 4.72 (m, 3 H) 7.03 - 7.14 (m, 2 H) 7.16 (s, 1 H) 7.76 (dd, $J=8.51, 4.40$ Hz, 2 H) 7.91 (dd, $J=8.22, 2.35$ Hz, 2 H) 8.42 (d, $J=2.35$ Hz, 1 H) 8.58 - 8.62 (m, 1 H);

[2130] MS (ESI, m/z): 570.5 $[M+H]^+$

[2131] Example 421. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-(4-methylpiperidine-1-carbonyl)phenyl)nicotinamide

[2132] Using 4-methylpiperidine, the title compound was obtained as described for the example 419.

[2133]



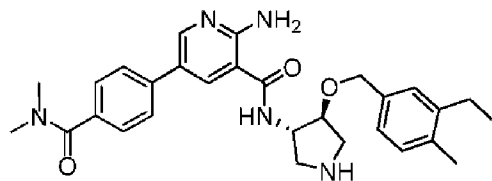
[2134] ^1H NMR (600 MHz, CD_3OD) δ ppm 0.98 (d, $J=6.46$ Hz, 3 H) 1.09-1.22 (m, 3H) 1.16 (t, $J=7.63$, 3 H) 1.62 (br d, $J=11.74$ Hz, 1 H) 1.66 - 1.74 (m, 2 H) 1.79 (br d, $J=12.91$ Hz, 1 H) 2.23 (s, 3 H) 2.53 - 2.63 (q, $J=7.63$ Hz, 2 H) 2.85 (br t, $J=12.33$ Hz, 1 H) 3.11 (br t, $J=12.33$ Hz, 1 H) 3.39 - 3.49 (m, 2 H) 3.55 - 3.61 (m, 1 H) 3.68 (br d, $J=12.91$ Hz, 1 H) 3.75 (td, $J=11.74, 7.04$ Hz, 1 H) 4.12 (br s, 1 H) 4.58 - 4.64 (m, 3 H) 7.02 - 7.11 (m, 2 H) 7.13 (s, 1 H) 7.51 (d, $J=8.22$ Hz, 2 H) 7.76 (d, $J=8.22$ Hz, 2 H) 8.36 (d, $J=1.76$ Hz, 1 H) 8.70 (d, $J=1.76$ Hz, 1 H);

[2135] MS (ESI, m/z): 556.5 $[M+H]^+$

[2136] Example 422. 2-amino-5-(4-(dimethylcarbamoyl)phenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide

[2137] Using dimethylamine, the title compound was obtained as described for the example 419.

[2138]



[2139] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.15 (t, $J=7.63$ Hz, 3 H) 2.22 (s, 3 H) 2.58 (q, $J=7.63$ Hz, 2 H) 3.01 (s, 3 H) 3.11 (s, 3 H) 3.38 - 3.50 (m, 2 H) 3.52 - 3.66 (m, 1 H) 3.67 - 3.81 (m, 1 H) 4.12 (br s, 1 H) 4.57 - 4.68 (m, 3 H) 7.05 (s, 2 H) 7.13 (s, 1 H) 7.54 (d, $J=8.80$ Hz, 2 H) 7.75 (d, $J=8.22$ Hz, 2 H) 8.36 (d, $J=1.76$ Hz, 1 H) 8.68 (d, $J=2.35$ Hz, 1 H);

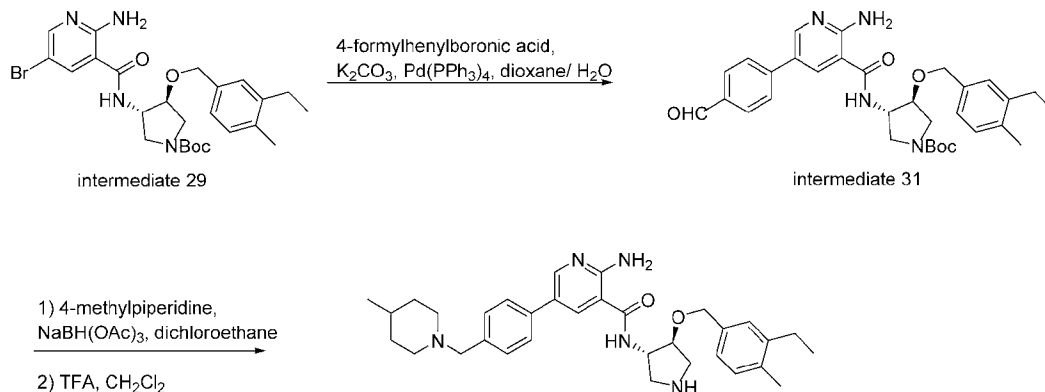
[2140] MS (ESI, m/z): 502.4 $[\text{M}+\text{H}]^+$

[2141] Example 423.

2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-((4-methylpiperidin-1-yl)methyl)phenyl)nicotinamide

[2142] Scheme for the preparation of the Compound of Example 423:

[2143]



[2144] Intermediate 31.

[2145] Using intermediate 29 and 4-formylphenylboronic acid, the title compound was obtained as described for the synthesis of intermediate 30.

[2146] ^1H NMR (600 MHz, CDCl_3)

[2147] ppm 1.30 (t, $J=7.63$ Hz, 3 H), 1.42 (s, 9 H), 2.26 (br s, 3 H) 2.58 (q, $J=7.63$ Hz, 2 H) 3.37-3.84 (m, 4H) 4.17 (br s, 1 H) 4.64 (br s, 2 H) 4.77 (br s, 1 H) 6.59 (br s, 2 H) 7.05 - 7.20 (m, 3 H) 7.55 - 7.73 (m, 2 H) 7.86 (br d, $J=5.28$ Hz, 2 H) 8.04 (br s, 1 H) 8.46 (br s, 1 H) 9.86 (br s, 1 H);

[2148] MS (ESI, m/z): 559.4 $[\text{M}+\text{H}]^+$

[2149] Example 423.

2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-((4-methylpiperidin-1-yl)methyl)phenyl)nicotinamide

[2150] To a mixture of intermediate 31 (40 mg, 0.07 mmol) in 0.4 ml of dichloroethane was

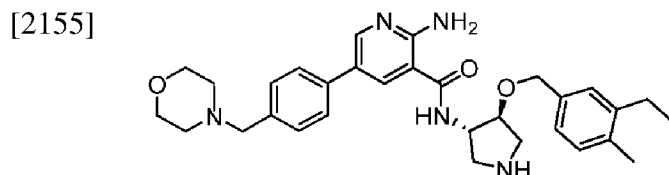
added 4-methylpiperidine (0.017 ml, 0.14 mmol) followed by NaBH(OAc)₃ (30 mg, 0.21 mmol). The mixture was stirred at room temperature for 4 hr and then water was added. The mixture was extracted with EtOAc, washed with brine, dried over MgSO₄, and concentrated in vacuo. The crude residue was dissolved with 0.5 ml of CH₂Cl₂ / TFA (10/1) and the mixture was stirred for 2 hrs. After concentration under vacuum, the crude residue was purified by preparative HPLC to afford 10 mg of the title compound.

[2151] ¹H NMR (600 MHz, CD₃OD) δ ppm 0.99 (d, *J*=6.46 Hz, 3 H) 1.16 (t, *J*=7.34 Hz, 3 H) 1.34 - 1.46 (m, 2 H) 1.91 (br d, *J*=14.09 Hz, 2 H) 2.25 (s, 3 H) 2.61 (q, *J*=7.63 Hz, 2 H) 2.93 - 3.07 (m, 2 H) 3.43 - 3.49 (m, 3 H) 3.57 (ddd, *J*=16.43, 12.91, 3.52 Hz, 2 H) 3.76 (dd, *J*=12.62, 6.75 Hz, 2 H) 4.27 - 4.39 (m, 3 H) 4.59 - 4.76 (m, 3 H) 7.05 - 7.14 (m, 2 H) 7.17 (s, 1 H) 7.60 (d, *J*=8.22 Hz, 2 H) 7.80 (d, *J*=8.22 Hz, 2 H) 8.39 (d, *J*=1.76 Hz, 1 H) 8.67 (d, *J*=1.76 Hz, 1 H);

[2152] MS (ESI, *m/z*): 542.3 [M+H]⁺

[2153] Example 424. 2-amino-N-((3*S*,4*S*)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-(morpholinomethyl)phenyl)nicotinamide

[2154] Using morpholine, the title compound was obtained as described for the example 423.



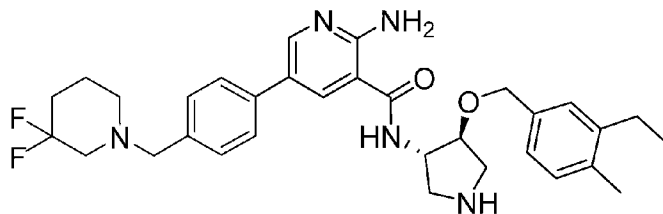
[2156] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.16 (t, *J*=7.63 Hz, 3 H) 2.25 (s, 3 H) 2.61 (q, *J*=7.63 Hz, 2 H) 3.09 - 3.27 (m, 2 H) 3.31 - 3.40 (m, 2 H) 3.46 (d, *J*=12.33 Hz, 1 H) 3.52 - 3.67 (m, 2 H) 3.76 (br dd, *J*=12.91, 7.04 Hz, 1 H) 3.77 (br s, 2 H) 4.03 (br s, 2 H) 4.35 (br d, *J*=4.11 Hz, 1 H) 4.41 (s, 2 H) 4.63 - 4.71 (m, 2 H) 4.72 (br d, *J*=6.46 Hz, 1 H) 7.06 - 7.12 (m, 2 H) 7.17 (s, 1 H) 7.63 (d, *J*=8.22 Hz, 2 H) 7.82 (d, *J*=8.22 Hz, 2 H) 8.40 (d, *J*=2.35 Hz, 1 H) 8.66 - 8.70 (m, 1 H);

[2157] MS (ESI, *m/z*): 530.3 [M+H]⁺

[2158] Example 425. 2-amino-5-(4-((3,3-difluoropiperidin-1-yl)methyl)phenyl)-N-((3*S*,4*S*)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide

[2159] Using 3,3-difluoropiperidine, the title compound was obtained as described for the example 423.

[2160]



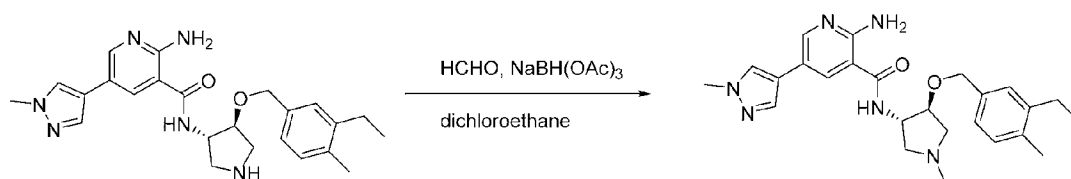
[2161] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.16 (t, $J=7.63$ Hz, 3 H) 1.97 - 2.09 (m, 2 H) 2.15 (br s, 2 H) 2.25 (s, 3 H) 2.61 (q, $J=7.63$ Hz, 2 H) 3.22 - 3.28 (m, 2 H) 3.38 - 3.49 (m, 4 H) 3.50 - 3.66 (m, 2 H) 3.76 (dd, $J=12.33, 7.04$ Hz, 1 H) 4.35 (br d, $J=4.70$ Hz, 1 H) 4.40 (s, 2 H) 4.62 - 4.73 (m, 3 H) 7.07 - 7.12 (m, 2 H) 7.17 (s, 1 H) 7.61 (d, $J=8.22$ Hz, 2 H) 7.81 (d, $J=8.22$ Hz, 2 H) 8.40 (d, $J=2.35$ Hz, 1 H) 8.61 (d, $J=1.76$ Hz, 1 H);

[2162] MS (ESI, m/z): 564.3 $[\text{M}+\text{H}]^+$

[2163] Example 426. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)-1-methylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2164] Scheme for the preparation of the Compound of Example 426:

[2165]



[2166] To compound 388 (40 mg, 0.09 mmol) in 0.4 ml of 1,2-dichloroethane was added formaldehyde (0.015 ml, 0.18 mmol) followed by $\text{NaBH}(\text{OAc})_3$ (38 mg, 0.28 mmol). The mixture was stirred at room temperature for 1 hr and then water was added. The mixture was extracted with EtOAc, washed with brine, dried over MgSO_4 , and concentrated in vacuo. The crude residue was purified by preparative HPLC to afford 30 mg of the title compound.

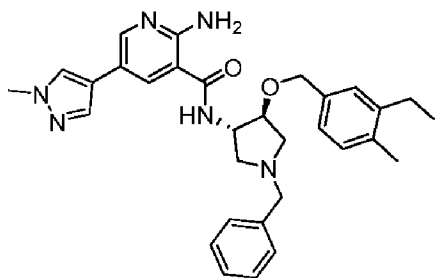
[2167] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.12 - 1.17 (m, 3 H) 2.23 (s, 3 H) 2.55 - 2.65 (m, 2 H) 3.01 (s, 3 H) 3.43 - 3.54 (m, 1 H) 3.60 - 3.71 (m, 1 H) 3.73 - 3.84 (m, 1 H) 3.92 (s, 3 H) 4.08 - 4.23 (m, 1 H) 4.31 - 4.45 (m, 1 H) 4.62 - 4.70 (m, 2 H) 4.72 (br d, $J=5.87$ Hz, 1 H) 7.04 - 7.11 (m, 2 H) 7.15 (s, 1 H) 7.88 (s, 1 H) 8.05 (s, 1 H) 8.26 (d, $J=2.35$ Hz, 1 H) 8.66 (d, $J=1.76$ Hz, 1 H);

[2168] MS (ESI, m/z): 449.3 $[\text{M}+\text{H}]^+$

[2169] Example 427. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2170] Using benzaldehyde, the title compound was obtained as described for the example 426.

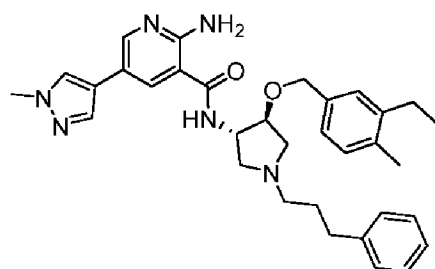
[2171]

[2172] MS (ESI, m/z): 525.7 [M+H]⁺

[2173] Example 428. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)-1-(3-phenylpropyl)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2174] Using 3-phenylpropanal, the title compound was obtained as described for the example 426.

[2175]



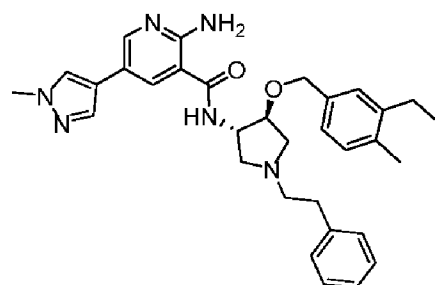
[2176] ¹H NMR (600 MHz, CD₃OD) δ ppm 1.14 (t, J=7.63 Hz, 3 H) 1.97 - 2.13 (m, 2 H) 2.22 (s, 3 H) 2.58 (q, J=7.63 Hz, 2 H) 2.70 (t, J=7.63 Hz, 2 H) 3.27 (t, J=7.63 Hz, 2 H) 3.43 - 3.54 (m, 1 H) 3.60 - 3.71 (m, 1 H) 3.73 - 3.84 (m, 1 H) 3.92 (s, 3 H) 4.08 - 4.23 (m, 1 H) 4.36 (br s, 1 H) 4.6 - 4.72 (m, 3 H) 7.01 - 7.10 (m, 2 H) 7.12 - 7.15 (m, 1 H) 7.15 - 7.30 (m, 5 H) 7.87 (s, 1 H) 8.04 (s, 1 H) 8.25 (d, J=1.76 Hz, 1 H) 8.64 (br s, 1 H);

[2177] MS (ESI, m/z): 553.3 [M+H]⁺

[2178] Example 429. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)-1-phenethylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2179] Using phenylacetaldehyde, the title compound was obtained as described for the example 426.

