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(54) Title: AMINOPYRIMIDINE KINASE INHIBITORS

(57) Abrégé/Abstract:
Disclosed are compounds, pharmaceutical compositions containing those compounds, and uses of the compounds and compositions as modulators of casein kinase 1 (e.g., CKI_Y), casein kinase 2 (CK2), Pim-1, Pim-2, Pim-3, the TGFPβ pathway, the Wnt pathway, the JAK/STAT pathway, and/or the mTOR pathway. Uses are also disclosed for the treatment or prevention of a range of therapeutic indications due at least in part to aberrant physiological activity of casein kinase 1 (e.g., CKI_Y), casein kinase 2 (CK2), Pim- 1, Pim-2, Pim-3, the TGFPβ pathway, the Wnt pathway, the JAK/STAT pathway, and/or the mTOR pathway.

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(54) Title: AMINOPYRIMIDINE KINASE INHIBITORS

(57) Abstract: Disclosed are compounds, pharmaceutical compositions containing those compounds, and uses of the compounds and compositions as modulators of casein kinase 1 (e.g., $CK1_Y$), casein kinase 2 (CK2), Pim-1, Pim-2, Pim-3, the TGFPβ pathway, the Wnt pathway, the JAK/STAT pathway, and/or the mTOR pathway. Uses are also disclosed for the treatment or prevention of a range of therapeutic indications due at least in part to aberrant physiological activity of casein kinase 1 (e.g., $CK1_Y$), casein kinase 2 (CK2), Pim- 1, Pim-2, Pim-3, the TGFPβ pathway, the Wnt pathway, the JAK/STAT pathway, and/or the mTOR pathway.

AMINOPYRIMIDINE KINASE INHIBITORS

BACKGROUND OF THE INVENTION

Casein kinase 1 (CK1) is a family of evolutionarily conserved serine/threonine kinases including seven known members in vertebrates (CK1α, -β, -γ1, -γ2, -γ3, -δ and -ε). The CK1s contain a typical kinase domain followed by a C-terminal tail region, which has been implicated in the regulation of CK1 localization, substrate selectivity and kinase activity. Myriad proteins have been found to be phosphorylated by CK1s, which are involved in a wide range of cellular functions including vesicular trafficking, DNA damage repair, cell cycle progression, cytokinesis and circadian rhythms (reviewed by Gross and Anderson, "Casein Kinase I: Spatial Organization and Positioning of a Multifunctional Protein Kinase Family", *Cellular Signalling*, 10.10 (1998): 699-711; Vielhaber and Virshup, "Casein Kinase I: From Obscurity to Center Stage", *IUBMB Life*, 51 (2001): 73-78 and Knippschild et al. "The casein kinase 1 family: participation in multiple cellular processes in eukaryotes", *Cellular Signalling*, 17.6 (2005): 675-689). Moreover, CK1 family members (-α, -δ/ε and -γ) modulate the activities of major signaling pathways (for example, Wnt and Shh) through several mechanisms (Peters et al. "Casein kinase I transduces Wnt signals", *Nature*, 401 (1999): 345-350, Liu et al. "Control of β-catenin phosphorylation/degradation by a dual-kinase mechanism", *Cell*, 108 (2002): 837-847, Price and Kalderon, "Proteolysis of Cubitus interruptus in *Drosophila* requires phosphorylation by protein kinase A", *Development*, 126 (1999): 4331-4339, Davidson et al. " Casein kinase 1γ couples Wnt receptor activation to cytoplasmic signal transduction", *Nature*, 438 (2005): 867-872, Zeng et al. "A dual-kinase mechanism for Wnt co-receptor phosphorylation and activation", *Nature*, 438 (2005): 873-877 and reviewed by Price "CKI, there's more than one: casein kinase I family members in Wnt and Hedgehog signaling", *Genes and Development*, 20 (2006): 399-410).

In mammals seven CK1 isoforms, namely CK1α, β, γ_{1-3}, δ and ε, and several splice variants have been described. They all contain a highly conserved kinase domain, a short N-terminal domain of 6 to 76 amino acids and a highly variable C-terminal domain of 24 to more than 200 amino acids. The constitutive phosphotransferase activity of CK1 isoforms is tightly controlled by several mechanisms. For example, the closely related isoforms CK1δ and ε, which share a 98% identity at the amino acid level in their catalytic domain, are regulated by autophosphorylation, dephosphorylation and proteolytic cleavage. Members of the CK1 family are found in the nucleus, the cytoplasm and in the plasma membrane. By phosphorylating many different substrates bearing either a canonical or non-canonical consensus sequence, they modulate the activity of key regulator proteins involved in many cellular processes such as cell differentiation, cell proliferation, apoptosis, circadian rhythm, chromosome segregation, and vesicle transport.

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The Pim kinase family contains three isoforms, Pim-1, Pim-2 and Pim-3, and has recently emerged as targets of interest in oncology and immune regulation. Ongoing studies have identified a role for these proteins in cell survival and proliferation, both functionally and mechanistically, and overexpression has been observed in a number of human cancers and inflammatory states.

Pim kinases suppress apoptosis and regulate cell-cycle progression. Elevated levels of Pim kinases have been reported in solid tumors such as prostate cancer and pancreatic cancer. Pim-1 was initially discovered in murine leukemia and several independent studies have shown this kinase to be upregulated in human prostate cancer. Pim-1, 2 and 3 make up a distinct and highly homologous family of serine/threonine kinases belonging to the calmodulin-dependent protein kinase-related (CAMK) family. In addition to the three gene-encoded proteins, translational variants have also been reported for Pim-1 and 2 resulting from utilization of alternative start codons. The name Pim refers to the original identification of the *pim-1* gene as a frequent proviral insertion site in Moloney murine leukemia virus-induced T-cell lymphomas, and the gene encoding Pim-2 was subsequently found to have similar susceptibility. Pim-3, originally designated kinase induced by depolarization (KID)-1, was later renamed due to high sequence similarity to Pim-1 (71% identity at the amino acid level). Considering all three isoforms, Pim proteins are widely expressed with high levels in hematopoietic tissue and are aberrantly expressed in a variety of human malignancies. Pim kinases positively regulate cell survival and proliferation, affording therapeutic opportunities in oncology. The Pim protein kinases are frequently overexpressed in prostate cancer and certain forms of leukemia and lymphoma.

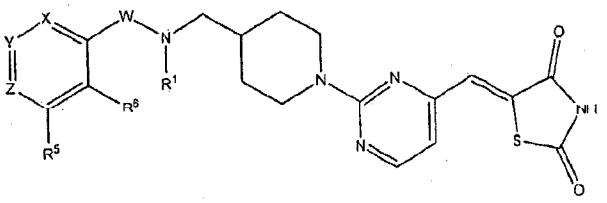
A role for Pim kinases in immune regulation has also been observed. Pim-2 has been reported to have enhanced levels of expression in a variety of inflammatory states and may function as a positive regulator of interleukin-6 (IL-6), whereby overexpression of the kinase augments stimulus-induced IL-6 levels. Pim-1 and 2 have also been implicated in cytokine-induced T-cell growth and survival. Comparing the sensitivity of stimulated T cells from Pim-$1^{-/-}$Pim-$2^{-/-}$ mice to wild-type mice following treatment with the immunosuppressant rapamycin, it was found that T-cell activation was significantly impaired by Pim-1/Pim-2 deficiency, suggesting that Pim kinases promote lymphocyte growth and survival through a PI3K/AKT (PKB, protein kinase B)/mammalian target of rapamycin (mTOR)-independent pathway. Other parallel but independent functions and overlapping substrate specificity for proteins in these pathways have been reported as well,

including the positive regulation of transcription of nuclear factor kappa-B (NF-κB)-responsive genes, which have implications in both inflammation and oncology. Therefore, Pim kinases are attractive targets for both therapeutic areas.

Further, Pim kinases have been reported to play a role in the protection of the ATP-binding cassette (ABC) transporter P-glycoprotein (Pgp; ABCB1) from proteolytic and proteasomal degradation. Pgp is known to mediate drug efflux, and, as such, inhibitors of Pim kinases may provide a novel approach to abrogating drug resistance.