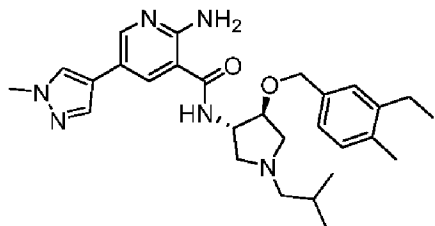
[2180]

[2181] MS (ESI, m/z): 539.3[M+H]⁺

[2182] Example 430. 2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)-1-isobutylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2183] Using isobutyraldehyde, the title compound was obtained as described for the example 426.

[2184]



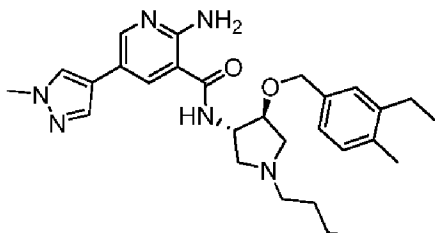
[2185] ^1H NMR (600 MHz, CD_3OD) δ ppm 1.04 (br d, $J=3.52$ Hz, 6 H) 1.14 (t, $J=7.63$ Hz, 3 H) 2.10 (dt, $J=13.65$, 6.97 Hz, 1 H) 2.22 (s, 3 H) 2.58 (q, $J=7.63$ Hz, 2 H) 3.14 (br d, $J=6.46$ Hz, 2 H) 3.32 - 3.42 (m, 1 H) 3.52 (br s, 1 H) 3.70 - 3.83 (m, 1 H) 3.93 (s, 3 H) 3.99 - 4.17 (m, 1 H) 4.41 (br d, $J=16.43$ Hz, 1 H) 4.59 - 4.75 (m, 3 H) 7.02 - 7.12 (m, 2 H) 7.15 (br s, 1 H) 7.87 (br s, 1 H) 8.05 (br d, $J=11.15$ Hz, 1 H) 8.28 (d, $J=1.76$ Hz, 1 H) 8.59 (br s, 1 H);

[2186] MS (ESI, m/z): 491.3 $[\text{M}+\text{H}]^+$

[2187] Example 431. 2-amino-N-((3S,4S)-1-butyl-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2188] Using butyraldehyde, the title compound was obtained as described for the example 426.

[2189]

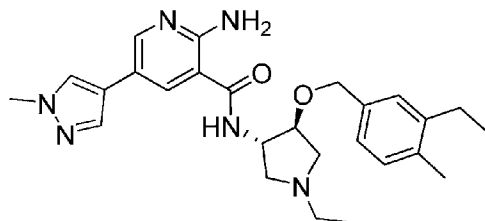


[2190] MS (ESI, m/z): 491.4 $[\text{M}+\text{H}]^+$

[2191] Example 432. 2-amino-N-((3S,4S)-1-ethyl-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2192] Using acetaldehyde, the title compound was obtained as described for the example 426.

[2193]



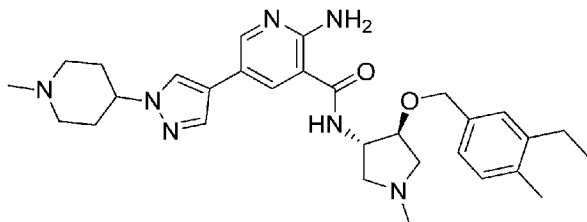
[2194] MS (ESI, m/z): 463.3 $[\text{M}+\text{H}]^+$

[2195] Example 433.

2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)-1-methylpyrrolidin-3-yl)-5-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide

[2196] From compound 359, the title compound was obtained as described for the example 426.

[2197]

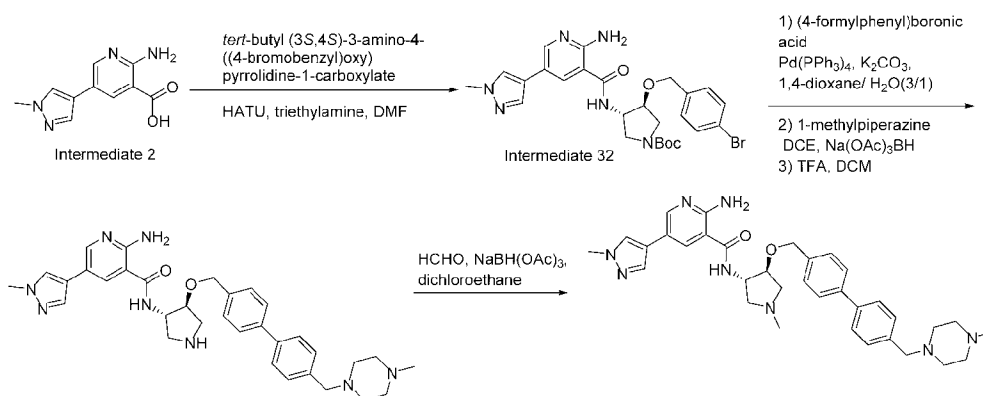


[2198] MS (ESI, m/z): 532.3 [M+H]⁺

[2199] Example 434 and Example 435.

[2200] Scheme for the preparation of the Compounds of Example 434 and 435:

[2201]



[2202] Intermediate 32.

[2203] To a mixture of intermediate 2 (350 mg, 1.60 mmol) and triethylamine (0.34 ml, 2.41 mmol) in 4 ml of DMF was added HATU (732 mg, 1.92 mmol) followed by tert-butyl (3S,4S)-3-amino-4-((4-bromobenzyl)oxy)pyrrolidine-1-carboxylate (657 mg, 1.76 mmol). The mixture was stirred at room temperature for 1 hr and then saturated sodium bicarbonate solution was added. The mixture was extracted with EtOAc, washed with brine, dried over MgSO₄, and concentrated in vacuo. The crude product was purified through silicagel column chromatography to give 700 mg of off-white solid.

[2204] ¹H NMR (600 MHz, CDCl₃)

[2205] ppm 1.43 (br s, 9 H) 3.42 (br d, *J*=10.56 Hz, 1 H) 3.51 - 3.65 (m, 2 H) 3.80 (dd, *J*=12.03, 5.58 Hz, 1 H) 3.89 (s, 3 H) 4.03 - 4.20 (m, 1 H) 4.54 - 4.77 (m, 3 H) 6.29 (br s, 2 H) 7.25 (br d, *J*=8.22 Hz, 2 H) 7.46 (br d, *J*=8.22 Hz, 2 H) 7.53 (br s, 1 H) 7.57 - 7.67 (m, 2 H) 8.29 (d, *J*=1.76 Hz, 1 H);

[2206] MS (ESI, m/z): 571.2 [M+H]⁺

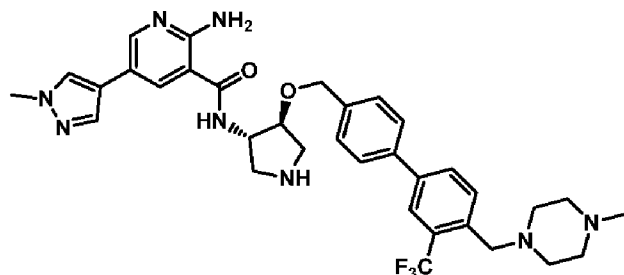
[2207] Example 434.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-4-((4'-((4-methylpiperazin-1-yl)met

hyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)nicotinamide

- [2208] To a mixture of intermediate 32 (40 mg, 0.07 mmol) and 4-((4-methylpiperazin-1-yl)methylphenylboronic acid pinacol ester (27 mg, 0.08 mmol) in 0.4 ml of 1,4-dioxane/ water (3/1) was added K_2CO_3 (29 mg, 0.21 mmol) followed by $Pd(PPh_3)_4$ (4 mg, 0.003 mmol) $Pd(PPh_3)_4$. The reaction mixture was heated at 100 °C for 3 hrs, cooled to room temperature, and extracted with EtOAc, dried over anhydrous $MgSO_4$ and concentrated under vacuum. The crude residue was dissolved with 0.5 ml of CH_2Cl_2 / TFA (10/1) and the mixture was stirred for 2 hrs. After concentration under vacuum, the crude residue was purified by preparative HPLC to afford 30 mg of the title compound.
- [2209] 1H NMR (600 MHz, CD_3OD) δ ppm 2.88 (s, 3 H) 2.91 - 3.13 (m, 4 H) 3.31 - 3.46 (m, 4 H) 3.52 - 3.65 (m, 3 H) 3.80 (dd, $J=12.91$, 7.04 Hz, 1 H) 3.87 - 3.96 (m, 5 H) 4.39 - 4.45 (m, 1 H) 4.71 - 4.83 (m, 3 H) 7.46 (br d, $J=8.22$ Hz, 2 H) 7.49 (br d, $J=8.22$ Hz, 2 H) 7.62 (dd, $J=8.22$, 2.35 Hz, 4 H) 7.87 (s, 1 H) 8.04 (s, 1 H) 8.25 (d, $J=1.76$ Hz, 1 H) 8.65 (d, $J=1.76$ Hz, 1 H);
- [2210] MS (ESI, m/z): 581.4 $[M+H]^+$
- [2211] Example 435.
2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-1-methyl-4-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)nicotinamide
- [2212] To a mixture of compound 434 (52 mg, 0.09 mmol) in 0.4 ml of 1,2-dichloroethane was added formaldehyde (0.015 ml, 0.18 mmol) followed by $NaBH(OAc)_3$ (38 mg, 0.28 mmol). The mixture was stirred at room temperature for 1 hr and then water was added. The mixture was extracted with EtOAc, washed with brine, dried over $MgSO_4$, and concentrated in vacuo. The crude residue was purified by preparative HPLC to afford 35 mg of the title compound.
- [2213] 1H NMR (600 MHz, CD_3OD) δ ppm 2.94 (s, 3 H) 3.04 (s, 3 H) 3.36 - 3.47 (m, 6 H) 3.48 - 3.58 (m, 6 H) 3.91 (s, 3 H) 4.27 (s, 2 H) 4.44 (br s, 1 H) 4.72 - 4.83 (m, 3 H) 7.49 (d, $J=8.22$ Hz, 2 H) 7.53 (d, $J=8.22$ Hz, 2 H) 7.61 (d, $J=8.22$ Hz, 2 H) 7.66 (d, $J=8.22$ Hz, 2 H) 7.86 (s, 1 H) 8.03 (s, 1 H) 8.22 (d, $J=1.76$ Hz, 1 H) 8.67 (d, $J=2.35$ Hz, 1 H);
- [2214] MS (ESI, m/z): 595.3 $[M+H]^+$
- [2215] Example 436.
2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-4-((4'-((4-methylpiperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)nicotinamide
- [2216] Using (4-formyl-3-(trifluoromethyl)phenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 434.

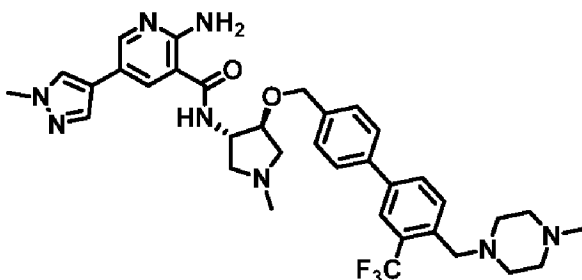
[2217]

[2218] MS (ESI, m/z): 649.3 $[M+H]^+$ [2219] Example 437.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-1-methyl-4-((4'-(4-methylpiperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)nicotinamide

[2220] From compound 436, the title compound was obtained as described for the example 435.

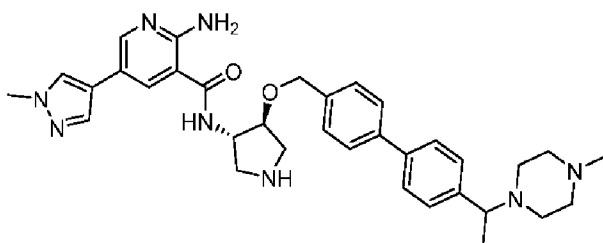
[2221]

[2222] MS (ESI, m/z): 663.3 $[M+H]^+$ [2223] Example 438.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-4-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)nicotinamide

[2224] Using (4-acetylphenyl)boronic acid, the title compound was obtained as described for the example 434.

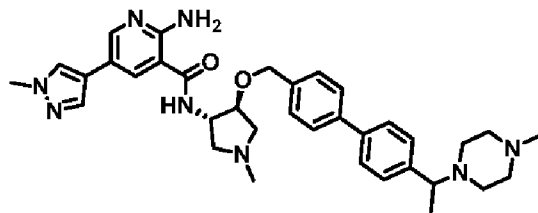
[2225]

[2226] MS (ESI+) m/z 595.3 $[M+H]^+$ [2227] Example 439.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-1-methyl-4-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)nicotinamide

[2228] From compound 438, the title compound was obtained as described for the example 435.

[2229]



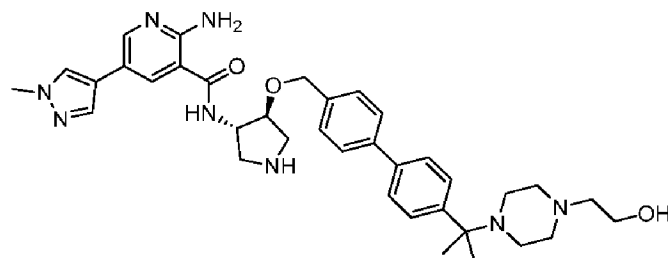
[2230] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.65 (d, $J=7.04$ Hz, 3 H) 2.90 (s, 3 H) 3.05 (s, 3 H) 3.08 - 3.17 (m, 2 H) 3.46 (br s, 4 H) 3.93 (s, 3 H) 4.16 (br d, $J=6.65$ Hz, 2 H) 4.49 (s, 1 H) 4.75 - 4.87 (m, 3 H) 7.51 (dd, $J=8.22$, 4.70 Hz, 4 H) 7.57 - 7.70 (m, 4 H) 7.88 (s, 1 H) 8.05 (s, 1 H) 8.26 (d, $J=1.96$ Hz, 1 H) 8.68 (d, $J=1.96$ Hz, 1 H); MS (ESI+) m/z 609.4 $[\text{M}+\text{H}]^+$

[2231] Example 440.

2-amino-N-((3S,4S)-4-((4'-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2232] Using (4-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)phenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 434.

[2233]



[2234] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.77 (s, 6 H) 3.50 - 3.68 (m, 6 H) 3.80 (s, 1 H) 3.83 - 3.89 (m, 2 H) 3.92 (s, 3 H) 4.42 (br d, $J=4.30$ Hz, 1 H) 4.73 - 4.88 (m, 3 H) 7.52 (d, $J=8.22$ Hz, 2 H) 7.65 (d, $J=8.22$ Hz, 2 H) 7.67 - 7.84 (m, 3 H) 7.86 - 7.92 (m, 1 H) 8.06 (s, 1 H) 8.26 (d, $J=2.35$ Hz, 1 H) 8.70 (d, $J=2.35$ Hz, 1 H);

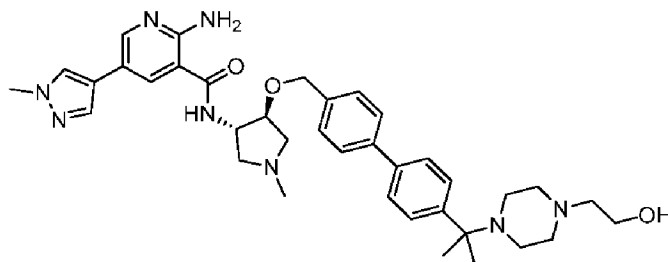
[2235] MS (ESI, m/z): 639.4 $[\text{M}+\text{H}]^+$

[2236] Example 441.