SUMMARY OF THE INVENTION

An aspect of the present invention relates to compounds that inhibit casein kinase 1 and/or casein kinase 2 and/or a PIM kinase. For example, an embodiment relates to a compound of formula 1 or a pharmaceutically acceptable salt thereof:



1

wherein independently for each occurrence:

W is $C(R^1)_2$, $C(R^1)_2C(R^1)_2$, $C(R^1)_2C(R^1)_2C(R^1)_2$, or $S(O)_2$;

X is nitrogen or CR^2;

Y is nitrogen or CR^3;

Z is nitrogen or CR^4;

R^1 is hydrogen or alkyl;

R^2 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, trifluoromethyl, perfluoroalkyl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, halo, hydroxy, alkoxy, trifluoromethoxy, hydroxyalkyl, and alkoxyalkyl;

R^3 and R^4 are each independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, trifluoromethyl, perfluoroalkyl, heterocyclylalkyl, aralkyl, heteroaryl,

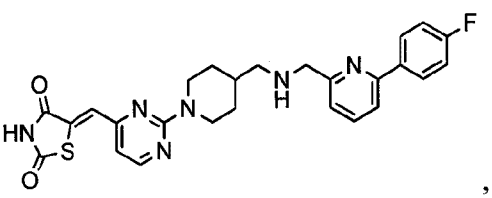
heteroaralkyl, halo, hydroxy, alkoxy, trifluoromethoxy, hydroxyalkyl, and alkoxyalkyl; or R^3 and R^4 are joined together to form an optionally substituted heterocyclic ring;

R^5 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, trifluoromethyl, perfluoroalkyl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, halo, hydroxy, alkoxy, trifluoromethoxy, hydroxyalkyl, and alkoxyalkyl;

R^6 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, trifluoromethyl, perfluoroalkyl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, halo, hydroxy, alkoxy, trifluoromethoxy, hydroxyalkyl, and alkoxyalkyl;

wherein any one of the aforementioned alkyl, alkenyl, alkynyl, aryl, heteroaryl, heterocyclyl, aralkyl, heteroaralkyl, and heterocyclylalkyl may be optionally substituted;

wherein the compound is not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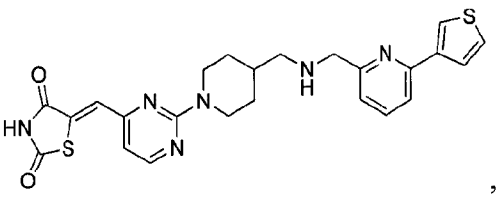
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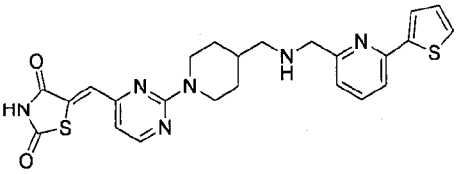
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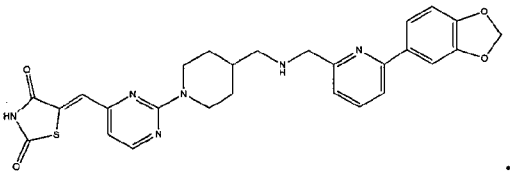
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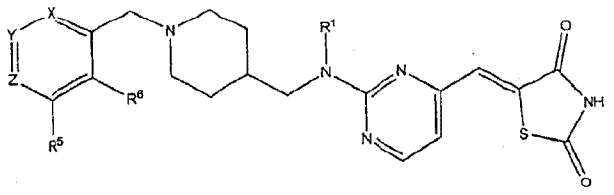
An embodiment relates to a compound of formula 2 or a pharmaceutically acceptable salt thereof:



2

wherein independently for each occurrence:

X is nitrogen or CR^2;

Y is nitrogen or CR^3;

Z is nitrogen or CR^4;

R^1 is hydrogen or alkyl;

R^2 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, trifluoromethyl, perfluoroalkyl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, halo, hydroxy, alkoxy, trifluoromethoxy, hydroxyalkyl, and alkoxyalkyl;

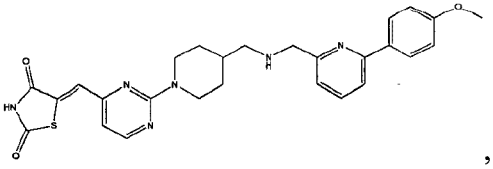
R^3 and R^4 are each independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, trifluoromethyl, perfluoroalkyl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, halo, hydroxy, alkoxy, trifluoromethoxy, hydroxyalkyl, and alkoxyalkyl; or R^3 and R^4 are joined together to form an optionally substituted heterocyclic ring;

R^5 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, trifluoromethyl, perfluoroalkyl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, halo, hydroxy, alkoxy, trifluoromethoxy, hydroxyalkyl, and alkoxyalkyl;

R^6 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, trifluoromethyl, perfluoroalkyl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, halo, hydroxy, alkoxy, trifluoromethoxy, hydroxyalkyl, and alkoxyalkyl;

wherein any one of the aforementioned alkyl, alkenyl, alkynyl, aryl, heteroaryl, heterocyclyl, aralkyl, heteroaralkyl, and heterocyclylalkyl may be optionally substituted.

An aspect of the invention relates to a compound, or a pharmaceutically acceptable salt thereof, selected from the group consisting of: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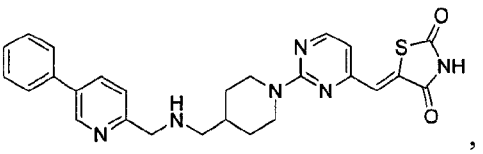
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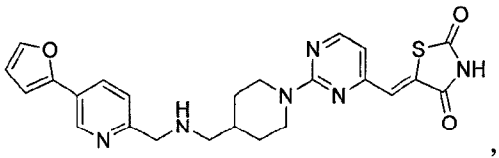
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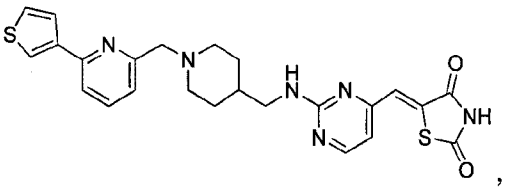
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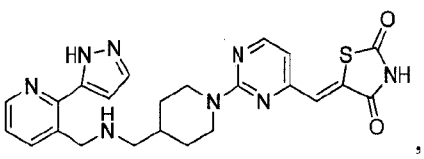
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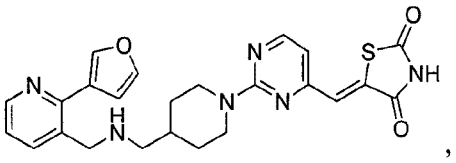
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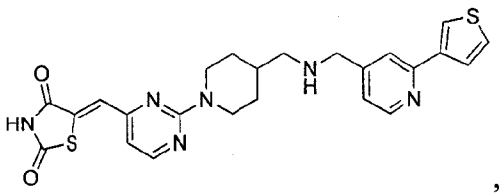
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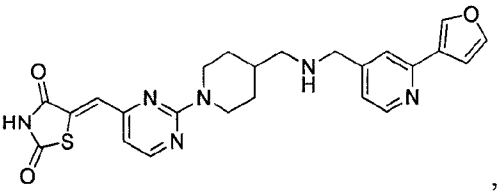
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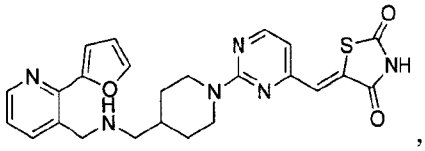
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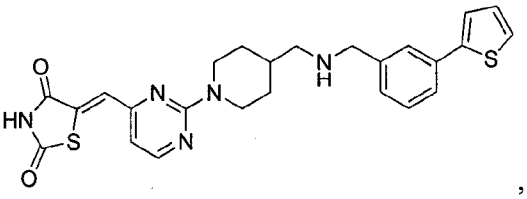
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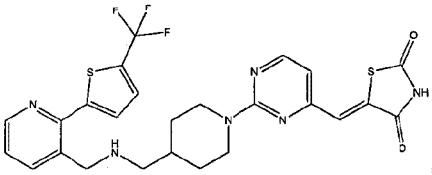
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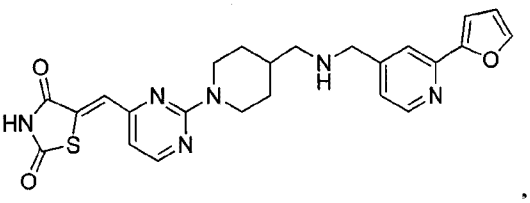
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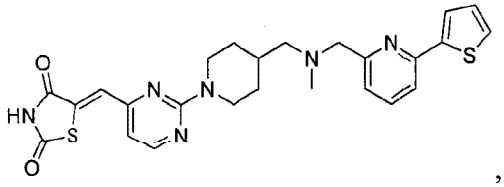
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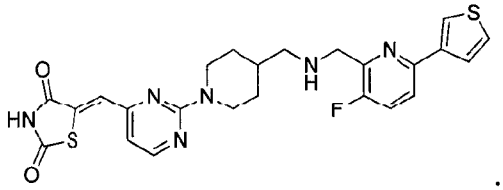
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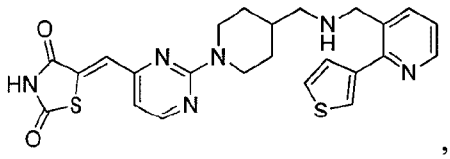
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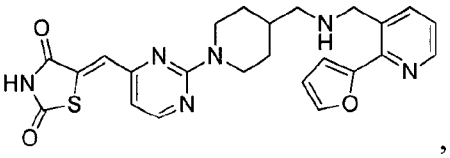
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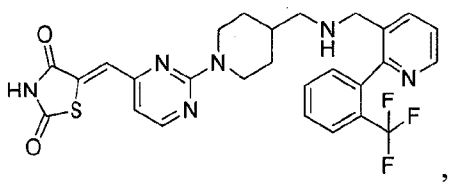
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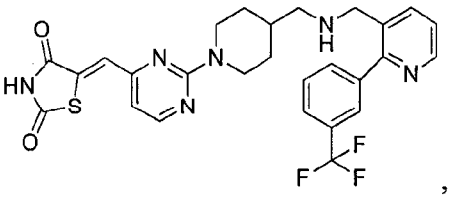
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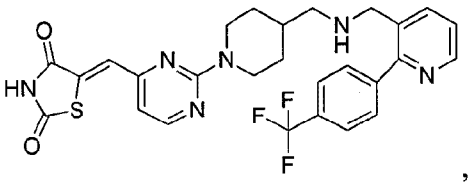
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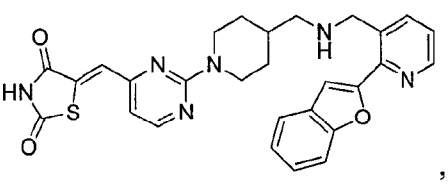
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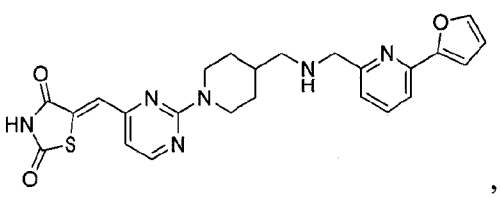
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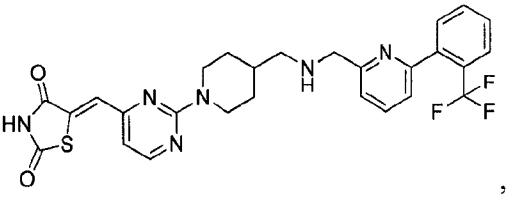
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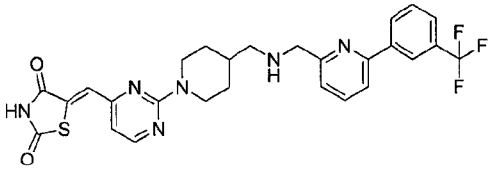
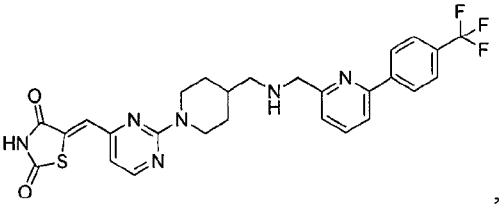
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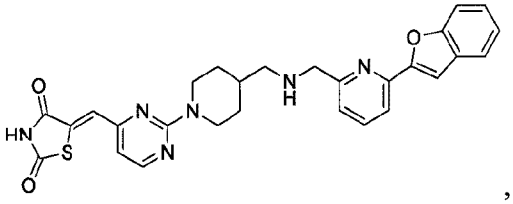
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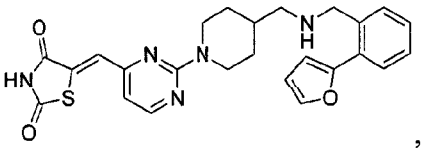
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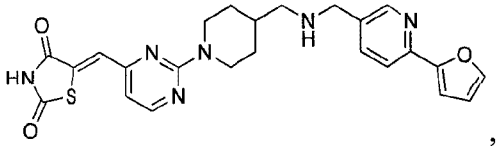
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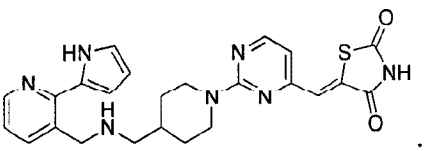
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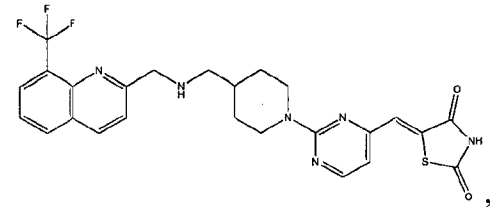
An aspect of the invention relates to a compound, or a pharmaceutically acceptable salt thereof, selected from the group consisting of: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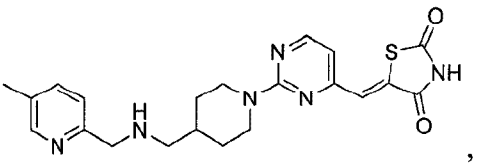
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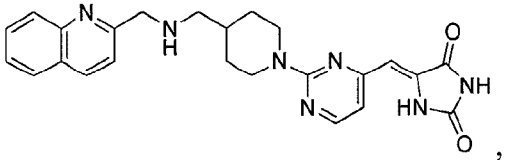
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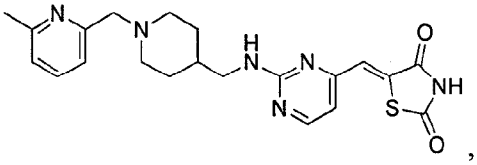
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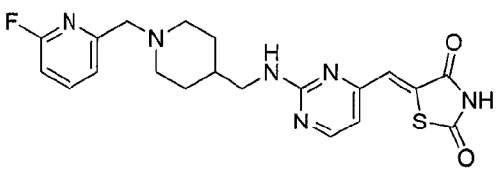
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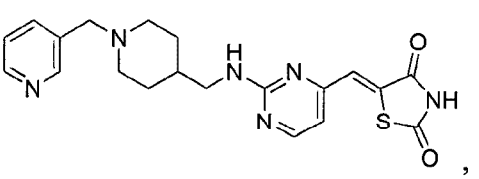
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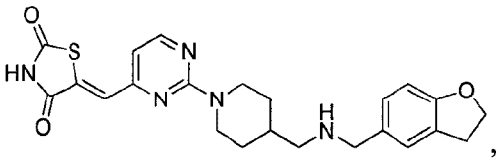
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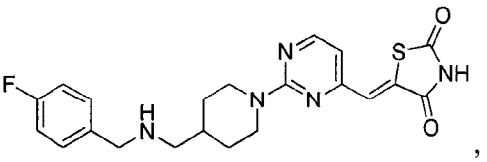
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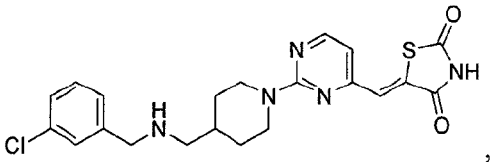
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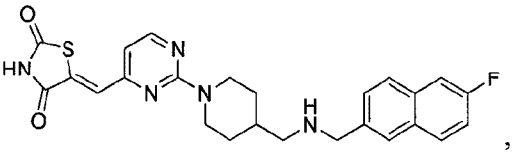
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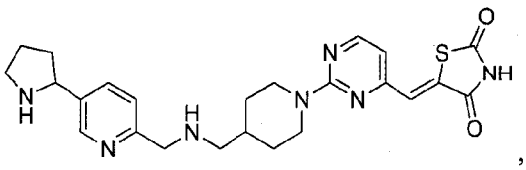
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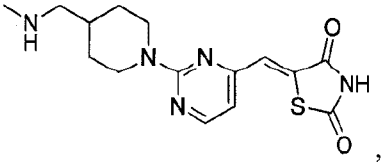
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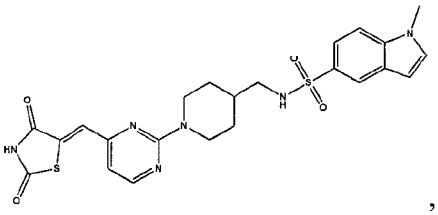
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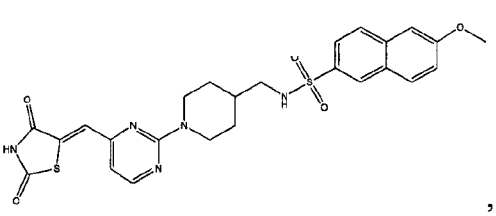
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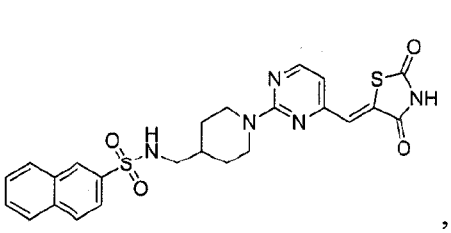
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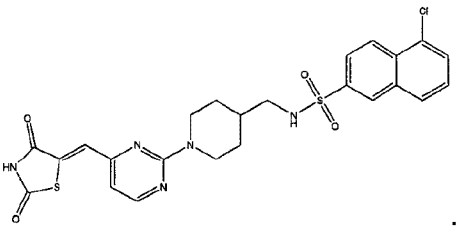
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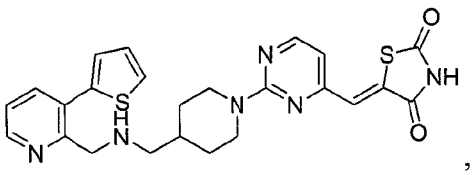