2-amino-N-((3S,4S)-4-((4'-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)-1-methylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2237] From compound 440, the title compound was obtained as described for the example 435.

[2238]



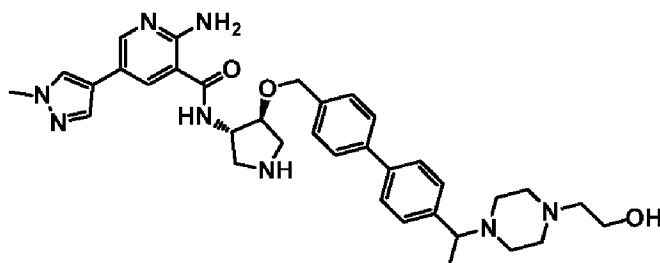
[2239] MS (ESI, m/z): 653.4 [M+H]⁺

[2240] Example 442.

2-amino-N-((3S,4S)-4-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2241] Using (4-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)phenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 434.

[2242]



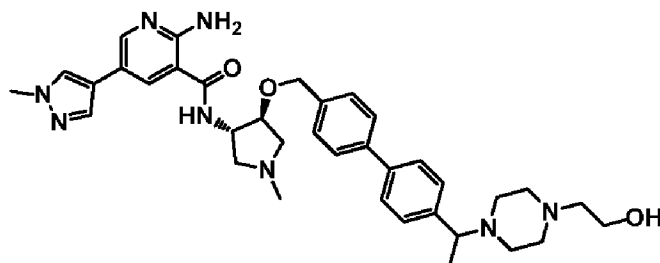
[2243] MS (ESI, m/z): 625.4 [M+H]⁺

[2244] Example 443.

2-amino-N-((3S,4S)-4-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)-1-methylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2245] From compound 442, the title compound was obtained as described for the example 435.

[2246]



[2247] MS (ESI, m/z): 639.4 [M+H]⁺

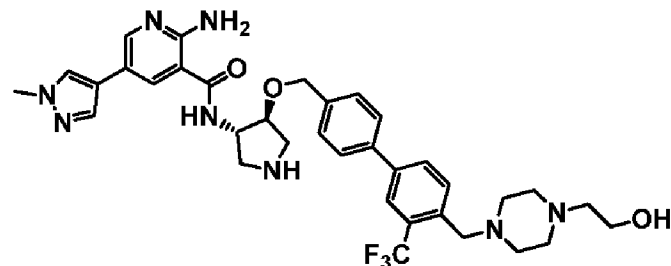
[2248] Example 444.

2-amino-N-((3S,4S)-4-((4'-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2249] Using

(4-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)-3-(trifluoromethyl)phenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 434.

[2250]



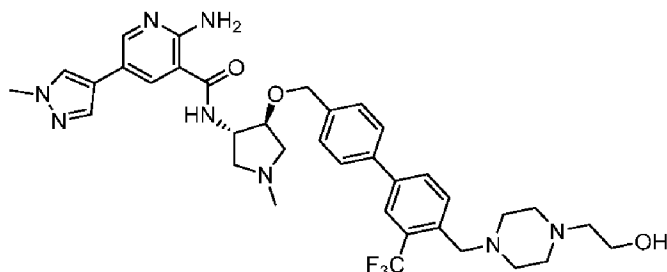
[2251] MS (ESI, m/z): 679.3 [M+H]⁺

[2252] Example 445.

2-amino-N-((3S,4S)-4-((4'-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)-1-methylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2253] Using 1-(4-bromo-2-(trifluoromethyl)benzyl)piperazine, the title compound was obtained as described for the example 435.

[2254]



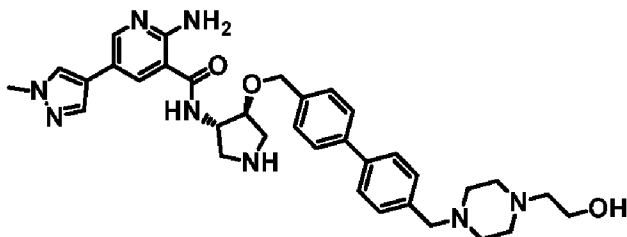
[2255] MS (ESI, m/z): 693.3 [M+H]⁺

[2256] Example 446.

2-amino-N-((3S,4S)-4-((4'-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2257] Using (4-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)phenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 434.

[2258]



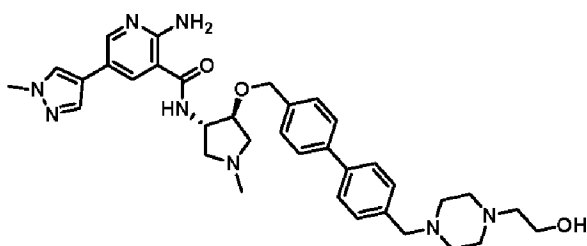
[2259] MS (ESI, m/z): 611.3 [M+H]⁺

[2260] Example 447.

2-amino-N-((3S,4S)-4-((4'-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)-1-methylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2261] From compound 446, the title compound was obtained as described for the example 435.

[2262]

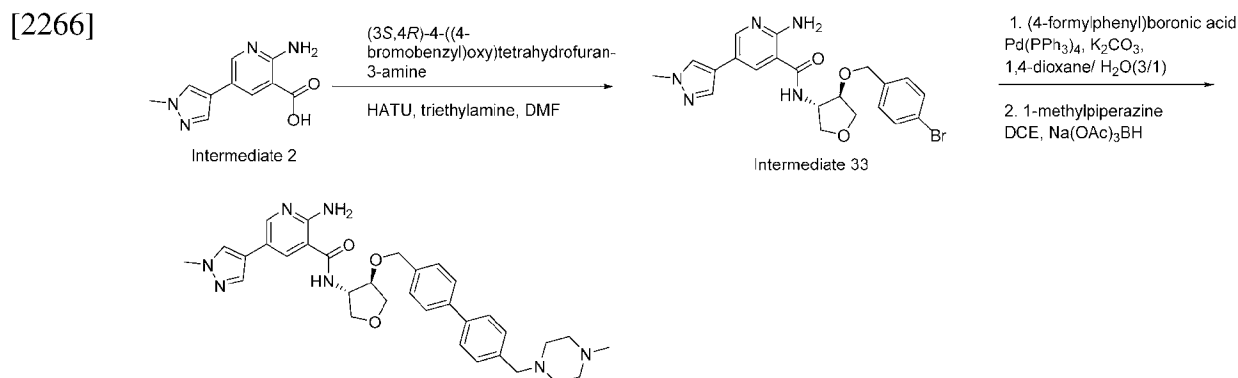


[2263] MS (ESI, m/z): 625.4 [M+H]⁺

[2264] Example 448.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4R)-4-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)nicotinamide

[2265] Scheme for the preparation of the Compound of Example 448:



[2267] Intermediate 33.

[2268] Using intermediate 2 and (3S,4R)-4-((4-bromobenzyl)oxy)tetrahydrofuran-3-amine, the title compound was obtained as described for the intermediate 4.

[2269] ¹H NMR (600 MHz, CD₃OD) δ ppm 3.81 (td, *J*=10.27, 2.35 Hz, 2 H) 3.91 (s, 3 H) 4.05 (dd, *J*=9.98, 5.28 Hz, 1 H) 4.11 (dd, *J*=9.39, 5.87 Hz, 1 H) 4.13 - 4.16 (m, 1 H) 4.55 (dd, *J*=3.81, 2.05 Hz, 1 H) 4.60 (s, 2 H) 4.63 (d, *J*=12.33 Hz, 1 H) 4.74 (d, *J*=12.33 Hz, 1 H) 7.30 (m, *J*=8.22 Hz, 2 H) 7.45 - 7.49 (m, 2 H) 7.78 (s, 1 H) 7.90 (s, 1 H) 8.07 (d, *J*=2.35 Hz, 1 H) 8.26 (d, *J*=1.76 Hz, 1 H);

[2270] MS (ESI, *m/z*): 472.1 [M+H]⁺

[2271] Example 448.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4R)-4-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)nicotinamide

[2272] Using intermediate 33, the title compound was obtained as described for the example 172.

[2273] ¹H NMR (600 MHz, CD₃OD) δ ppm 2.87 (s, 3 H) 3.80 - 3.89 (m, 4 H) 3.92 (s, 3 H) 4.04 - 4.15 (m, 2 H) 4.19 - 4.25 (m, 1 H) 4.57 - 4.63 (m, 1 H) 4.71 (d, *J*=11.74 Hz, 1 H) 4.82 (d, *J*=11.74 Hz, 1 H) 7.40 - 7.51 (m, 4 H) 7.57 - 7.63 (m, 4 H) 7.88 (s, 1 H) 8.02 (s, 1 H) 8.23 (s, 1 H) 8.62 (s, 1 H);

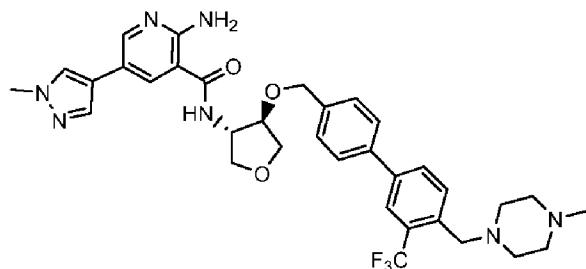
[2274] MS (ESI, *m/z*): 582.3 [M+H]⁺

[2275] Example 449.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4R)-4-((4'-((4-methylpiperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)nicotinamide

[2276] Using (4-formyl-3-(trifluoromethyl)phenyl)boronic acid pinacol ester pinacol ester, the title compound was obtained as described for the example 448.

[2277]



[2278] ^1H NMR (400 MHz, CD_3OD) δ ppm 2.91 (s, 3 H) 3.80 - 3.91 (m, 3 H) 3.94 (s, 2 H) 4.12 (td, $J=9.59$, 5.48 Hz, 2 H) 4.23 (br s, 1 H) 4.62 (br s, 1 H) 4.74 (d, $J=12.13$ Hz, 1 H) 7.52 (d, $J=8.61$ Hz, 2 H) 7.65 (d, $J=8.22$ Hz, 2 H) 7.88 (d, $J=13.30$ Hz, 4 H) 8.03 (s, 1 H) 8.25 (d, $J=1.96$ Hz, 1 H) 8.63 (d, $J=1.96$ Hz, 1 H);

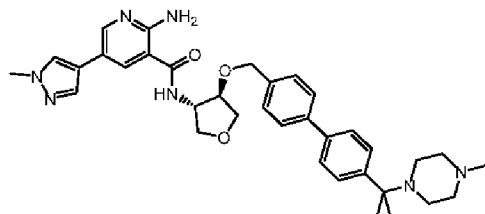
[2279] MS (ESI, m/z): 650.3 $[\text{M}+\text{H}]^+$

[2280] Example 450.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4R)-4-((4'-(2-(4-methylpiperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)nicotinamide

[2281] Using (4-formyl-3-(trifluoromethyl)phenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 448.

[2282]



[2283] ^1H NMR (400 MHz, CD_3OD) δ ppm 1.62 (s, 6 H) 2.89 (s, 3 H) 3.04 (br s, 2 H) 3.34 - 3.47 (m, 4 H) 3.82 - 3.91 (m, 2 H) 3.93 (s, 3 H) 4.12 (td, $J=10.56$, 5.48 Hz, 2 H) 4.22 (br s, 1 H) 4.61 (br s, 1 H) 4.66 - 4.77 (m, 1 H) 4.81 - 4.88 (m, 1 H) 7.47 (d, $J=7.83$ Hz, 2 H) 7.58 - 7.70 (m, 6 H) 7.89 (s, 1 H) 8.03 (s, 1 H) 8.24 (d, $J=1.96$ Hz, 1 H) 8.65 (d, $J=1.96$ Hz, 1 H);

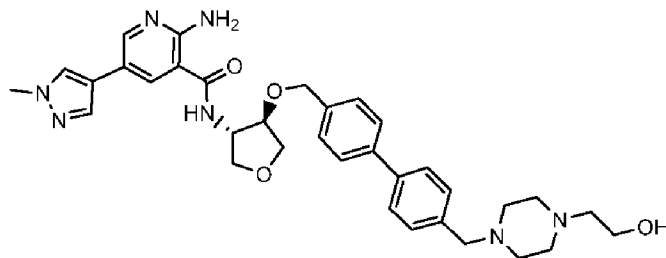
[2284] MS (ESI, m/z): 610.2 $[\text{M}+\text{H}]^+$

[2285] Example 451.

2-amino-N-((3S,4R)-4-((4'-(4-(2-hydroxyethyl)piperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2286] Using (4-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)phenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 448.

[2287]



[2288] MS (ESI, m/z): 612.3 [M+H]⁺

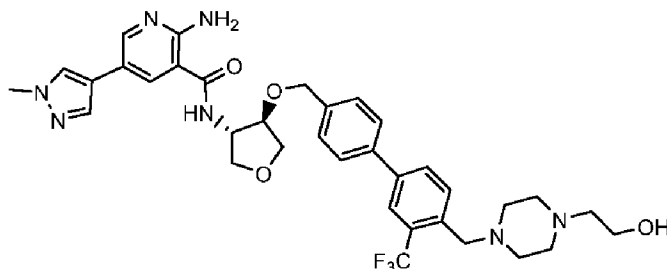
[2289] Example 452.

2-amino-N-((3S,4R)-4-((4'-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2290] Using

(4-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)-3-(trifluoromethyl)phenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 448.

[2291]



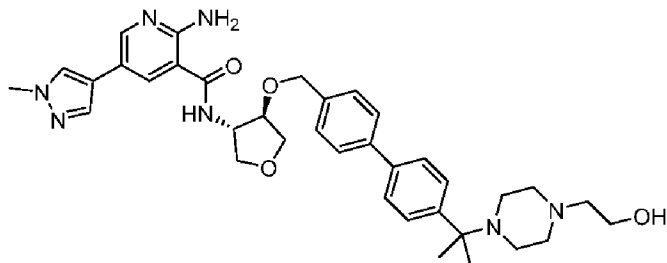
[2292] ¹H NMR (400 MHz, CD₃OD) δ ppm 2.62 (br s, 4 H) 3.25 - 3.29 (m, 2 H) 3.34 - 3.40 (m, 2 H) 3.82 - 3.84 (m, 2 H) 3.85 - 3.91 (m, 2 H) 3.94 (s, 2 H) 4.06 - 4.17 (m, 2 H) 4.23 (br s, 1 H) 4.62 (br s, 1 H) 4.74 (m, 1 H) 7.52 (m, *J*=8.22 Hz, 2 H) 7.65 (m, *J*=8.22 Hz, 2 H) 7.86 (s, 2 H) 7.89 (s, 2 H) 8.03 (s, 1 H) 8.25 (d, *J*=1.96 Hz, 1 H) 8.63 (d, *J*=1.96 Hz, 1 H);

[2293] MS (ESI, m/z): 680.3 [M+H]⁺

[2294] Example 453. 2-amino-N-((3S,4R)-4-((4'-((4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

[2295] Using (4-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)phenyl)boronic acid pinacol ester, the title compound was obtained as described for the example 448.