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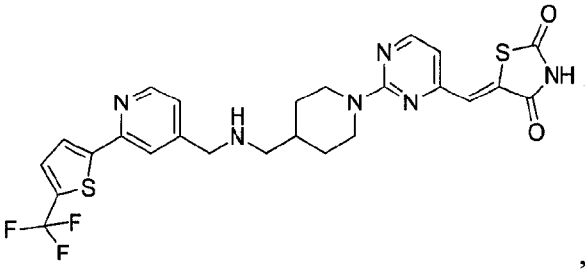

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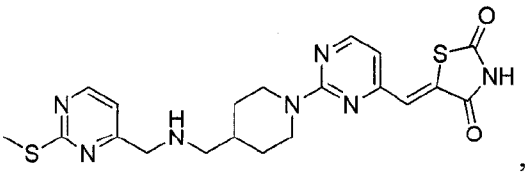

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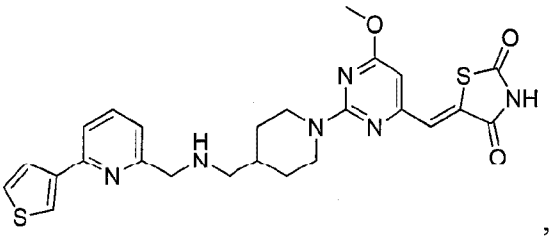

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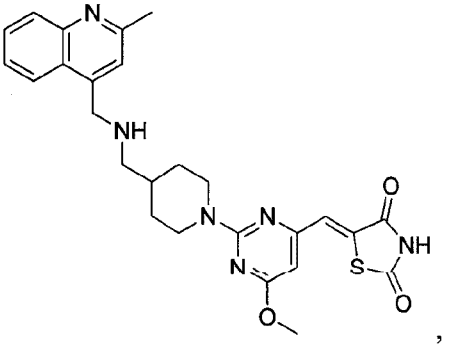

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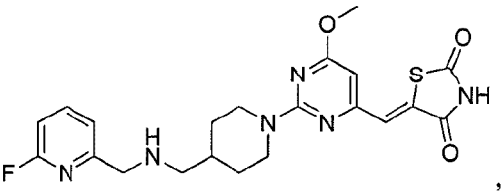

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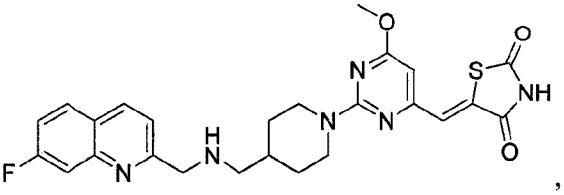

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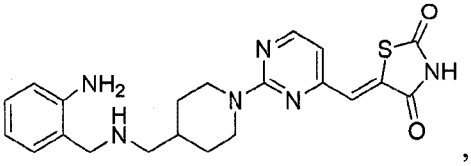
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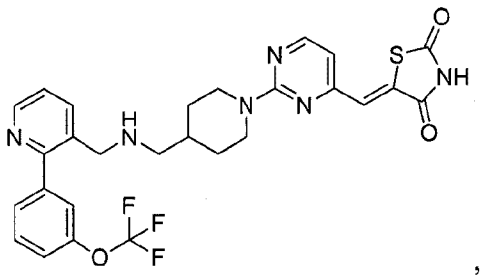
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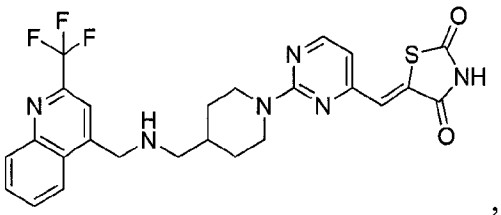
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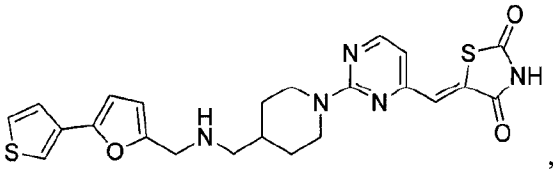
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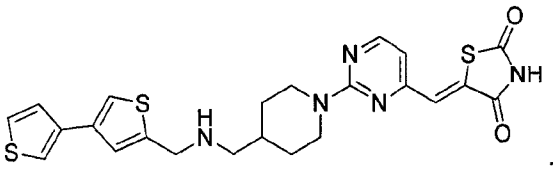
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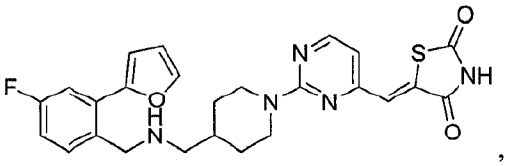
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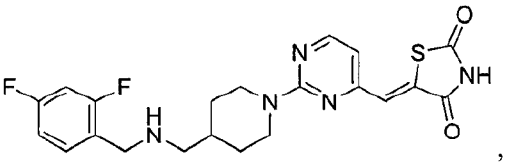
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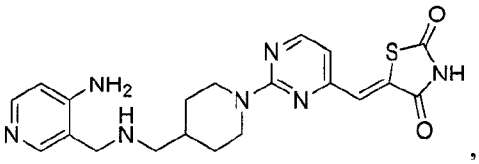
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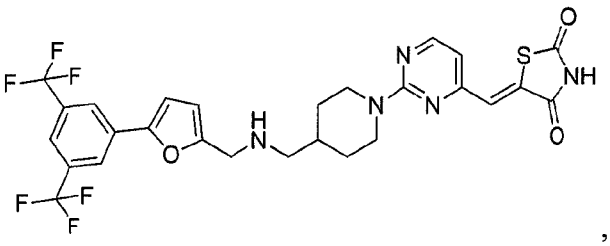
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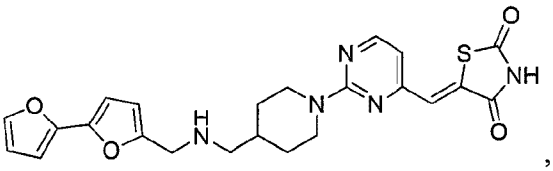
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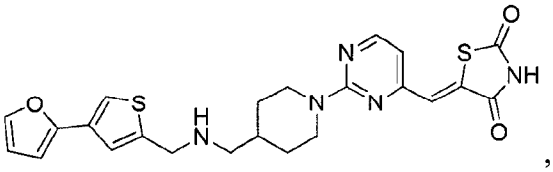
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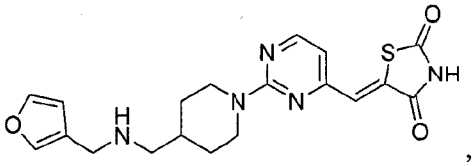
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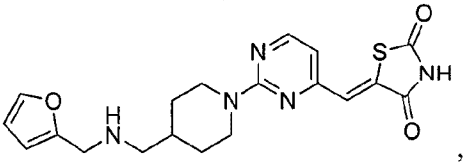
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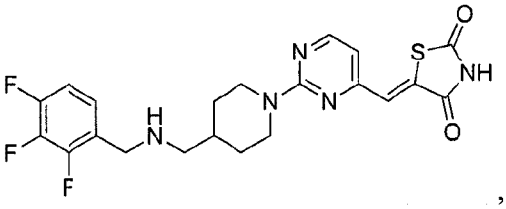
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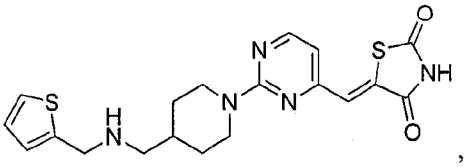
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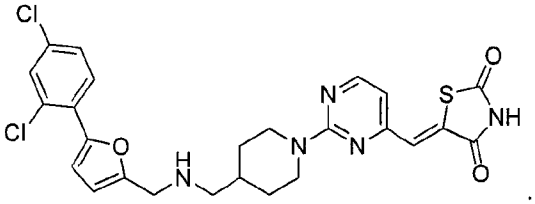
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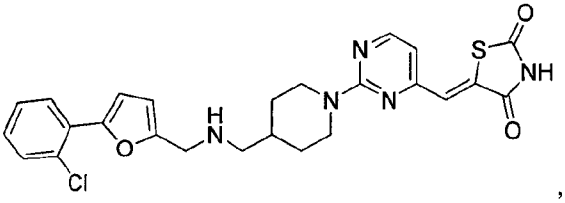
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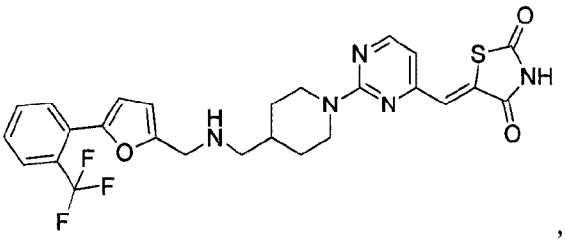
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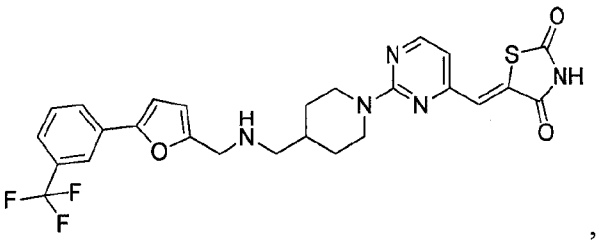

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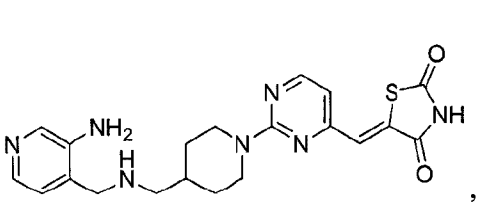

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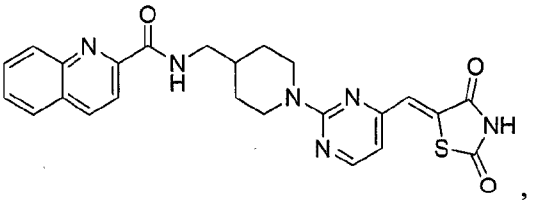

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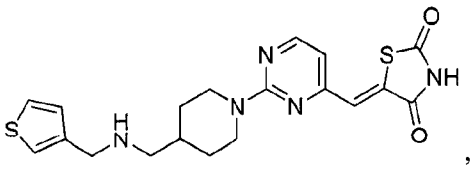

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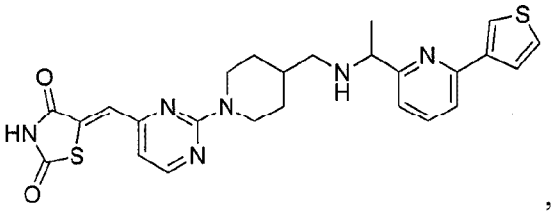

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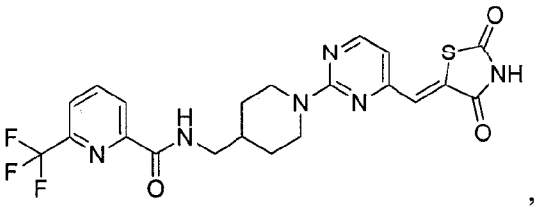

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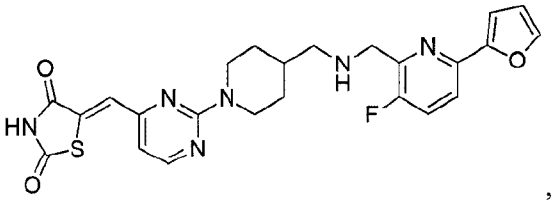

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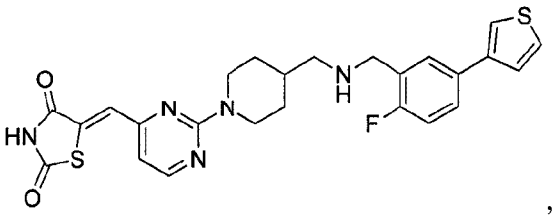

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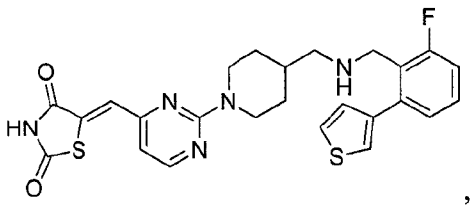

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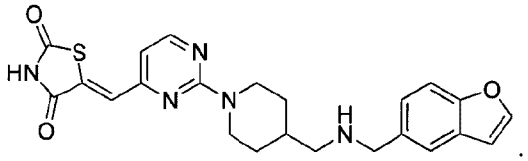

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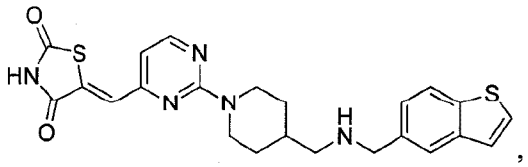
An aspect of the invention relates to a compound, or a pharmaceutically acceptable salt thereof, selected from the group consisting of:



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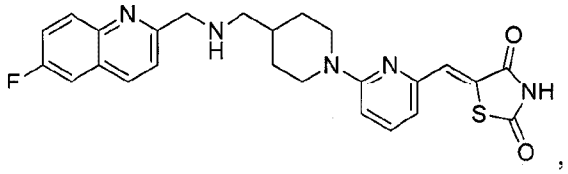

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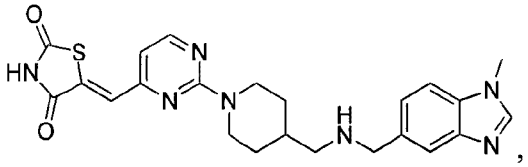

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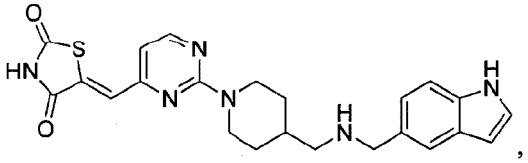

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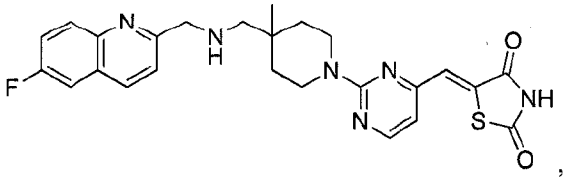

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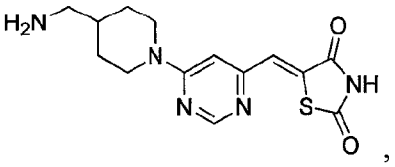

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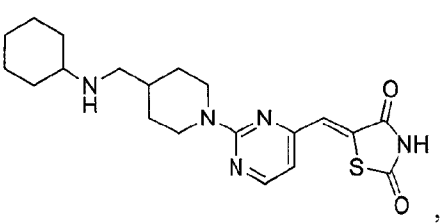
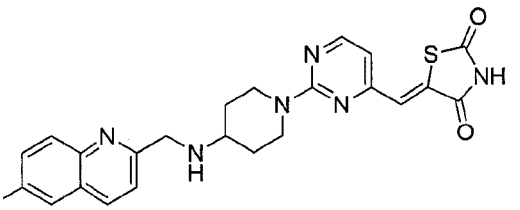
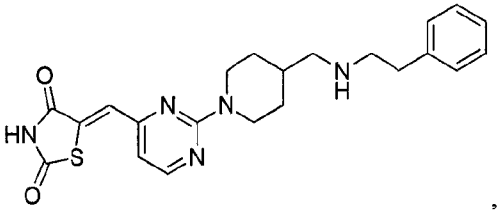
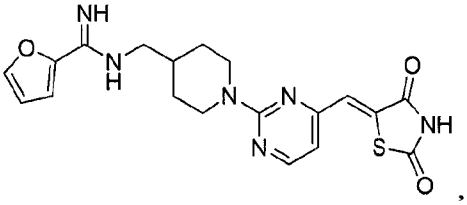
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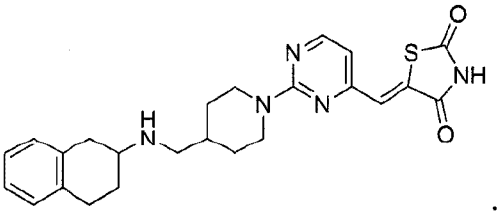
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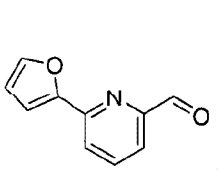
An aspect of the invention relates to a compound, or a pharmaceutically acceptable salt thereof, selected from the group consisting of: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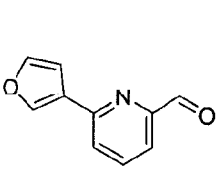
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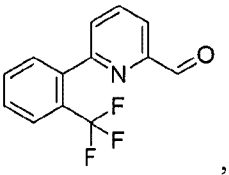
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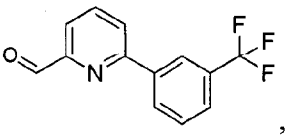
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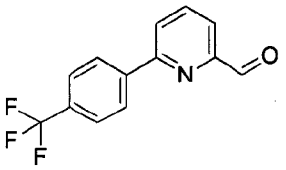
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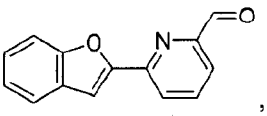
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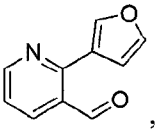
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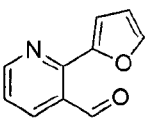
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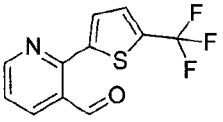
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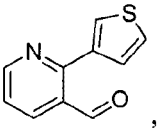
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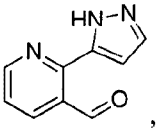
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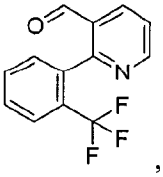
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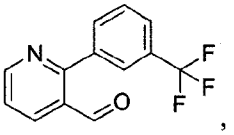
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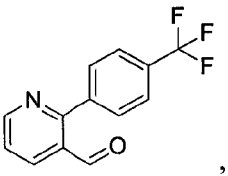
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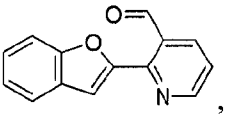
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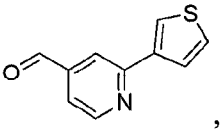
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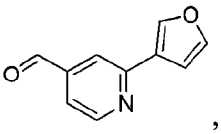
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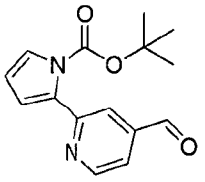
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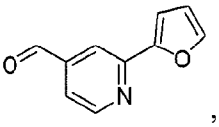
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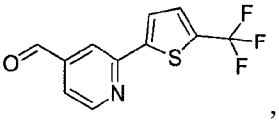
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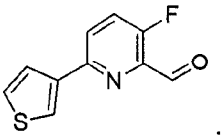
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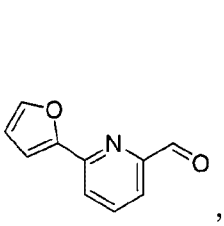
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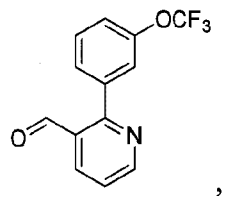
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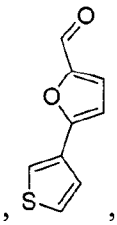
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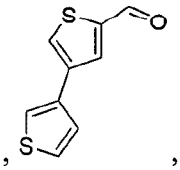
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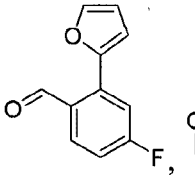
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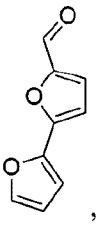
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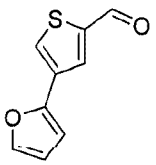
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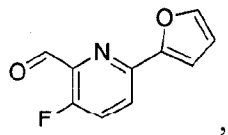
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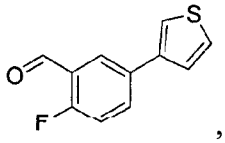
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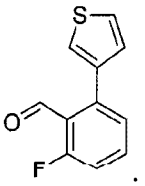
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An embodiment relates to any one of the aforementioned compounds, wherein the compound is an inhibitor of CK1, CK1γ1, CK1γ2, or CK1γ3. In one embodiment the compound has an IC_{50} of less than 5000 nM for CK1, CK1γ1, CK1γ2, or CK1γ3. In one embodiment the compound has an IC_{50} of less than 1000 nM for CK1, CK1γ1, CK1γ2, or CK1γ3. In one embodiment the compound has an IC_{50} of less than 500 nM for CK1, CK1γ1, CK1γ2, or CK1γ3.