[2296]



[2297] MS (ESI, m/z): 640.2 [M+H]⁺

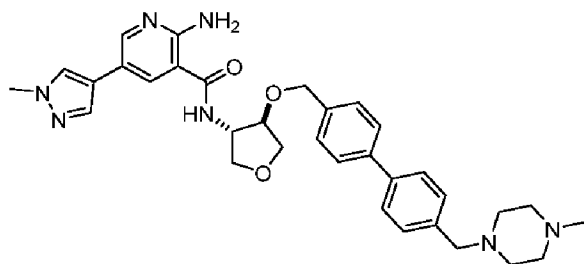
[2298] Example 454.

2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-(trans-4-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)nicotinamide

[2299] Using trans-

4-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-amine, the title compound was obtained as described for the example 448.

[2300]



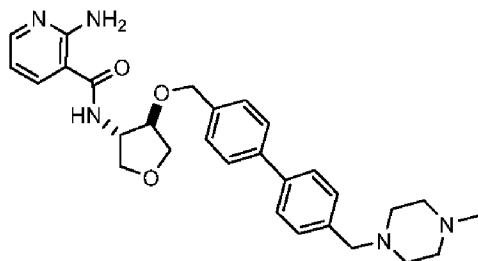
[2301] ^1H NMR (400 MHz, CD_3OD) δ ppm 2.88(s, 3 H) 3.76 - 3.89 (m, 4 H) 4.09 (ddd, J = 16.92, 9.88, 5.28 Hz, 2 H) 4.20 (br d, J = 4.70 Hz, 1 H) 4.57 (br s, 1 H) 4.70 (br d, J = 11.74 Hz, 1 H) 6.98 (dd, J = 7.43, 6.26 Hz, 1 H) 7.46 (d, J = 8.22 Hz, 4 H) 7.56 - 7.67 (m, 4 H) 7.99 - 8.06 (m, 1 H) 8.40 (dd, J = 7.43, 1.56 Hz, 1 H);

[2302] MS (ESI, m/z): 582.3 $[\text{M}+\text{H}]^+$

[2303] Example 455. 2-amino-N-(trans-4-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)nicotinamide

[2304] Using 2-aminonicotinic acid and trans-4-((4-bromobenzyl)oxy)tetrahydrofuran-3-amine, the title compound was obtained as described for the example 448.

[2305]



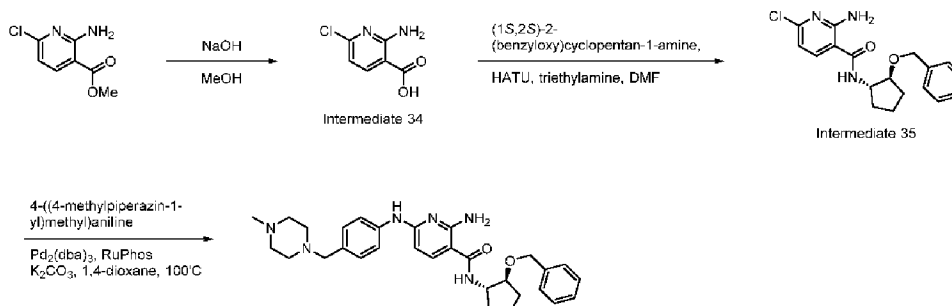
[2306] ^1H NMR (400 MHz, CD_3OD) δ ppm 2.88(s, 3 H) 3.76 - 3.89 (m, 4 H) 4.09 (ddd, J = 16.92, 9.88, 5.28 Hz, 2 H) 4.20 (br d, J = 4.70 Hz, 1 H) 4.57 (br s, 1 H) 4.70 (br d, J = 11.74 Hz, 1 H) 6.98 (dd, J = 7.43, 6.26 Hz, 1 H) 7.46 (d, J = 8.22 Hz, 4 H) 7.56 - 7.67 (m, 4 H) 7.99 - 8.06 (m, 1 H) 8.40 (dd, J = 7.43, 1.56 Hz, 1 H);

[2307] MS (ESI, m/z): 502.3 $[\text{M}+\text{H}]^+$

[2308] Example 456. 2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-6-((4-((4-methylpiperazin-1-yl)methyl)phenyl)amino)nicotinamide

[2309] Scheme for the preparation of the Compound of Example 456:

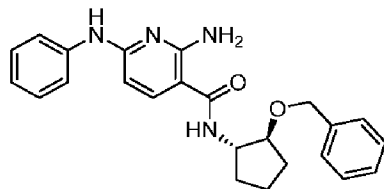
[2310]



[2311] Intermediate 34.

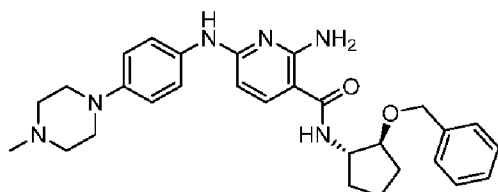
- [2312] To a suspension of methyl 2-amino-6-chloronicotinate (100 mg, 0.54 mmol) in 3 ml of MeOH was added 2N NaOH (1 ml, 2 mmol) and the mixture was heated at 65 °C for 1 hr, cooled to room temperature, neutralized (1 ml of 2N HCl), and the resulting precipitate was filtered, washed with MeOH, and dried to give 80 mg of off-white solid.
- [2313] ¹H NMR (400 MHz, DMSO-*d*₆) δ ppm 6.61 (d, *J*=7.83 Hz, 1 H) 7.53 (br s, 2 H) 8.01 (d, *J*=8.22 Hz, 1 H);
- [2314] MS (ESI, *m/z*): 173.2 [M+H]⁺
- [2315] Intermediate 35.
- [2316] To a mixture of intermediate 34 (50 mg, 0.29 mmol) and triethylamine (0.061 ml, 0.43 mmol) in 2 ml of DMF was added HATU (132 mg, 0.35 mmol) followed by (1*S*,2*S*)-2-(benzyloxy)cyclopentan-1-amine (55 mg, 0.29 mmol). The mixture was stirred at room temperature for 1 hr and then saturated sodium bicarbonate solution was added. The mixture was extracted with EtOAc, washed with brine, dried over MgSO₄, and concentrated in vacuo. The crude residue was purified by preparative HPLC to afford 80 mg of the title compound.
- [2317] ¹H NMR (400 MHz, CDCl₃) δ ppm 1.39 - 1.52 (m, 1 H) 1.68 - 1.81 (m, 2 H) 1.83 - 1.89 (m, 1 H) 1.89 - 2.02 (m, 1 H) 2.27 (td, *J*=13.69, 7.83 Hz, 1 H) 3.80 - 3.87 (m, 1 H) 4.27 - 4.37 (m, 1 H) 4.58 - 4.67 (m, 2 H) 5.79 (br d, *J*=6.26 Hz, 1 H) 6.51 (br s, 2H) 6.56 (d, *J*=7.83 Hz, 1 H) 7.25 - 7.37 (m, 5 H) 7.39 (d, *J*=7.83 Hz, 1 H);
- [2318] MS (ESI, *m/z*): 345.3 [M+H]⁺
- [2319] Example 456.
2-amino-N-((1*S*,2*S*)-2-(benzyloxy)cyclopentyl)-6-((4-((4-methylpiperazin-1-yl)methyl)phenyl)amino)nicotinamide
- [2320] To a mixture of intermediate 35 (186 mg, 1 mmol) and 4-((4-methylpiperazine-1-yl)methyl)aniline (240mg, 1.2 mmol) in 5 ml of 1,4-dioxane was added 480 mg of K₂CO₃ followed by Pd₂(dba)₃ (30 mg, 0.3 mmol). The reaction mixture was heated at 100 °C for 3 hrs, cooled to room temperature, and extracted with EtOAc, dried over anhydrous MgSO₄ and concentrated under vacuum. The crude product was purified by silicagel column chromatography to give 170 mg of off-white solid.
- [2321] ¹H NMR (400 MHz, CD₃OD) δ ppm 1.57 (br dd, *J*=13.30, 7.04 Hz, 1 H) 1.66 - 1.87 (m, 3 H) 1.97 (dt, *J*=13.01, 6.60 Hz, 1 H) 2.13 (br dd, *J*=13.11, 6.85 Hz, 1 H) 2.95 (s, 3 H) 3.44 - 3.62 (m, 4 H) 3.87 - 3.97 (m, 1 H) 4.17 (s, 2 H) 4.31 - 4.39 (m, 1 H) 4.60 (s, 2 H) 6.25 (d, *J*=9.00 Hz, 1 H) 7.21 - 7.35 (m, 4 H) 7.43 (d, *J*=8.22 Hz, 2 H) 7.58 (d, *J*=8.61 Hz, 2 H) 8.08 (d, *J*=9.00 Hz, 1 H); MS (ESI, *m/z*): 515.3 [M+H]⁺
- [2322] Example 457. 2-amino-N-((1*S*,2*S*)-2-(benzyloxy)cyclopentyl)-6-(phenylamino)nicotinamide
- [2323] Using aniline, the title compound was obtained as described for the example 456.

[2324]

[2325] MS (ESI, m/z): 403.2 [M+H]⁺[2326] Example 458. 2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-6-((4-(4-methylpiperazin-1-yl)phenyl)amino)nicotinamide

[2327] Using 4-(4-methylpiperazin-1-yl)aniline, the title compound was obtained as described for the example 456.

[2328]

[2329] MS (ESI, m/z): 501.3 [M+H]⁺

[2330] Biochemical Assay

[2331] For the SAR (structure-activity relationship) and compound screening, LanthScreen™ TR-FRET (Time-Resolved fluorescence energy transfer) assay was employed using the phospho-tyrosine specific Terbium (Tb)-labeled antibody with a fluorescein labeled poly-GT (glutamate-tyrosine) as a substrate. Upon excitation at 340 nm by UV, the energy from Tb donor of the antibody is transferred to the fluorescein of the phosphorylated poly GT substrate, and fluorescein emits light at 520 nm. The ratio between the intensity of primary emission at 495 nm and that of secondary emission at 520 nm was used to quantify the level of kinase activity. The recombinant proteins of human c-MER and AXL catalytic domains, Fluorescein-labeled poly-GT substrate, Tb-labeled anti-phosphorylated tyrosine antibodies, the kinase assay buffer, and 0.5M EDTA solution were purchased (Life technologies, USA). The TR-FRET assays were carried out in the white low volume 384-well plate (Corning, USA). To measure the compound mediated inhibition of kinase activity, the recombinant kinases were pre-incubated with test compounds for 20 minutes prior to the addition of 200 nM fluorescein labeled poly-GT substrates and 10 uM ATP, and then the reaction was carried out for 1 hour at room temperature. 10 mM EDTA was added to terminate the enzyme reaction, and the level of phosphorylation of poly-GT substrate was determined following 30 min incubation with 2 nM Tb-labeled antibody. The fluorescence intensity was measured with Envision™ plate reader (PerkinElmer, USA).

[2332] In cell MER kinase assay using BaF3 cellular system

[2333] CD8-MerTK is a chimeric fusion protein consisting of the extracellular and transmembrane domains of the human CD8α (amino acids 1 to 209) at its N-terminus and

the kinase domain and intracellular parts of MerTK (amino acids 521-994) at its C-terminus. To establish an *in cell* kinase assay for MerTK kinase, the IL-3 dependent Ba/F3 cells of murine lymphoid origin was transfected with CD8-MerTK. The resulting Ba/F3-CDM line was then validated that Ba/F3-CDM cell proliferation is completely dependent on the activity of MerTK kinase activity when growing in the absence of IL-3. For a routine cellular assay, Ba/F3-CDM cells were seeded at 2,000 cells per well in 384-well cell culture plate containing DMEM/10% FBS culture media and incubated for 24 hours before addition of compounds pre-diluted in culture media. Following compound treatment, cells were further incubated for 48 hours and the proliferation was measured. To discriminate a Ba/F3 growth inhibition by a specific inhibition of MerTK kinase following compound treatment vs growth inhibition due to a non-specific unintended cytotoxicity of compounds, we routinely carried out control sets of Ba/F3 cells in parallel that grown in IL3-supplemented growth media. In the presence of IL-3, the proliferation of Ba/F3 is no longer dependent on the MerTK activity. Cell growth and proliferation was measured with Celltiter-Glo™ system (Promega, USA) according to the manufacturer's instruction. The half-maximal growth inhibitory concentration (GI_{50}) value was calculated with Prism6.0 software (GraphPad, USA).

[2334] TABLE 1. Biochemical IC₅₀ and cell growth inhibitory GI₅₀ values.

[2335]

Compound No.	Mer TK inhibition (IC50)	Cell growth inhibition (GI50)
1	+++	+
2	++	
3	++	
4	+	
5	+	
6	+++	
7	+++	
8	+++	
9	+++	
10	++	
11	+++	
12	++	
13	+++	
14	+++	
15	+	+
16	+++	
17	+++	
18	+++	
19	+++	
20	+++	
21	++++	+
22	+++	
23	++	+
24	+++	
25	+++	

[2336]

26	++	
27	++	
28	++	
29	++	
30	+	
31	+	
32	+	
33	++	
34	++	
35	+	
36	+	
37	++	
38	++	
39	++	
40	++	
41	+++	
42	+	
43	++	
44	++	+
45	++	
46	++	
47	++	
48	++	
49	++	
50	+	
51	+	

[2337]

52	++	
53	+	
54	++	
55	+	
56	+	
57	+	
58	+	
59	+	
60	++	
61	++	
62	+	
63	+++	+
64	++	
65	+++	++
66	+	
67	++	
68	+++	+
69	+	
70	+	
71	+	
72	+	
73	+	
74	+	
75	+	
76	+	
77	++	

[2338]

78	+++	+
79	+	
80	++	
81	+++	+
82	++	
83	+	
84	++	
85	++	
86	++++	+++
87	++	
88	++	
89	++	
90	+	
91	+	
92	+	
93	++	+
94	+	
95	+	
96	+	
97	+	
98	+	
99	+	
100	+	
101	++	
102	+	
103	+	

[2339]

104	+	
105	+	
106	+	
107	+	
108	+	
109	+	
110	+	
111	+	
112	+	
113	+	
114	+	
115	+	
116	+	
117	+	
118	+	
119	+	
120	+	
121	+	
122	+	
123	+	
124	+	
125	+	
126	+	
127	+	
128	+	
129	+	

[2340]

130	+++	+
131	+	
132	++	
133	+	
134	+++	
135	+++	+
136	++++	+++
137	++++	++++
138	++++	+
139	+	
140	+++	
141	+++	
142	++++	+++
143	+	
144	++++	++
145	++++	+
146	++++	++++
147	++++	+++
148	++++	+
149	+++	+
150	+++	+
151	+++	
152	+++	
153	++++	++
154	++	+
155	+++	+

[2341]

156	++++	++++
157	++++	+++
158	++	+
159	++++	+++
160	+++	+++
161	++++	++++
162	+++	
163	++	
164	+	+
165	+	
166	+	
167	++++	
168	++	+
169	+	
170	+	
171	+	
172	++++	++++
173	+++	+
174	++++	+++
175	+++	+
176	+++	+
177	++++	+++
178	++	+
179	++++	+++
180	++++	+
181	++++	++++

[2342]

182	++++	++++
183	++++	++++
184	++++	++++
185	++++	+++
186	++++	++++
187	++++	++++
188	++++	++++
189	++++	+++
190	++++	++++
191	++++	+++
192	++++	++++
193	++++	++++
194	++++	++++
195	++++	++++
196	++++	+++
197	++++	++++
198	++++	++++
199	++++	++++
200	++++	+++
201	+++	+++
202	++++	+++
203	++++	+++
204	++++	
205	++++	++++
206	++++	+++
207	++++	