An embodiment relates to any one of the aforementioned compounds, wherein the compound is an inhibitor of CK2. In one embodiment the compound has an IC_{50} of less than 5000 nM for CK2. In one embodiment the compound has an IC_{50} of less than 1000 nM for CK2. In one embodiment the compound has an IC_{50} of less than 500 nM for CK2.

An embodiment relates to any one of the aforementioned compounds, wherein the compound is an inhibitor of Pim-1, Pim-2, or Pim-3. In one embodiment the compound has

an IC_{50} of less than 5000 nM for Pim-1, Pim-2, or Pim-3. In one embodiment the compound has an IC_{50} of less than 1000 nM for Pim-1, Pim-2, or Pim-3. In one embodiment the compound has an IC_{50} of less than 500 nM for Pim-1, Pim-2, or Pim-3.

An embodiment relates to any one of the aforementioned compounds, wherein the compound is an inhibitor of the Wnt pathway.

An embodiment relates to any one of the aforementioned compounds, wherein the compound is an inhibitor of the TGFβ pathway.

An embodiment relates to any one of the aforementioned compounds, wherein the compound is an inhibitor of the JAK/STAT pathway.

An embodiment relates to any one of the aforementioned compounds, wherein the compound is an inhibitor of the mTOR pathway.

An embodiment relates to any one of the aforementioned compounds, wherein the compound is a modulator of Pgp degradation, drug efflux, or drug resistance.

An embodiment relates to a pharmaceutical composition comprising any one or combination of the aforementioned compounds, and a pharmaceutically acceptable carrier.

Another embodiment relates to a method of inhibiting CK1 activity, comprising contacting CK1, CK1γ1, CK1γ2, or CK1γ3 with any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method of inhibiting CK2 activity, comprising contacting CK2 with any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method of treating or preventing a condition associated with aberrant CK1, CK1γ1, CK1γ2, or CK1γ3 activity, comprising administering to a mammal in need thereof a therapeutically effective amount of any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method of treating or preventing a condition associated with aberrant CK2 activity, comprising administering to a mammal in need thereof a therapeutically effective amount of any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method of treating cancer, comprising administering to a mammal in need thereof a therapeutically effective amount of any one of the aforementioned compounds or pharmaceutical compositions. In one embodiment the cancer is a cancer of a system selected from the group consisting of the hematopoietic system, immune system, endocrine system, pulmonary system, gastrointestinal system, musculoskeletal system, reproductive system, central nervous system, and urologic system. In one embodiment the cancer is located in the mammal's myeloid tissues, lymphoid tissues, pancreatic tissues, thyroid tissues, lung tissues, colon tissues, rectal tissues, anal tissues, liver tissues, skin, bone, ovarian tissues, uterine tissues, cervical tissues, breast, prostate, testicular tissues, brain, brainstem, meningeal tissues, kidney or bladder. In one embodiment the cancer is selected from the group consisting of breast cancer, colon cancer, multiple myeloma, prostate cancer, Hodgkin's lymphoma, non-Hodgkin's lymphoma, leukemia, hematologic malignancy, renal cell carcinoma, renal cancer, malignant melanoma, pancreatic cancer, lung cancer, colorectal carcinoma, brain cancer, head and neck cancer, bladder cancer, thyroid cancer, ovarian cancer, cervical cancer, and myelodysplastic syndrome.

Another embodiment relates to a method of treating leukemia, multiple myeloma, or other hematologic malignancies, comprising administering to a mammal in need thereof a therapeutically effective amount of any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method of treating Alzheimer's disease, comprising administering to a mammal in need thereof a therapeutically effective amount of any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method of treating a Wnt-dependent disease, comprising administering to a mammal in need thereof a therapeutically effective amount of any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method of treating a TGFβ-dependent disease, comprising administering to a mammal in need thereof a therapeutically effective amount of any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method of treating a JAK/STAT-dependent disease, comprising administering to a mammal in need thereof a therapeutically effective amount of any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method of treating an mTOR-dependent disease, comprising administering to a mammal in need thereof a therapeutically effective amount of any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method of treating or preventing inflammation, inflammatory diseases (e.g., osteoarthritis and rheumatoid arthritis), neurological conditions (e.g., Alzheimer's disease) and neurodegeneration, comprising administering to a mammal in need thereof a therapeutically effective amount of any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method of treating or preventing bone-related diseases and conditions, including osteoporosis and bone formation, or facilitating bone restoration, comprising administering to a mammal in need thereof a therapeutically effective amount of any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method of treating or preventing hypoglycemia, metabolic syndrome and diabetes, comprising administering to a mammal in need thereof a therapeutically effective amount of any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method of influencing apoptosis (e.g., increasing the rate of apoptosis in cancerous cells), comprising administering to a mammal in need thereof a therapeutically effective amount of any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method of treating or preventing aberrant embryonic development, comprising administering to a mammal in need thereof a therapeutically effective amount of any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method of inhibiting PIM activity, comprising contacting Pim-1, Pim-2 or Pim-3 with any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method for treating or preventing a condition associated with aberrant PIM activity, comprising administering to a mammal in need

thereof a therapeutically effective amount of any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method of modulating Pgp degradation and/or drug efflux activity, comprising contacting a cell with any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method for treating a malignancy based upon modulation of Pgp, comprising administering to a mammal in need thereof a therapeutically effective amount of any one of the aforementioned compounds or pharmaceutical compositions.

Another embodiment relates to a method for treating a malignancy based upon modulation of Pgp, comprising administering to a mammal in need thereof a therapeutically effective amount of any one of the aforementioned compounds or pharmaceutical compositions, in conjunction with another drug, compound, or material, to abrogate resistance to the drug, compound, or material.

DETAILED DESCRIPTION OF THE INVENTION

DEFINITIONS

The definitions of terms used herein are meant to incorporate the present state-of-the-art definitions recognized for each term in the chemical and pharmaceutical fields. Where appropriate, illustration is provided. The definitions apply to the terms as they are used throughout this specification, unless otherwise limited in specific instances, either individually or as part of a larger group.

Where stereochemistry is not specifically indicated, all stereoisomers of the inventive compounds are included within the scope of the invention, as pure compounds as well as mixtures thereof. Unless otherwise indicated, individual enantiomers, diastereomers, geometrical isomers, and combinations and mixtures thereof are all encompassed by the present invention. Polymorphic crystalline forms and solvates are also encompassed within the scope of this invention.