[2343]

208	++++	++++
209	++++	++++
210	++++	++++
211	++++	++++
212	++++	+
213	++++	+++
214	++++	++++
215	++++	++++
216	++++	++++
217	++++	++++
218	++++	++++
219	++++	++++
220	++++	++++
221	++++	++++
222	++++	++++
223	++++	+++
224	++++	+++
225	++++	+++
226	++++	++++
227	++++	++++
228	++++	+++
229	++++	++++
230	++++	++++
231	++++	
232	++++	++
233	++++	+++

[2344]

234	++	
235	++++	++
236	++++	++++
237	++++	++++
238	++++	++++
239	++++	++++
240	++++	++++
241	++++	++
242	++++	++++
243	++	+
244	+	
245	++++	++
246	++++	+++
247	++++	+++
248	+++	+
249	++++	+
250	++++	+++
251	++++	+
252	+++	+
253	+++	+
254	+++	+
255	+++	++
256	+++	
257	+++	+
258	+++	
259	++	

[2345]

260	+++	
261	++	
262	+	
263	+	
264	+	
265	++	
266	++	
267	+	
268	++	
269	++	
270	+++	
271	+++	
272	+++	
273	+++	+
274	+++	
275	+++	++
276	+++	
277	+++	
278	+++	
279	+++	
280	+++	
281	+++	
282	+++	
283	+++	
284	+++	
285	+++	

[2346]

286	+++	
287	++	+
288	++	
289	+++	
290	+++	
291	+++	
292	+++	
293	+++	+
294	++	
295	++	
296	++	
297	+++	+
298	++	
299	+++	
300	+++	
301	+++	
302	+++	+
303	+++	
304	+++	
305	++	
306	+++	
307	+++	
308	++	
309	++	
310	++	
311	+++	

[2347]

312	+++	
313	+++	+
314	+++	
315	+++	
316	+++	
317	++	
318	++++	++
319	+++	
320	+++	
321	+++	+
322	+++	
323	+++	
324	+++	
325	++++	+
326	+++	
327	++++	+
328	++++	++
329	++++	
330	++++	
331	+++	+
332	+++	
333	+++	+
334	++	
335	++	
336	++	
337	++++	++

[2348]

338	+++	+
339	+++	
340	+++	+
341	+++	
342	++++	
343	+++	
344	+++	
345	+++	
346	+++	+
347	++++	+
348	++++	+
349	+++	+
350	+++	
351	+++	
352	+++	+
353	+++	
354	++	
355	+++	+
356	+++	+
357	+++	+
358	+++	+
359	+++	+
360	++++	+
361	+++	+
362	+	
363	++++	+++

[2349]

364	++++	++++
365	+++	+
366	++++	++++
367	++++	++++
368	++++	++++
369	++++	++++
370	++++	++++
371	++++	++++
372	++++	++++
373	++++	+++
374	++++	+++
375	++++	++++
376	++++	++++
377	++++	++++
378	++++	++++
379	++++	++++
380	++++	++++
381	++++	++++
382	++++	
383	++++	++++
384	++++	++++
385	++++	+++
386	++++	++++
387	++++	++++
388	++++	+++
389	++++	+++

[2350]

390	++++	+++
391	++++	+
392	+++	+
393	++	+
394	++++	++
395	++++	++
396	++++	+
397	+++	+
398	+++	++
399	++++	++
400	++++	++
401	++++	+
402	++	+
403	++	++
404	++	+
405	++++	+++
406	+++	+
407	+++	++
408	+++	+
409	+++	+
410	+++	+
411	++++	+++
412	++++	+
413	++++	++
414	+++	+
415	++++	+

[2351]

416	++++	+++
417	+++	++
418	+++	++
419	++++	+
420	+++	+
421	+++	+
422	+++	+
423	+++	++
424	+++	+
425	+++	++
426	++++	++
427	+++	+
428	+++	+
429	++	+
430	+++	+
431	+++	+
432	+++	
433	++++	+++
434	++++	++
435	++++	+++
436	++++	++
437	++++	++++
438	++++	++
439	++++	+++
440	++++	+
441	++++	+++

[2352]

442	++++	+
443	++++	++++
444	++++	+
445	++++	++++
446	++++	+
447	++++	++++
448	++++	++++
449	++++	++++
450	++++	++++
451	++++	++++
452	++++	++++
453	++++	+++
454	++++	
455	+++	
456	+	
457	+	
458	+	

[2353] +++++: $IC_{50} < 10$, +++: $10 \leq IC_{50} < 100$, ++: $100 \leq IC_{50} < 1000$, +: $IC_{50} \geq 1000$ nM

[2354] +++++: $GI_{50} < 100$, +++: $100 \leq GI_{50} < 500$, ++: $500 \leq GI_{50} < 1000$, +: $GI_{50} \geq 1000$ nM

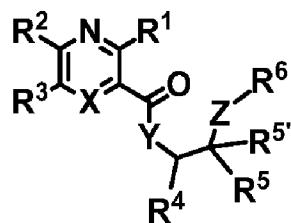
[2355] As can be seen in Table 1 above, the heterocyclic compounds of the present invention showed the the activity of Mer, which compounds are useful for the prevention and/or the treatment of cancer.

Claims

[Claim 1]

A heterocyclic compound represented by the following Formula I, a stereoisomer thereof, an enantiomer thereof, or a pharmaceutically acceptable salt thereof:

[Formula I]



wherein:

X is CR⁷, or N;

Y is CHR⁸, NR⁸, or O;

Z is CH₂, CH₂O, C(=O), C(=O)O, C(=O)NH, NR⁸, NHC(=O), O or O(C=O);

R¹ is H, halogen, C₁₋₃ alkyl, NHR⁸ or OR⁸;

R² is H, halogen, C₁₋₄ alkyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, C₁₋₂ alkylheterocyclyl or -L-aryl, which C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, C₁₋₂ alkylheterocyclyl or -L-aryl may optionally be substituted with one or more R⁹;

R³ is H, halogen, CN, C₁₋₃ alkyl, cycloalkenyl, C₂₋₆ alkenyl, aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, or C₁₋₂ alkylheterocyclyl which aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, or C₁₋₂ alkylheterocyclyl may optionally be substituted with one or more R⁹;

R⁴ and R⁵ each independently is H, C₁₋₆ alkyl, C₁₋₆ alkoxy, C₃₋₁₀ cycloalkyl, C(=O) R⁶, C₁₋₂ alkylaryl, aryl; or

R⁴ and R⁵ may be combined with each other to form a 3-7 membered cyclic ring or heterocyclic ring containing 1 or 2 of NR⁸, O or S, and the cyclic or heterocyclic ring may optionally be substituted with 1 or 2 halogen(s), C₁₋₄ alkyl or C₁₋₄ alkoxy;

R⁵ is H or R⁵ and R⁵ may be combined with each other to form carbonyl;

R⁶ is H, C₁₋₄ alkyl, C₁₋₆ alkoxy, -NR¹⁵R¹⁶, aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, C₁₋₂ alkylheterocyclyl, C₁₋₂ alkylbiaryl, -L-aryl or -L-biaryl, which C₁₋₄ alkyl, aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkyl-

heteroaryl, C₁₋₂ alkylheterocyclyl, C₁₋₂ alkylbiaryl, -L-aryl or -L-biaryl, may optionally be substituted with one or more R⁹;

R⁷ is H, halogen or C₁₋₃ alkyl;

R⁸ is H, C₁₋₆ alkyl, C₁₋₄ fluoroalkyl, C₁₋₄ hydroxyalkyl, C₁₋₃ alkylaryl or C(=O)R¹⁰ which C₁₋₆ alkyl or C₁₋₃ alkylaryl may optionally be substituted with one or more R⁹;

when Z is NR⁸, R⁸ and R⁶ may be combined with each other to form a 3-7 membered heterocyclic ring comprising 1 to 2 N or 0 to 2 O heteroatoms;

R⁹ is halogen, hydroxyl, -CN, -NO₂, -COOH, -(C=O)H, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, C₁₋₄ hydroxyalkyl, C₁₋₆ alkoxy, cycloalkenyl, aryl, heterocyclyl, heteroaryl, -NR¹⁵R¹⁶, -L-NR¹⁵R¹⁶, -L-COOR¹⁷, -L-alkyl, -L-C₃₋₁₀ cycloalkyl, -L-heterocyclyl, -L-heteroaryl, or -L-aryl which C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, C₁₋₄ hydroxyalkyl, C₁₋₆ alkoxy, cycloalkenyl, aryl, heterocyclyl, heteroaryl, -L-alkyl, -L-C₃₋₁₀ cycloalkyl, -L-heterocyclyl, -L-heteroaryl, or -L-aryl may substituted with halogen, hydroxyl, -CN, -NR¹⁵R¹⁶, C₁₋₆ alkyl, C₃₋₁₀ cycloalkyl, C₁₋₄ hydroxyalkyl, C₂₋₆ alkenyl, aryl, heterocyclyl, -L-heterocyclyl, or -(CH₂)_l-C(=O)-NR¹⁵R¹⁶;

R¹⁰ is C₁₋₃ alkyl or C₁₋₃ alkylaryl;

R¹⁵ and R¹⁶ each independently is H, C₁₋₆ alkyl, C₃₋₁₀ cycloalkyl or SO₂R¹⁷;

R¹⁷ is H, C₁₋₃ alkyl or C₁₋₃ alkylaryl;

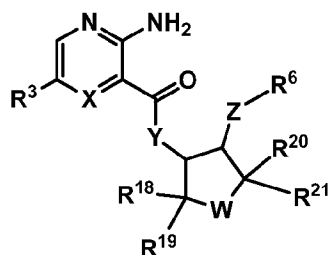
L is C₁₋₃ alkyl, C₁₋₃ alkylO, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, -(CH₂)_l-C(=O)-(CH₂)_m-, C(=O)O-, -(CH₂)_l-C(=O)NH-(CH₂)_m-, -(CH₂)_l-NHC(=O)-(CH₂)_m-, -(CH₂)_l-NH-(CH₂)_m-, NR⁸, -NH-C(=O)-CR¹⁵R¹⁶-, NH-C(=O)-, NHC(=O), O, O(C=O) S, S(=O), or SO₂; and

l and m each independently is an integer of 0 to 2.

[Claim 2]

The heterocyclic compound, the stereoisomer thereof, the enantiomer thereof, or the pharmaceutically acceptable salt thereof of claim 1, wherein the heterocyclic compound represented formula I is represented by the following Formula Ia:

[Formula Ia]



wherein

X is CH, or N;

Y is NR⁸, or O;

W is CH₂, (CH₂)₂, NR¹¹, or O;

Z is CH₂, CH₂O, C(=O), C(=O)O, C(=O)NH, NR⁸, NHC(=O), O or O(C=O);

R³ is H, halogen, CN, C₁₋₃ alkyl, cycloalkenyl, C₂₋₆ alkenyl, aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, or C₁₋₂ alkylheterocyclyl which aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, or C₁₋₂ alkylheterocyclyl may optionally be substituted with one or more R⁹;

R⁶ is H, C₁₋₄ alkyl, C₁₋₆ alkoxy, -NR¹⁵R¹⁶, aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, C₁₋₂ alkylheterocyclyl, C₁₋₂ alkylbiaryl, -L-aryl or -L-biaryl, which C₁₋₄ alkyl, aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, C₁₋₂ alkylheterocyclyl, C₁₋₂ alkylbiaryl, -L-aryl or -L-biaryl, may optionally be substituted with one or more R⁹;

R⁸ is H, C₁₋₆ alkyl, C₁₋₄ fluoroalkyl, C₁₋₄ hydroxyalkyl, C₁₋₃ alkylaryl or C(=O)R¹⁰ which C₁₋₆ alkyl or C₁₋₃ alkylaryl may optionally be substituted with one or more R⁹;

when Z is NR⁸, R⁸ and R⁶ may be combined with each other to form a 3-7 membered heterocyclic ring comprising 1 to 2 N or 0 to 2 O heteroatoms;

R⁹ is halogen, hydroxyl, -CN, -NO₂, -COOH, -(C=O)H, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, C₁₋₄ hydroxyalkyl, C₁₋₆ alkoxy, cycloalkenyl, aryl, heterocyclyl, heteroaryl, -NR¹⁵R¹⁶, -L-NR¹⁵R¹⁶, -L-COOR¹⁷, -L-alkyl, -L-C₃₋₁₀ cycloalkyl, -L-heterocyclyl, -L-heteroaryl, or -L-aryl which C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, C₁₋₄ hydroxyalkyl, C₁₋₆ alkoxy, cycloalkenyl, aryl, heterocyclyl, heteroaryl, -L-alkyl, -L-C₃₋₁₀ cycloalkyl, -L-heterocyclyl, -L-heteroaryl, or -L-aryl may substituted with halogen, hydroxyl, -CN, -NR¹⁵R¹⁶, C₁₋₆ alkyl, C₃₋₁₀ cycloalkyl, C₁₋₄ hydroxyalkyl, C₂₋₆ alkenyl, aryl, heterocyclyl,

-L-heterocyclyl, or $-(CH_2)_l-C(=O)-NR^{15}R^{16}$;

R^{10} is C_{1-3} alkyl or C_{1-3} alkylaryl;

R^{11} is H, C_{1-6} alkyl, C_{1-4} fluoroalkyl, C_{1-4} hydroxyalkyl, C_{1-3} alkylaryl or $C(=O)R^{10}$ which C_{1-6} alkyl or C_{1-3} alkylaryl may optionally be substituted with one or more R^9 ;

R^{15} and R^{16} each independently is H, C_{1-6} alkyl, C_{3-10} cycloalkyl or SO_2R^{17} ;

R^{17} is H, C_{1-3} alkyl or C_{1-3} alkylaryl;

R^{18} to R^{21} are the same as or different from each other, and are each independently H or halogen; or

R^{18} and R^{19} ; or R^{20} and R^{21} may be combined with each other to form a 3-7 membered cyclic ring or heterocyclic ring containing 1 or 2 of NR^8 , O or S, and the cyclic or heterocyclic ring may optionally be substituted with 1 or 2 halogen(s), C_{1-4} alkyl or C_{1-4} alkoxy;

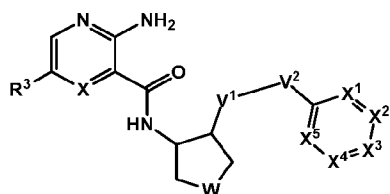
L is C_{1-3} alkyl, C_{1-3} alkylO, C_{2-6} alkynyl, C_{3-10} cycloalkyl, $-(CH_2)_l-C(=O)-$ $(CH_2)_m-$, $C(=O)O$, $-(CH_2)_l-C(=O)NH-(CH_2)_m-$, $-(CH_2)_l-NHC(=O)-(CH_2)_m-$, $-(CH_2)_l-NH-(CH_2)_m-$, NR^8 , $-NH-C(=O)-CR^{15}R^{16}-NH-C(=O)-NHC(=O)$, O, $O(C=O)$ S, S, $S(=O)$, or SO_2 ; and

l and m each independently is an integer of 0 to 2.

[Claim 3]

The heterocyclic compound, the stereoisomer thereof, the enantiomer thereof, or the pharmaceutically acceptable salt thereof of claim 1, wherein the heterocyclic compound represented formula I is represented by the following Formula Ib:

[Formula Ib]



wherein

X is CH, or N;

W is CH_2 , NR^{11} , or O;

V^1 and V^2 each independently is $CR^{13}R^{13'}$, NR^{13} , or O;

at least one of V_1 and V_2 is $CR^{13}R^{13'}$;

X^1 to X^5 are the same as or different from each other, and are each independently CR^{14} or N;

at least one of X^1 to X^5 is CR^{14} ;

R^3 is H, halogen, CN, C_{1-3} alkyl, cycloalkenyl, C_{2-6} alkenyl, aryl, biaryl,

heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkyl-heteroaryl, or C₁₋₂ alkylheterocyclyl which aryl, biaryl, heteroaryl, heterobiaryl, heterocyclyl, C₁₋₂ alkylaryl, C₁₋₂ alkylheteroaryl, or C₁₋₂ alkylheterocyclyl may optionally be substituted with one or more R⁹;

R⁹ is halogen, hydroxyl, -CN, -NO₂, -COOH, -(C=O)H, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, C₁₋₄ hydroxyalkyl, C₁₋₆ alkoxy, cycloalkenyl, aryl, heterocyclyl, heteroaryl, -NR¹⁵R¹⁶, -L-NR¹⁵R¹⁶, -L-COOR¹⁷, -L-alkyl, -L-C₃₋₁₀ cycloalkyl, -L-heterocyclyl, -L-heteroaryl, or -L-aryl which C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, C₁₋₄ hydroxyalkyl, C₁₋₆ alkoxy, cycloalkenyl, aryl, heterocyclyl, heteroaryl, -L-alkyl, -L-C₃₋₁₀ cycloalkyl, -L-heterocyclyl, -L-heteroaryl, or -L-aryl may substituted with halogen, hydroxyl, -CN, -NR¹⁵R¹⁶, C₁₋₆ alkyl, C₃₋₁₀ cycloalkyl, C₁₋₄ hydroxyalkyl, C₂₋₆ alkenyl, aryl, heterocyclyl, -L-heterocyclyl, or -(CH₂)_l-C(=O)-NR¹⁵R¹⁶ ;

R¹⁰ is C₁₋₃ alkyl or C₁₋₃ alkylaryl;

R¹¹ is H, C₁₋₆ alkyl, C₁₋₄ fluoroalkyl, C₁₋₄ hydroxyalkyl, C₁₋₃ alkylaryl or C(=O)R¹⁰ which C₁₋₆ alkyl or C₁₋₃ alkylaryl may optionally be substituted with one or more R⁹;

R¹³ and R^{13'} each independently is H, C₁₋₃ alkyl, C₂₋₃ hydroxyalkyl; each R¹⁴ is independently selected from H, halogen, hydroxyl, -CN, -NO₂, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, cycloalkenyl, aryl, heterocyclyl, heteroaryl, -NR¹⁵R¹⁶, -L-alkyl, -L-heterocyclyl, -L-heteroaryl, or -L-aryl which C₁₋₆ alkyl, aryl, heteroaryl, heterocyclyl may optionally be substituted with one or more R⁹; or adjacent groups among a plurality of R¹⁴s are bonded to each other to form a 3-7 membered cyclic ring or heterocyclic ring containing 1 or 2 of NR¹¹ O or S, and the cyclic or heterocyclic ring may optionally be substituted with 1 or 2 halogen(s), C₁₋₄ alkyl or C₁₋₄ alkoxy;

R¹⁵ and R¹⁶ each independently is H, C₁₋₆ alkyl, C₃₋₁₀ cycloalkyl or SO₂R¹⁷;

R¹⁷ is H, C₁₋₃ alkyl or C₁₋₃ alkylaryl;

L is C₁₋₃ alkyl, C₁₋₃ alkylO, C₂₋₆ alkynyl, C₃₋₁₀ cycloalkyl, -(CH₂)_l-C(=O)-(CH₂)_m-, C(=O)O-, -(CH₂)_l-C(=O)NH-(CH₂)_m-, -(CH₂)_l-NHC(=O)-(CH₂)_m-, -(CH₂)_l-NH-(CH₂)_m-, NR⁸-, -NH-C(=O)-CR¹⁵R¹⁶-, NH-C(=O)-, NHC(=O), O, O(C=O) S, S, S(=O), or SO₂; and l and m each independently is an integer of 0 to 2.

[Claim 4]

The heterocyclic compound, the stereoisomer thereof, the enantiomer thereof, or the pharmaceutically acceptable salt thereof of claim 1,

wherein the heterocyclic compound represented formula I is represented by any one of the following compounds.

Example 1	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 2	2-amino-N-((1R,2R)-2-(benzyloxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 3	2-amino-N-(trans-2-(benzyloxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 4	2-amino-N-((1R,2S)-2-(benzyloxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 5	2-amino-N-(cis-2-(benzyloxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 6	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((2-methylbenzyl)oxy)cyclopentyl)nicotinamide
Example 7	2-amino-N-((1S,2S)-2-((3-ethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 8	2-amino-N-((1S,2S)-2-((4-ethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 9	2-amino-N-(trans-2-((4-ethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 10	2-amino-N-((1S,2S)-2-((4-isopropylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 11	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 12	2-amino-N-((1R,2R)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

Example 13	2-amino-N-(trans-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 14	2-amino-N-((1S,2S)-2-((2,3-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 15	2-amino-N-((1S,2S)-2-((2,6-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 16	2-amino-N-((1S,2S)-2-((2,5-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 17	2-amino-N-((1S,2S)-2-((3,5-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 18	2-amino-N-((1S,2S)-2-((2,4-dimethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 19	2-amino-N-((1S,2S)-2-((4-ethyl-3-methylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 20	2-amino-N-((1S,2S)-2-((3,4-diethylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 21	2-amino-N-((1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 22	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3-propylbenzyl)oxy)cyclopentyl)nicotinamide
Example 23	2-amino-N-((1S,2S)-2-((3-cyclopentylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 24	2-amino-N-((1S,2S)-2-((3-isopropylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

Example 25	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3-(prop-1-en-2-yl)benzyl)oxy)cyclopentyl)nicotinamide
Example 26	2-amino-N-((1S,2S)-2-((3-cyclopropylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 27	2-amino-N-((1S,2S)-2-((3-cyclobutylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 28	2-amino-N-((1S,2S)-2-((3-ethynylbenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 29	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(trifluoromethyl)benzyl)oxy)cyclopentyl)nicotinamide
Example 30	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3-nitrobenzyl)oxy)cyclopentyl)nicotinamide
Example 31	2-amino-N-((1S,2S)-2-((3-cyanobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 32	2-amino-N-((1S,2S)-2-((3-hydroxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 33	2-amino-N-((1S,2S)-2-((3-methoxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 34	2-amino-N-((1R,2R)-2-((3-methoxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 35	2-amino-N-((1S,2S)-2-((4-methoxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 36	2-amino-N-((1R,2R)-2-((4-methoxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

Example 37	2-amino-N-(trans-2-((3,5-dimethoxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 38	2-amino-N-((1S,2S)-2-((2,3-dimethoxybenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 39	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3-phenoxybenzyl)oxy)cyclopentyl)nicotinamide
Example 40	2-amino-N-((1S,2S)-2-(benzo[d][1,3]dioxol-5-ylmethoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 41	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(methylthio)benzyl)oxy)cyclopentyl)nicotinamide
Example 42	methyl 3-((((1S,2S)-2-(2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamido)cyclopentyl)oxy)methyl)benzoate
Example 43	2-amino-N-((1S,2S)-2-((3-chlorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 44	2-amino-N-(trans-2-((3-chlorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 45	2-amino-N-(trans-2-((4-chlorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 46	2-amino-N-(trans-2-((3,4-dichlorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamid
Example 47	2-amino-N-(trans-2-((2-fluorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 48	2-amino-N-((1S,2S)-2-((3-fluorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

Example 49	2-amino-N-(trans-2-((4-bromo-2-fluorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 50	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-(trans-2-((2,4,5-trifluorobenzyl)oxy)cyclopentyl)nicotinamide
Example 51	2-amino-N-((1S,2S)-2-((3-bromobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 52	2-amino-N-(trans-2-((3-bromo-4-fluorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 53	2-amino-N-((1R,2R)-2-((3-bromo-4-fluorobenzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 54	2-amino-N-((1S,2S)-2-(1-(4-bromophenyl)ethoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 55	methyl (3-(((1S,2S)-2-(2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamido)cyclopentyl)oxy)methyl)benzoyl)glycinate
Example 56	2-amino-N-((1S,2S)-2-((3-((2-hydroxyethyl)carbamoyl)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 57	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3-(piperidine-4-carboxamido)benzyl)oxy)cyclopentyl)nicotinamide
Example 58	2-amino-N-((1S,2S)-2-((3-((S)-2-aminopropanamido)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

Example 59	N-((1S,2S)-2-((3-((S)-2-acetamidopropanamido)benzyl)oxy)cyclopentyl)-2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 60	2-amino-N-((1S,2S)-2-((3-(3-aminopropanamido)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 61	N-((1S,2S)-2-((3-(2H-1,2,3-triazol-2-yl)benzyl)oxy)cyclopentyl)-2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 62	N-((1S,2S)-2-((4-(2H-1,2,3-triazol-2-yl)benzyl)oxy)cyclopentyl)-2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 63	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-(naphthalen-2-ylmethoxy)cyclopentyl)nicotinamide
Example 64	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-(quinolin-8-ylmethoxy)cyclopentyl)nicotinamide
Example 65	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((2',3',4',5'-tetrahydro-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 66	N-(trans-2-([1,1'-biphenyl]-2-ylmethoxy)cyclopentyl)-2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 67	N-((1S,2S)-2-([1,1'-biphenyl]-3-ylmethoxy)cyclopentyl)-2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 68	N-((1S,2S)-2-([1,1'-biphenyl]-4-ylmethoxy)cyclopentyl)-2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 69	2-amino-N-((1S,2S)-2-hydroxycyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

Example 70	2-amino-N-(cis-2-hydroxycyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 71	N-((1S,2S)-2-(benzyloxy)cyclopentyl)-2-(ethylamino)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 72	N-((1S,2S)-2-(benzyloxy)cyclopentyl)-2-((3,4-dimethylbenzyl)amino)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 73	2-amino-N-((6R,7S)-6-(benzyloxy)-1,4-dioxaspiro[4.4]nonan-7-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 74	2-amino-N-(trans-2-(benzyloxy)cyclohexyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 75	2-amino-N-((1S,2S)-2-(benzyloxy)cyclohexyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 76	2-amino-N-(trans-2-(benzyl(methyl)amino)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 77	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-(phenoxymethyl)cyclopentyl)nicotinamide
Example 78	2-amino-N-((1S,2S)-2-((3,4-dimethylphenoxy)methyl)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 79	2-amino-N-(trans-2,2-difluoro-5-(phenoxymethyl)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 80	2-amino-N-((1S,2S)-2-(((2,3-dihydro-1H-inden-5-yl)oxy)methyl)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

Example 81	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3,4,5-trimethylphenoxy)methyl)cyclopentyl)nicotinamide
Example 82	2-amino-N-((1S,2S)-2-((3-(dimethylamino)phenoxy)methyl)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 83	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3-(piperidine-1-carbonyl)phenoxy)methyl)cyclopentyl)nicotinamide
Example 84	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-phenoxyphenoxy)methyl)cyclopentyl)nicotinamide
Example 85	2-amino-N-((1S,2S)-2-((benzyloxy)methyl)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 86	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-(((4'-(4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)oxy)methyl)cyclopentyl)nicotinamide
Example 87	(1S,2S)-2-(benzyloxy)cyclopentyl 2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinate
Example 88	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2R)-2-phenethylcyclopentyl)nicotinamide
Example 89	2-amino-N-(trans-4-(benzyloxy)tetrahydrofuran-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 90	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-(trans-4-morpholinotetrahydrofuran-3-yl)nicotinamide
Example 91	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-(trans-4-(pyrrolidin-1-yl)tetrahydrofuran-3-yl)nicotinamide

Example 92	2-amino-N-(cis-4-hydroxytetrahydrofuran-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 93	2-amino-N-(4-(benzyloxy)-1-methylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 94	2-amino-N-(trans-4-(benzyloxy)-1-isopropylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 95	(R)-2-amino-N-(2-(benzyloxy)propyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 96	(S)-2-amino-N-(2-(benzyloxy)propyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 97	(S)-2-amino-N-(1-(benzyloxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 98	(R)-2-amino-N-(1-(benzyloxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 99	2-amino-N-(1-(benzyloxy)-2-methylpropan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 100	(R)-2-amino-N-(1-((3,4-dimethylbenzyl)oxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 101	(S)-2-amino-N-(2-((3,4-dimethylbenzyl)oxy)propyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 102	(R)-2-amino-N-(1-((4-chlorobenzyl)oxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 103	(S)-2-amino-N-(2-((4-chlorobenzyl)oxy)propyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

Example 104	(R)-2-amino-N-(1-((3,4-dichlorobenzyl)oxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 105	(S)-2-amino-N-(2-((3,4-dichlorobenzyl)oxy)propyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 106	(R)-2-amino-N-(1-((3-methoxybenzyl)oxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 107	(S)-2-amino-N-(2-((3-methoxybenzyl)oxy)propyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 108	(R)-2-amino-N-(1-(benzyloxy)butan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 109	(S)-2-amino-N-(1-(benzyloxy)-3-methylbutan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 110	(R)-2-amino-N-(1-(benzyloxy)-3-methylbutan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 111	(S)-2-amino-N-(1-(benzyloxy)-4-methylpentan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 112	(R)-2-amino-N-(1-(benzyloxy)-4-methylpentan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 113	(R)-2-amino-N-(2-(benzyloxy)-1-cyclohexylethyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 114	(R)-2-amino-N-(1-cyclohexyl-2-hydroxyethyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 115	(S)-2-amino-N-(2-(benzyloxy)-1-phenylethyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

Example 116	(R)-2-amino-N-(2-(benzyloxy)-1-phenylethyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 117	(S)-2-amino-N-(1-(benzyloxy)-3-phenylpropan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 118	(R)-2-amino-N-(1-(benzyloxy)-3-phenylpropan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 119	(R)-2-amino-N-(1-(cyclobutylmethoxy)propan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 120	methyl N-(2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinoyl)-O-benzyl-L-serinate
Example 121	methyl N-(2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinoyl)-O-benzyl-L-threoninate
Example 122	2-amino-N-((2S,3R)-3-(benzyloxy)-1-(methylamino)-1-oxobutan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 123	2-amino-N-((2S,3R)-3-(benzyloxy)-1-oxo-1-(propylamino)butan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 124	2-amino-N-((2S,3R)-3-(benzyloxy)-1-(cyclopentylamino)-1-oxobutan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 125	2-amino-N-((2S,3R)-3-(benzyloxy)-1-oxo-1-(pyrrolidin-1-yl)butan-2-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 126	benzyl (2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinoyl)-L-alaninate
Example 127	benzyl (2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinoyl)-L-valinate
Example 128	benzyl (2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinoyl)-L-serinate

Example 129	3-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-6-(1-methyl-1H-pyrazol-4-yl)pyrazine-2-carboxamide
Example 130	3-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-6-(1-methyl-1H-pyrazol-4-yl)pyrazine-2-carboxamide
Example 131	(S)-3-amino-6-(1-methyl-1H-pyrazol-4-yl)-N-(1,2,3,4-tetrahydronaphthalen-1-yl)pyrazine-2-carboxamide
Example 132	3-amino-N-(trans-4-(benzyloxy)tetrahydrofuran-3-yl)-6-(1-methyl-1H-pyrazol-4-yl)pyrazine-2-carboxamide
Example 133	3-amino-N-(cis-4-(benzyloxy)tetrahydrofuran-3-yl)-6-(1-methyl-1H-pyrazol-4-yl)pyrazine-2-carboxamide
Example 134	2-amino-N-((1S,2S)-2-((3'-amino-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 135	2-amino-N-((1S,2S)-2-((4'-amino-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 136	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(methylamino)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 137	2-amino-N-((1S,2S)-2-((4'-(dimethylamino)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 138	2-amino-N-((1S,2S)-2-((4'-((dimethylamino)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 139	2-amino-N-((1S,2S)-2-((3'-amino-2'-methyl-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