As used herein, the term "isolated" in connection with a compound of the present invention means the compound is not in a cell or organism and the compound is separated from some or all of the components that typically accompany it in nature.

As used herein, the term "pure" in connection with an isolated sample of a compound of the present invention means the isolated sample contains at least 60% by weight of the compound. In certain embodiments, the isolated sample contains at least 70% by weight of the compound. In certain embodiments, the isolated sample contains at least 80% by weight of the compound. In certain embodiments, the isolated sample contains at least 90% by weight of the compound. In certain embodiments, the isolated sample contains at least 95% by weight of the compound. The purity of an isolated sample of a compound of the present invention may be assessed by a number of methods or a combination of them; e.g., thin-layer, preparative or flash chromatography, mass spectrometry, HPLC, NMR analysis, and the like.

The term "heteroatom" is art-recognized and refers to an atom of any element other than carbon or hydrogen. Illustrative heteroatoms include boron, nitrogen, oxygen, phosphorus, sulfur and selenium.

The term "alkyl" is art-recognized, and includes saturated aliphatic groups, including straight-chain alkyl groups, branched-chain alkyl groups, cycloalkyl (alicyclic) groups, alkyl substituted cycloalkyl groups, and cycloalkyl substituted alkyl groups. In certain embodiments, a straight chain or branched chain alkyl has about 30 or fewer carbon atoms in its backbone (e.g., C_1-C_{30} for straight chain, C_3-C_{30} for branched chain), and alternatively, about 20 or fewer. Likewise, cycloalkyls have from about 3 to about 10 carbon atoms in their ring structure, and alternatively about 5, 6 or 7 carbons in the ring structure.

Unless the number of carbons is otherwise specified, "lower alkyl" refers to an alkyl group, as defined above, but having from one to about ten carbons, alternatively from one to about six carbon atoms in its backbone structure. Likewise, "lower alkenyl" and "lower alkynyl" have similar chain lengths.

The term "aralkyl" is art-recognized and refers to an alkyl group substituted with an aryl group (e.g., an aromatic or heteroaromatic group).

The terms "alkenyl" and "alkynyl" are art-recognized and refer to unsaturated aliphatic groups analogous in length and possible substitution to the alkyls described above, but that contain at least one double or triple bond respectively.

The term "aryl" is art-recognized and refers to 5-, 6- and 7-membered single-ring aromatic groups that may include from zero to four heteroatoms, for example, benzene,

naphthalene, anthracene, pyrene, pyrrole, furan, thiophene, imidazole, oxazole, thiazole, triazole, pyrazole, pyridine, pyrazine, pyridazine and pyrimidine, and the like. Those aryl groups having heteroatoms in the ring structure may also be referred to as "aryl heterocycles" or "heteroaromatics." The aromatic ring may be substituted at one or more ring positions with such substituents as described herein, for example, halogen, azide, alkyl, aralkyl, alkenyl, alkynyl, cycloalkyl, hydroxyl, alkoxyl, amino, nitro, sulfhydryl, imino, amido, phosphonate, phosphinate, carbonyl, carboxyl, silyl, ether, alkylthio, sulfonyl, sulfonamido, ketone, aldehyde, ester, heterocyclyl, aromatic or heteroaromatic moieties, $-CF_3$, -CN, or the like. The term "aryl" also includes polycyclic ring systems having two or more cyclic rings in which two or more carbons are common to two adjoining rings (the rings are "fused rings") wherein at least one of the rings is aromatic, e.g., the other cyclic rings may be cycloalkyls, cycloalkenyls, cycloalkynyls, aryls and/or heterocyclyls.

The terms *ortho*, *meta* and *para* are art-recognized and refer to 1,2-, 1,3- and 1,4-disubstituted benzenes, respectively. For example, the names 1,2-dimethylbenzene and ortho-dimethylbenzene are synonymous.

The terms "heterocyclyl", "heteroaryl", or "heterocyclic group" are art-recognized and refer to 3- to about 10-membered ring structures, alternatively 3- to about 7-membered rings, whose ring structures include one to four heteroatoms. Heterocycles may also be polycycles. Heterocyclyl groups include, for example, thiophene, thianthrene, furan, pyran, isobenzofuran, chromene, xanthene, phenoxanthene, pyrrole, imidazole, pyrazole, isothiazole, isoxazole, pyridine, pyrazine, pyrimidine, pyridazine, indolizine, isoindole, indole, indazole, purine, quinolizine, isoquinoline, quinoline, phthalazine, naphthyridine, quinoxaline, quinazoline, cinnoline, pteridine, carbazole, carboline, phenanthridine, acridine, pyrimidine, phenanthroline, phenazine, phenarsazine, phenothiazine, piperonyl, furazan, phenoxazine, pyrrolidine, oxolane, thiolane, oxazole, piperidine, piperazine, morpholine, lactones, lactams such as azetidinones and pyrrolidinones, sultams, sultones, and the like. The heterocyclic ring may be substituted at one or more positions with such substituents as described above, as for example, halogen, alkyl, aralkyl, alkenyl, alkynyl, cycloalkyl, hydroxyl, amino, nitro, sulfhydryl, imino, amido, phosphonate, phosphinate, carbonyl, carboxyl, silyl, ether, alkylthio, sulfonyl, ketone, aldehyde, ester, a heterocyclyl, an aromatic or heteroaromatic moiety, $-CF_3$, -CN, or the like.

The term "optionally substituted" refers to a chemical group, such as alkyl, cycloalkyl aryl, and the like, wherein one or more hydrogen may be replaced with a

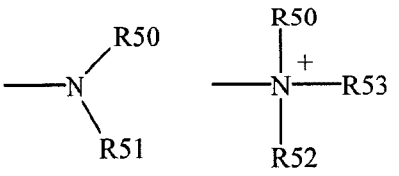
substituent as described herein, including but not limited to halogen, azide, alkyl, aralkyl, alkenyl, alkynyl, cycloalkyl, hydroxyl, alkoxyl, amino, nitro, sulfhydryl, imino, amido, phosphonate, phosphinate, carbonyl, carboxyl, silyl, ether, alkylthio, sulfonyl, sulfonamido, ketone, aldehyde, ester, heterocyclyl, aromatic or heteroaromatic moieties, $-CF_3$, -CN, or the like.

The terms "polycyclyl" or "polycyclic group" are art-recognized and refer to two or more rings (e.g., cycloalkyls, cycloalkenyls, cycloalkynyls, aryls and/or heterocyclyls) in which two or more carbons are common to two adjoining rings, e.g., the rings are "fused rings". Rings that are joined through non-adjacent atoms are termed "bridged" rings. Each of the rings of the polycycle may be substituted with such substituents as described above, as for example, halogen, alkyl, aralkyl, alkenyl, alkynyl, cycloalkyl, hydroxyl, amino, nitro, sulfhydryl, imino, amido, phosphonate, phosphinate, carbonyl, carboxyl, silyl, ether, alkylthio, sulfonyl, ketone, aldehyde, ester, a heterocyclyl, an aromatic or heteroaromatic moiety, $-CF_3$, -CN, or the like.

The term "carbocycle" is art-recognized and refers to an aromatic or non-aromatic ring in which each atom of the ring is carbon.

The term "nitro" is art-recognized and refers to $-NO_2$; the term "halogen" is art-recognized and refers to -F, -Cl, -Br or -I; the term "sulfhydryl" is art-recognized and refers to -SH; the term "hydroxyl" means -OH; and the term "sulfonyl" is art-recognized and refers to $-SO_2^-$. "Halide" designates the corresponding anion of the halogens, and "pseudohalide" has the definition set forth on 560 of *Advanced Inorganic Chemistry* by Cotton and Wilkinson.

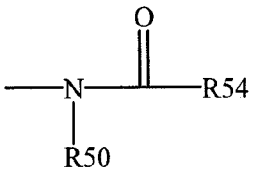
The terms "amine" and "amino" are art-recognized and refer to both unsubstituted and substituted amines, e.g., a moiety that may be represented by the general formulas:



wherein R50, R51 and R52 each independently represent a hydrogen, an alkyl, an alkenyl, $-(CH_2)_m$-R61, or R50 and R51, taken together with the N atom to which they are attached complete a heterocycle having from 4 to 8 atoms in the ring structure; R61 represents an aryl, a cycloalkyl, a cycloalkenyl, a heterocycle or a polycycle; and m is zero or an integer

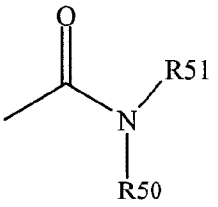
in the range of 1 to 8. In other embodiments, R50 and R51 (and optionally R52) each independently represent a hydrogen, an alkyl, an alkenyl, or $-(CH_2)_m-R61$. Thus, the term "alkylamine" includes an amine group, as defined above, having a substituted or unsubstituted alkyl attached thereto, i.e., at least one of R50 and R51 is an alkyl group.

The term "acylamino" is art-recognized and refers to a moiety that may be represented by the general formula:



wherein R50 is as defined above, and R54 represents a hydrogen, an alkyl, an alkenyl or $-(CH_2)_m-R61$, where m and R61 are as defined above.