Example 140	2-amino-N-((1S,2S)-2-((3'-hydroxy-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 141	2-amino-N-((1S,2S)-2-((3'-(hydroxymethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 142	2-amino-N-((1S,2S)-2-((4'-(hydroxymethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 143	2-amino-N-((1S,2S)-2-((4'-(aminomethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 144	2-amino-N-((1S,2S)-2-((4'-(aminomethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 145	2-amino-N-((1S,2S)-2-((4'-(2-aminoethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 146	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(4-methylpiperazin-1-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 147	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(6-(piperazin-1-yl)pyridin-3-yl)benzyl)oxy)cyclopentyl)nicotinamide
Example 148	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(6-(4-methylpiperazin-1-yl)pyridin-3-yl)benzyl)oxy)cyclopentyl)nicotinamide
Example 149	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3'-(piperazin-1-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

Example 150	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3'-(4-methylpiperazin-1-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 151	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 152	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(morpholine-4-carbonyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 153	2-amino-N-((1S,2S)-2-((4'-ethyl-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 154	2-amino-N-((1S,2S)-2-((4'-(cyanomethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 155	2-amino-N-((1S,2S)-2-((4'-carbamoyl-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 156	2-amino-N-((1S,2S)-2-((3-fluoro-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 157	2-amino-N-((1S,2S)-2-((3-fluoro-4'-((cis-3,4,5-trimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 158	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-3-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

Example 159	2-amino-N-((1S,2S)-2-((2-chloro-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 160	2-amino-N-((1S,2S)-2-((3-fluoro-4'-((cis-4-(2-hydroxyethyl)-3,5-dimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 161	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((2-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 162	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)benzyl)oxy)cyclopentyl)nicotinamide
Example 163	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)benzyl)oxy)cyclopentyl)nicotinamide
Example 164	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2R)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 165	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1R,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 166	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclohexyl)nicotinamide

Example 167	2-amino-N-((1S,2S)-2-((4'-(2-(4-methylpiperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 168	2-amino-N-((1S,2S)-2-((4'-(4-methylpiperazin-1-yl)methyl)-3-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 169	2-amino-N-((1S,2S)-2-((3'-hydroxy-[1,1'-biphenyl]-3-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 170	2-amino-N-((1S,2S)-2-((3'-amino-[1,1'-biphenyl]-3-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 171	2-amino-N-((1S,2S)-2-((3'-(hydroxymethyl)-[1,1'-biphenyl]-3-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 172	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 173	2-amino-N-((1S,2S)-2-((4'-((2-hydroxyethyl)amino)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 174	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(morpholinomethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 175	2-amino-N-((1S,2S)-2-((4'-((3,3-difluoropiperidin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

Example 176	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperidin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 177	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(piperazin-1-ylmethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 178	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-phenylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 179	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-(pyrrolidin-1-yl)piperidin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 180	2-amino-N-((1S,2S)-2-((4'-((4-hydroxypiperidin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 181	2-amino-N-((1S,2S)-2-((4'-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 182	2-amino-N-((1S,2S)-2-((4'-((4-(2-hydroxy-2-methylpropyl)piperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 183	2-amino-N-((1S,2S)-2-((4'-((4-ethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

Example 184	2-amino-N-((1S,2S)-2-((4'-((4-cyclopropylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 185	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((R)-3-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 186	2-amino-N-((1S,2S)-2-((4'-((R)-3,4-dimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 187	2-amino-N-((1S,2S)-2-((4'-((R)-2,4-dimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 188	2-amino-N-((1S,2S)-2-((4'-((3-ethyl-4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 189	2-amino-N-((1S,2S)-2-((4'-((cis-3,5-dimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 190	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((cis-3,4,5-trimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 191	2-amino-N-((1S,2S)-2-((4'-((trans-2,5-dimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

Example 192	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((2R,5S)-2,4,5-trimethylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 193	2-amino-N-((1S,2S)-2-((4'-((3-(dimethylamino)pyrrolidin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 194	3-amino-6-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)pyrazine-2-carboxamide
Example 195	2-amino-N-((1S,2S)-2-((3'-fluoro-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 196	2-amino-N-((1S,2S)-2-((3',5'-difluoro-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 197	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 198	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3'-methyl-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 199	2-amino-N-((1S,2S)-2-((3'-hydroxy-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

Example 200	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-3'-nitro-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 201	2-amino-N-((1S,2S)-2-((3'-methoxy-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 202	2-amino-N-((1S,2S)-2-((2'-chloro-4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 203	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(6-((4-methylpiperazin-1-yl)methyl)pyridin-3-yl)benzyl)oxy)cyclopentyl)nicotinamide
Example 204	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(5-((4-methylpiperazin-1-yl)methyl)pyridin-2-yl)benzyl)oxy)cyclopentyl)nicotinamide
Example 205	2-amino-N-((1S,2S)-2-((4'-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 206	2-amino-N-((1S,2S)-2-((2'-chloro-4'-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 207	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

Example 208	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 209	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(1-((3S,5R)-3,4,5-trimethylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 210	2-amino-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 211	2-amino-N-((1S,2S)-2-((4'-(1-((3S,5R)-4-(2-hydroxyethyl)-3,5-dimethylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 212	2-amino-N-((1S,2S)-2-((3',5'-difluoro-4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 213	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((R)-1-(piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 214	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((R)-1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 215	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((S)-1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

Example 216	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)cyclopropyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 217	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(2-(4-methylpiperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 218	2-amino-N-((1S,2S)-2-((4'-((R)-1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 219	2-amino-N-((1S,2S)-2-((4'-((S)-1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 220	2-amino-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)cyclopropyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 221	2-amino-N-((1S,2S)-2-((4'-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 222	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-((S)-1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 223	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-((R)-1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide

Example 224	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)cyclopropyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 225	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(2-(4-methylpiperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 226	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-((S)-1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 227	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-((R)-1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 228	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)cyclopropyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 229	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 230	6-amino-5'-fluoro-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 231	2-amino-5-chloro-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

Example 232	2-amino-5-fluoro-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 233	2-amino-5-cyano-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 234	2-amino-6-chloro-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 235	2-amino-N-((1S,2S)-2-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 236	6-amino-5'-fluoro-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 237	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 238	6-amino-2'-fluoro-N-((1S,2S)-2-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 239	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-(1-(4-methylpiperidin-4-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 240	2-amino-N-((1S,2S)-2-((4'-(1-(2-hydroxyethyl)piperidin-4-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

Example 241	methyl 2-(4-((4'-(((1S,2S)-2-(2-amino-5-(1-methyl-1H-pyrazol-4-yl)nicotinamido)cyclopentyl)oxy)methyl)-[1,1'-biphenyl]-4-yl)methyl)piperidin-1-yl)acetate
Example 242	2-amino-N-((1S,2S)-2-((4'-((1-(2-amino-2-oxoethyl)piperidin-4-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 243	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(3-(4-methylpiperazin-1-yl)propyl)benzyl)oxy)cyclopentyl)nicotinamide
Example 244	2-amino-N-((1S,2S)-2-((4-(3-(dimethylamino)propyl)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 245	2-amino-N-((1S,2S)-2-((4'-(2-(dimethylamino)ethoxy)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 246	2-amino-N-((1S,2S)-2-((4'-(3-(dimethylamino)propoxy)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 247	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4'-((1-methylpiperidin-4-yl)oxy)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 248	2-amino-N-((1S,2S)-2-((4-(3-(dimethylamino)prop-1-yn-1-yl)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

Example 249	2-amino-N-((1S,2S)-2-((4-(4-hydroxybut-1-yn-1-yl)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 250	2-amino-N-((1S,2S)-2-((4-(5-hydroxypent-1-yn-1-yl)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 251	2-amino-N-((1S,2S)-2-((4-(6-hydroxyhex-1-yn-1-yl)benzyl)oxy)cyclopentyl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 252	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((4-(4-methylpiperazin-1-yl)but-1-yn-1-yl)benzyl)oxy)cyclopentyl)nicotinamide
Example 253	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(4-((4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide
Example 254	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 255	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 256	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(1-(1-ethylpiperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 257	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(1-(1-isopropylpiperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 258	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(1-(1-(pyrrolidin-3-ylmethyl)piperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide

Example 259	2-amino-N-((1R,2R)-2-(benzyloxy)cyclopentyl)-5-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 260	2-amino-N-((1S,2S)-2-((3,4-dichlorobenzyl)oxy)cyclopentyl)-5-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 261	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(3-(hydroxymethyl)-1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 262	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(3-((2-hydroxyethyl)amino)methyl)-1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 263	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(3-((3-hydroxypiperidin-1-yl)methyl)-1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 264	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(4-cyanophenyl)nicotinamide
Example 265	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(3-cyanophenyl)nicotinamide
Example 266	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(4-(cyanomethyl)phenyl)nicotinamide
Example 267	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(4-phenoxyphenyl)nicotinamide
Example 268	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-5-(3-((1-methylpiperidin-4-yl)carbonyl)phenyl)nicotinamide
Example 269	6-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-6'-(hydroxymethyl)-[3,3'-bipyridine]-5-carboxamide

Example 270	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-((4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide
Example 271	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(3-(4-methylpiperazine-1-carbonyl)phenyl)nicotinamide
Example 272	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(3-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)nicotinamide
Example 273	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(3-((4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide
Example 274	2-amino-5-(3-fluoro-4-((4-methylpiperazin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)nicotinamide
Example 275	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-((4-(pyrrolidin-1-yl)piperidin-1-yl)methyl)phenyl)nicotinamide
Example 276	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(4-methylpiperazine-1-carbonyl)phenyl)nicotinamide
Example 277	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)nicotinamide
Example 278	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(2-((1-methylpiperidin-4-yl)amino)-2-oxoethyl)phenyl)nicotinamide
Example 279	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(2-(4-methylpiperazin-1-yl)acetyl)phenyl)nicotinamide
Example 280	2-amino-5-(3-fluoro-4-((4-(pyrrolidin-1-yl)piperidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)nicotinamide

Example 281	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(4-methylpiperazin-1-yl)piperidine-1-carbonyl)phenyl)nicotinamide
Example 282	2-amino-N-((1S,2S)-2-((3-methylbenzyl)oxy)cyclopentyl)-5-(4-(piperazin-1-ylmethyl)phenyl)nicotinamide
Example 283	2-amino-N-((1S,2S)-2-((4-methylbenzyl)oxy)cyclopentyl)-5-(4-(4-methylpiperazine-1-carbonyl)phenyl)nicotinamide
Example 284	2-amino-N-((1S,2S)-2-((4-methylbenzyl)oxy)cyclopentyl)-5-(4-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)nicotinamide
Example 285	2-amino-5-(1,5-dimethyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 286	2-amino-5-(1,3-dimethyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 287	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(2-(2-hydroxypropan-2-yl)-4-methylthiazol-5-yl)nicotinamide
Example 288	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(2-(3-hydroxytetrahydrofuran-3-yl)-4-methylthiazol-5-yl)nicotinamide
Example 289	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide
Example 290	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(2-(4-methylpiperazin-1-yl)-2-oxoethyl)phenyl)nicotinamide
Example 291	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(morpholinomethyl)phenyl)nicotinamide
Example 292	2-amino-5-(4-((dimethylamino)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

Example 293	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((4-(2-hydroxyethyl)piperazin-1-yl)methyl)phenyl)nicotinamide
Example 294	6-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-2'-methoxy-[3,3'-bipyridine]-5-carboxamide
Example 295	2-amino-5-(4-(dimethylamino)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 296	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-hydroxyphenyl)nicotinamide
Example 297	2-amino-5-(3-aminophenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 298	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(methylsulfonamido)phenyl)nicotinamide
Example 299	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(hydroxymethyl)phenyl)nicotinamide
Example 300	2-amino-5-(3-(aminomethyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 301	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(3-hydroxypropyl)phenyl)nicotinamide
Example 302	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(((1R,4S)-4-hydroxycyclohexyl)amino)methyl)phenyl)nicotinamide
Example 303	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(((1-methylpiperidin-4-yl)amino)methyl)phenyl)nicotinamide
Example 304	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(((S)-piperidin-3-yl)amino)methyl)phenyl)nicotinamide

Example 305	3-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)-5-hydroxybenzoic acid
Example 306	4-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)-2-methylbenzoic acid
Example 307	2-amino-5-(4-aminophenyl)-N-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 308	3-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)benzoic acid
Example 309	3-amino-5-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)benzoic acid
Example 310	2-amino-N-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(2-methyl-5-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)nicotinamide
Example 311	2-amino-N-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-methyl-4-(4-methylpiperazine-1-carbonyl)phenyl)nicotinamide
Example 312	2-amino-5-(3-amino-5-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)-N-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 313	2-amino-N-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(hydroxymethyl)phenyl)nicotinamide

Example 314	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-formylphenyl)nicotinamide
Example 315	4-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)benzoic acid
Example 316	3-(4-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)phenyl)propanoic acid
Example 317	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(2-hydroxyphenyl)nicotinamide
Example 318	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((1-methylpiperidin-4-yl)carbamoyl)phenyl)nicotinamide
Example 319	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(dimethylcarbamoyl)phenyl)nicotinamide
Example 320	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(((1-methylpiperidin-4-yl)amino)methyl)phenyl)nicotinamide
Example 321	6-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-6'-(hydroxymethyl)-[3,3'-bipyridine]-5-carboxamide
Example 322	2-amino-4-(6-amino-5-(((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)carbamoyl)pyridin-3-yl)benzoic acid
Example 323	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(hydroxymethyl)-3-methoxyphenyl)nicotinamide

Example 324	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-fluoro-4-(hydroxymethyl)phenyl)nicotinamide
Example 325	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-fluoro-4-((4-(pyrrolidin-1-yl)piperidin-1-yl)methyl)phenyl)nicotinamide
Example 326	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(1-hydroxyethyl)phenyl)nicotinamide
Example 327	2-amino-5-(4-((3-(dimethylamino)pyrrolidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 328	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((4-hydroxypiperidin-1-yl)methyl)phenyl)nicotinamide
Example 329	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(((1-methylpiperidin-4-yl)methyl)amino)methyl)phenyl)nicotinamide
Example 330	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-methyl-4-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)nicotinamide
Example 331	2-amino-5-(3-amino-4-(4-(pyrrolidin-1-yl)piperidine-1-carbonyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 332	2-amino-5-(3-amino-4-((4-(pyrrolidin-1-yl)piperidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

Example 333	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(hydroxymethyl)-3-methylphenyl)nicotinamide
Example 334	2-amino-5-(3-chlorophenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 335	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(m-tolyl)nicotinamide
Example 336	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3,5-dimethylphenyl)nicotinamide
Example 337	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((3-morpholinopyrrolidin-1-yl)methyl)phenyl)nicotinamide
Example 338	2-amino-5-(4-((4-aminopiperidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 339	2-amino-5-(4-((3-aminopiperidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 340	2-amino-5-(4-((3-aminopyrrolidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 341	2-amino-5-(4-((3-aminopyrrolidin-1-yl)methyl)-3-fluorophenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 342	2-amino-5-(4-((3-aminopyrrolidin-1-yl)methyl)-3-fluorophenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 343	2-amino-5-(3-((3-(dimethylamino)pyrrolidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

Example 344	2-amino-5-(3-((3-(dimethylamino)pyrrolidin-1-yl)methyl)-4-methoxyphenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 345	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((3-hydroxyazetidin-1-yl)methyl)phenyl)nicotinamide
Example 346	2-amino-5-(4-(((R)-3-(dimethylamino)pyrrolidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 347	2-amino-5-(4-(((S)-3-(dimethylamino)pyrrolidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 348	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(((R)-3-hydroxypyrrolidin-1-yl)methyl)phenyl)nicotinamide
Example 349	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-(((S)-3-hydroxypyrrolidin-1-yl)methyl)phenyl)nicotinamide
Example 350	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-((3-hydroxypiperidin-1-yl)methyl)phenyl)nicotinamide
Example 351	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-hydroxyphenyl)nicotinamide
Example 352	2-amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(4-hydroxy-3-methoxyphenyl)nicotinamide
Example 353	2-amino-5-(3,4-dimethoxyphenyl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide

Example 354	amino-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)-5-(3-(pyrrolidin-1-yl)phenyl)nicotinamide
Example 355	2-amino-5-(5-amino-1-methyl-1H-pyrazol-4-yl)-N-((1S,2S)-2-((3,4-dimethylbenzyl)oxy)cyclopentyl)nicotinamide
Example 356	2-amino-N-((1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentyl)-5-(4-(hydroxymethyl)phenyl)nicotinamide
Example 357	2-amino-5-(4-((3-(dimethylamino)pyrrolidin-1-yl)methyl)phenyl)-N-((1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentyl)nicotinamide
Example 358	2-amino-N-((1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentyl)-5-(4-((3-hydroxypyrrolidin-1-yl)methyl)phenyl)nicotinamide
Example 359	2-amino-N-((1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentyl)-5-(4-(2-(piperazin-1-yl)propan-2-yl)phenyl)nicotinamide
Example 360	2-amino-N-((1S,2S)-2-((3-ethyl-4-methylbenzyl)oxy)cyclopentyl)-5-(4-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)phenyl)nicotinamide
Example 361	3-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-6-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)pyrazine-2-carboxamide
Example 362	(S)-3-amino-6-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)-N-(1,2,3,4-tetrahydronaphthalen-1-yl)pyrazine-2-carboxamide
Example 363	2-amino-5-(4-fluorophenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 364	2-amino-5-(3,4-difluorophenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

Example 365	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-(trifluoromethyl)phenyl)nicotinamide
Example 366	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 367	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-(4-methylpiperazin-1-yl)phenyl)nicotinamide
Example 368	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-((4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide
Example 369	2-amino-5-(4-(hydroxymethyl)phenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 370	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(m-tolyl)nicotinamide
Example 371	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-phenylnicotinamide
Example 372	2-amino-5-(4-hydroxyphenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 373	2-amino-5-(4-chloro-3-fluorophenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide

Example 374	2-amino-5-methyl-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 375	6-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 376	2-amino-5-(4-methoxyphenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 377	6-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,4'-bipyridine]-5-carboxamide
Example 378	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-((4-methylpiperidin-1-yl)methyl)phenyl)nicotinamide
Example 379	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-(morpholinomethyl)phenyl)nicotinamide
Example 380	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-(tetrahydro-2H-pyran-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 381	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-morpholinophenyl)nicotinamide

Example 382	2-amino-5-(cyclohex-1-en-1-yl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 383	2-amino-5-(3,4-dimethoxyphenyl)-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)nicotinamide
Example 384	6-amino-2',6'-difluoro-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,4'-bipyridine]-5-carboxamide
Example 385	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(4-methylthiophen-3-yl)nicotinamide
Example 386	6-amino-6'-fluoro-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-[3,3'-bipyridine]-5-carboxamide
Example 387	2-amino-N-((1S,2S)-2-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)cyclopentyl)-5-(1-(1,1,2,2-tetrafluoroethyl)-1H-pyrazol-4-yl)nicotinamide
Example 388	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 389	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-(hydroxymethyl)phenyl)nicotinamide
Example 390	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-((4-methylpiperazin-1-yl)methyl)phenyl)nicotinamide

Example 391	2-amino-5-(4-carbamoylphenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide
Example 392	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(m-tolyl)nicotinamide
Example 393	4-(6-amino-5-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)carbamoyl)pyridin-3-yl)benzoic acid
Example 394	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-phenylnicotinamide
Example 395	6-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-[3,4'-bipyridine]-5-carboxamide
Example 396	6-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-[3,3'-bipyridine]-5-carboxamide
Example 397	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-vinylnicotinamide
Example 398	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-fluorophenyl)nicotinamide
Example 399	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-formylphenyl)nicotinamide
Example 400	2-amino-5-(4-cyanophenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide
Example 401	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-(methylsulfonamido)phenyl)nicotinamide
Example 402	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-phenoxyphenyl)nicotinamide

Example 403	5-([1,1'-biphenyl]-4-yl)-2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide
Example 404	2-amino-5-(4-(benzyloxy)phenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide
Example 405	2-amino-5-(4-(dimethylamino)phenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide
Example 406	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(quinolin-3-yl)nicotinamide
Example 407	2-amino-5-(benzofuran-2-yl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide
Example 408	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(naphthalen-1-yl)nicotinamide
Example 409	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-(trifluoromethyl)phenyl)nicotinamide
Example 410	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(2,4,5-trifluorophenyl)nicotinamide
Example 411	2-amino-5-(4-(cyanomethyl)phenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide
Example 412	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-(piperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 413	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 414	2-amino-N-((3S,4S)-4-(benzyloxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

Example 415	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-4-((4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide
Example 416	2-amino-N-((3S,4S)-4-((3-ethylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 417	2-amino-N-((3S,4S)-4-((3-ethyl-4-fluorobenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 418	2-amino-N-((3S,4S)-4-((4-chloro-3-ethylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 419	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-((1-methylpiperidin-4-yl)carbamoyl)phenyl)nicotinamide
Example 420	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-((4-methylcyclohexyl)carbamoyl)phenyl)nicotinamide
Example 421	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-(4-methylpiperidine-1-carbonyl)phenyl)nicotinamide
Example 422	2-amino-5-(4-(dimethylcarbamoyl)phenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide
Example 423	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-((4-methylpiperidin-1-yl)methyl)phenyl)nicotinamide
Example 424	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(4-(morpholinomethyl)phenyl)nicotinamide
Example 425	2-amino-5-(4-((3,3-difluoropiperidin-1-yl)methyl)phenyl)-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)nicotinamide

Example 426	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)-1-methylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 427	2-amino-N-((3S,4S)-1-benzyl-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 428	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)-1-(3-phenylpropyl)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 429	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)-1-phenethylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 430	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)-1-isobutylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 431	2-amino-N-((3S,4S)-1-butyl-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 432	2-amino-N-((3S,4S)-1-ethyl-4-((3-ethyl-4-methylbenzyl)oxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 433	2-amino-N-((3S,4S)-4-((3-ethyl-4-methylbenzyl)oxy)-1-methylpyrrolidin-3-yl)-5-(1-(1-methylpiperidin-4-yl)-1H-pyrazol-4-yl)nicotinamide
Example 434	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-4-((4'-(4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)nicotinamide

Example 435	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-1-methyl-4-((4'-((4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)nicotinamide
Example 436	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-4-((4'-((4-methylpiperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)nicotinamid
Example 437	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-1-methyl-4-((4'-((4-methylpiperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)nicotinamide
Example 438	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-4-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)nicotinamide
Example 439	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4S)-1-methyl-4-((4'-(1-(4-methylpiperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)nicotinamide
Example 440	2-amino-N-((3S,4S)-4-((4'-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 441	2-amino-N-((3S,4S)-4-((4'-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)-1-methylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 442	2-amino-N-((3S,4S)-4-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide

Example 443	2-amino-N-((3S,4S)-4-((4'-(1-(4-(2-hydroxyethyl)piperazin-1-yl)ethyl)-[1,1'-biphenyl]-4-yl)methoxy)-1-methylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 444	2-amino-N-((3S,4S)-4-((4'-(4-(2-hydroxyethyl)piperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 445	2-amino-N-((3S,4S)-4-((4'-(4-(2-hydroxyethyl)piperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)-1-methylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 446	2-amino-N-((3S,4S)-4-((4'-(4-(2-hydroxyethyl)piperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)pyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 447	2-amino-N-((3S,4S)-4-((4'-(4-(2-hydroxyethyl)piperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)-1-methylpyrrolidin-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 448	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4R)-4-((4'-(4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)nicotinamide
Example 449	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4R)-4-((4'-(4-methylpiperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)nicotinamide

Example 450	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-((3S,4R)-4-((4'-(2-(4-methylpiperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)nicotinamide
Example 451	2-amino-N-((3S,4R)-4-((4'-(4-(2-hydroxyethyl)piperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 452	2-amino-N-((3S,4R)-4-((4'-(4-(2-hydroxyethyl)piperazin-1-yl)methyl)-3'-(trifluoromethyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 453	2-amino-N-((3S,4R)-4-((4'-(2-(4-(2-hydroxyethyl)piperazin-1-yl)propan-2-yl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)-5-(1-methyl-1H-pyrazol-4-yl)nicotinamide
Example 454	2-amino-5-(1-methyl-1H-pyrazol-4-yl)-N-(trans-4-((4'-(4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)nicotinamide
Example 455	2-amino-N-(trans-4-((4'-(4-methylpiperazin-1-yl)methyl)-[1,1'-biphenyl]-4-yl)methoxy)tetrahydrofuran-3-yl)nicotinamide
Example 456	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-6-((4-(4-methylpiperazin-1-yl)methyl)phenyl)amino)nicotinamide
Example 457	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-6-(phenylamino)nicotinamide
Example 458	2-amino-N-((1S,2S)-2-(benzyloxy)cyclopentyl)-6-((4-(4-methylpiperazin-1-yl)phenyl)amino)nicotinamide

[Claim 5] Pharmaceutical compositions comprising the heterocyclic compounds, the stereoisomer thereof, the enantiomer thereof, or the pharmaceutically acceptable salt thereof according to any one of claims 1 to 4 together with pharmaceutically acceptable carriers.

[Claim 6] The pharmaceutical compositions of claim 5, wherein the compositions comprise, as active ingredients, the heterocyclic compounds, the stereoisomer thereof, the enantiomer thereof, or the pharmaceutically acceptable salt thereof and are used for prevention or treatment of a disease which is influenced by inhibition of Mer kinase.

[Claim 7] The pharmaceutical compositions of claim 5, the disease which is influenced by inhibition of Mer kinase is cancer or immune-related diseases.

[Claim 8] The pharmaceutical compositions of claim 7, the cancer is selected

from the group consisting of: glioma, gliosarcoma, anaplastic astrocytoma, medulloblastoma, lung cancer, small cell lung carcinoma, cervical carcinoma, colon cancer, rectal cancer, chordoma, throat cancer, Kaposi's sarcoma, lymphangiosarcoma, lymphangioendotheliosarcoma, colorectal cancer, endometrium cancer, ovarian cancer, breast cancer, pancreatic cancer, prostate cancer, renal cell carcinoma, hepatic carcinoma, bile duct carcinoma, choriocarcinoma, seminoma, testicular tumor, Wilms' tumor, Ewing's tumor, bladder carcinoma, angiosarcoma, endotheliosarcoma, adenocarcinoma, sweat gland carcinoma, sebaceous gland sarcoma, papillary sarcoma, papillary adenocarcinoma, cystadenocarcinoma, bronchogenic carcinoma, medullary carcinoma, mastocytoma, mesothelioma, synovial sarcoma, melanoma, leiomyosarcoma, rhabdomyosarcoma, neuroblastoma, retinoblastoma, oligodendroglioma, acoustic neuroma, hemangioblastoma, meningioma, pinealoma, ependymoma, craniopharyngioma, epithelial carcinoma, embryonal carcinoma, squamous cell carcinoma, basal cell carcinoma, fibrosarcoma, myxoma, myxosarcoma, liposarcoma, chondrosarcoma, osteogenic sarcoma, leukemia and metastatic lesions secondary to these primary tumors.

- [Claim 9] The pharmaceutical compositions of claim 7, the immune-related diseases are selected from the group consisting of infection and sepsis.
- [Claim 10] A method of treating or preventing immune-related diseases or cancer, the method comprising administering to a mammal including humans in need thereof compositions comprising, as active ingredients, the heterocyclic compounds, isomers thereof or pharmaceutically acceptable salts thereof according to any one of claims 1 to 4.
- [Claim 11] Use of compositions comprising, as active ingredients, the heterocyclic compounds, the stereoisomer thereof, the enantiomer thereof, or the pharmaceutically acceptable salt thereof according to any one of claims 1 to 4, for preparation of medicaments for preventing or treating cancer or immune-related diseases.

A. CLASSIFICATION OF SUBJECT MATTER**C07D 401/04(2006.01)i, C07D 403/04(2006.01)i, A61K 31/4439(2006.01)i, A61K 31/497(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

C07D 401/04; A61K 31/497; C07D 43/02; C07D 519/00; C07D 213/80; A61K 31/55; A61K 35/28; C07D 213/82; C07D 403/04; A61K 31/4439

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal), STN(Registry, Caplus), Google & Keywords: heterocyclic compound, Mer kinase, nicotinamide, pyrazine carboxamide, cancer, immune-related disease, infection, sepsis**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2004-0180905 A1 (MUNCHHOF, M. J.) 16 September 2004	1-8, 11
Y	See abstract; claims 1, 5, 8, 12; paragraphs [0056]-[0059]; tables 1-2.	9
X	WO 2004-054977 A1 (CYTOPIA PTY LTD) 01 July 2004	1, 4-8, 11
Y	See abstract; claims 1, 3-6; pages 8-10, 22-25, 51; tables 1-2.	9
A		2-3
Y	US 2013-0209422 A1 (KANG, K. S. et al.) 15 August 2013	9
	See paragraphs [0009], [0057]-[0059].	
A	WO 03-093297 A2 (EXELIXIS, INC.) 13 November 2003	1-9, 11
	See abstract; claims 1, 42; paragraphs [0031]-[0035]; table 10.	
A	RAHMANI, R. et al., "6-Arylpyrazine-2-carboxamides: A New Core for Trypanosoma brucei Inhibitors", J. Med. Chem., 06 August 2015, Vol. 58, No. 17, pages 6753-6765.	1-9, 11
	See pages 6753, 6759.	
A	WO 2008-009122 A1 (AFFINIUM PHARMACEUTICALS, INC.) 24 January 2008	1-9, 11
	See abstract; page 96.	



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

08 December 2016 (08.12.2016)

Date of mailing of the international search report

09 December 2016 (09.12.2016)

Name and mailing address of the ISA/KR

International Application Division

Korean Intellectual Property Office

189 Cheongsa-ro, Seo-gu, Daejeon, 35208, Republic of Korea

Facsimile No. +82-42-481-8578

Authorized officer

PARK, Jung Min

Telephone No. +82-42-481-3516



Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 10
because they relate to subject matter not required to be searched by this Authority, namely:
Claim 10 pertains to a method for treatment of the human body by surgery or therapy, and thus relate to a subject matter which this International Searching Authority is not required to search (PCT Article 17(2)(a)(i) and PCT Rule 39.1(iv)).
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of any additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2016/009743

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

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