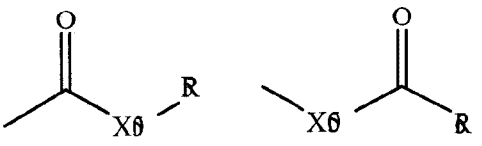
The term "amido" is art recognized as an amino-substituted carbonyl and includes a moiety that may be represented by the general formula:



wherein R50 and R51 are as defined above. Certain embodiments of the amide in the present invention will not include imides which may be unstable.

The term "alkylthio" refers to an alkyl group, as defined above, having a sulfur radical attached thereto. In certain embodiments, the "alkylthio" moiety is represented by one of -S-alkyl, -S-alkenyl, -S-alkynyl, and $-S-(CH_2)_m-R61$, wherein m and R61 are defined above. Representative alkylthio groups include methylthio, ethyl thio, and the like.

The term "carboxyl" is art recognized and includes such moieties as may be represented by the general formulas:

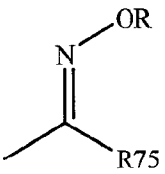


wherein X50 is a bond or represents an oxygen or a sulfur, and R55 and R56 represents a hydrogen, an alkyl, an alkenyl, $-(CH_2)_m$-R61or a pharmaceutically acceptable salt, R56 represents a hydrogen, an alkyl, an alkenyl or $-(CH_2)_m$-R61, where m and R61 are defined above. Where X50 is an oxygen and R55 or R56 is not hydrogen, the formula represents an "ester". Where X50 is an oxygen, and R55 is as defined above, the moiety is referred to herein as a carboxyl group, and particularly when R55 is a hydrogen, the formula represents a "carboxylic acid". Where X50 is an oxygen, and R56 is hydrogen, the formula represents a "formate". In general, where the oxygen atom of the above formula is replaced by sulfur, the formula represents a "thiolcarbonyl" group. Where X50 is a sulfur and R55 or R56 is not hydrogen, the formula represents a "thiolester." Where X50 is a sulfur and R55 is hydrogen, the formula represents a "thiolcarboxylic acid." Where X50 is a sulfur and R56 is hydrogen, the formula represents a "thiolformate." On the other hand, where X50 is a bond, and R55 is not hydrogen, the above formula represents a "ketone" group. Where X50 is a bond, and R55 is hydrogen, the above formula represents an "aldehyde" group.

The term "carbamoyl" refers to -O(C=O)NRR', where R and R' are independently H, aliphatic groups, aryl groups or heteroaryl groups.

The term "oxo" refers to a carbonyl oxygen (=O).

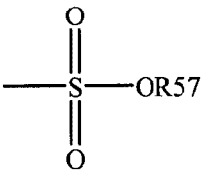
The terms "oxime" and "oxime ether" are art-recognized and refer to moieties that may be represented by the general formula:



wherein R75 is hydrogen, alkyl, cycloalkyl, alkenyl, alkynyl, aryl, aralkyl, or $-(CH_2)_m$-R61. The moiety is an "oxime" when R is H; and it is an "oxime ether" when R is alkyl, cycloalkyl, alkenyl, alkynyl, aryl, aralkyl, or $-(CH_2)_m$-R61.

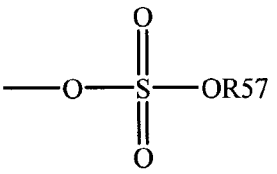
The terms "alkoxyl" or "alkoxy" are art-recognized and refer to an alkyl group, as defined above, having an oxygen radical attached thereto. Representative alkoxyl groups include methoxy, ethoxy, propyloxy, tert-butoxy and the like. An "ether" is two hydrocarbons covalently linked by an oxygen. Accordingly, the substituent of an alkyl that renders that alkyl an ether is or resembles an alkoxyl, such as may be represented by one of -O-alkyl, -O-alkenyl, -O-alkynyl, $-O-(CH_2)_m$-R61, where m and R61 are described above.

The term "sulfonate" is art recognized and refers to a moiety that may be represented by the general formula:



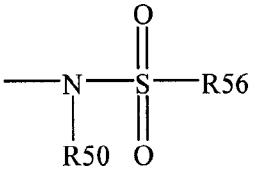
in which R57 is an electron pair, hydrogen, alkyl, cycloalkyl, or aryl.

The term "sulfate" is art recognized and includes a moiety that may be represented by the general formula:



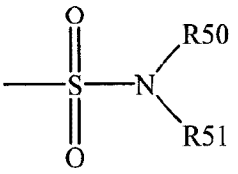
in which R57 is as defined above.

The term "sulfonamido" is art recognized and includes a moiety that may be represented by the general formula:



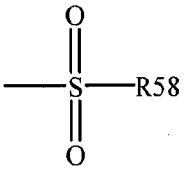
in which R50 and R56 are as defined above.

The term "sulfamoyl" is art-recognized and refers to a moiety that may be represented by the general formula:



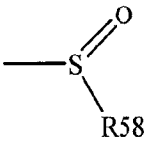
in which R50 and R51 are as defined above.

The term "sulfonyl" is art-recognized and refers to a moiety that may be represented by the general formula:



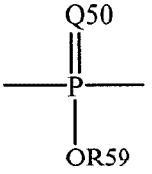
in which R58 is one of the following: hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, heterocyclyl, aryl or heteroaryl.

The term "sulfoxido" is art-recognized and refers to a moiety that may be represented by the general formula:

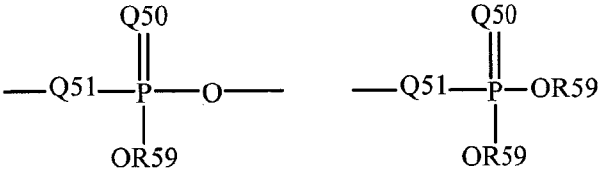


in which R58 is defined above.

The term "phosphoryl" is art-recognized and may in general be represented by the formula:

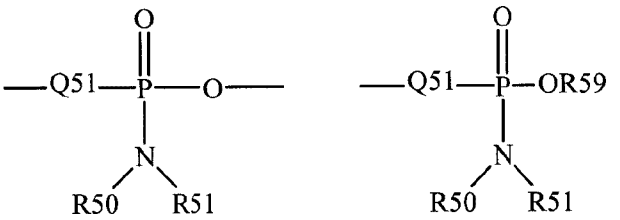


wherein Q50 represents S or O, and R59 represents hydrogen, a lower alkyl or an aryl. When used to substitute, e.g., an alkyl, the phosphoryl group of the phosphorylalkyl may be represented by the general formulas:



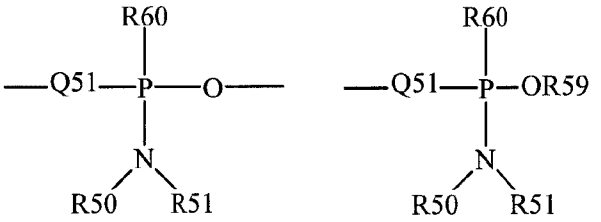
wherein Q50 and R59, each independently, are defined above, and Q51 represents O, S or N. When Q50 is S, the phosphoryl moiety is a "phosphorothioate".

The term "phosphoramidite" is art-recognized and may be represented in the general formulas:



wherein Q51, R50, R51 and R59 are as defined above.

The term "phosphonamidite" is art-recognized and may be represented in the general formulas:



wherein Q51, R50, R51 and R59 are as defined above, and R60 represents a lower alkyl or an aryl.

Analogous substitutions may be made to alkenyl and alkynyl groups to produce, for example, aminoalkenyls, aminoalkynyls, amidoalkenyls, amidoalkynyls, iminoalkenyls, iminoalkynyls, thioalkenyls, thioalkynyls, carbonyl-substituted alkenyls or alkynyls.

The definition of each expression, e.g., alkyl, m, n, and the like, when it occurs more than once in any structure, is intended to be independent of its definition elsewhere in the same structure.

The terms triflyl, tosyl, mesyl, and nonaflyl are art-recognized and refer to trifluoromethanesulfonyl, *p*-toluenesulfonyl, methanesulfonyl, and nonafluorobutanesulfonyl groups, respectively. The terms triflate, tosylate, mesylate, and nonaflate are art-recognized and refer to trifluoromethanesulfonate ester, *p*-toluenesulfonate ester, methanesulfonate ester, and nonafluorobutanesulfonate ester functional groups and molecules that contain said groups, respectively.

The abbreviations Me, Et, Ph, Tf, Nf, Ts, and Ms represent methyl, ethyl, phenyl, trifluoromethanesulfonyl, nonafluorobutanesulfonyl, *p*-toluenesulfonyl and methanesulfonyl, respectively. A more comprehensive list of the abbreviations utilized by organic chemists of ordinary skill in the art appears in the first issue of each volume of the

Journal of Organic Chemistry; this list is typically presented in a table entitled "Standard List of Abbreviations."

Certain compounds contained in compositions of the present invention may exist in particular geometric or stereoisomeric forms. In addition, polymers of the present invention may also be optically active. The present invention contemplates all such compounds, including cis- and trans-isomers, E- and Z-isomers, *R*- and *S*-enantiomers, diastereomers, (D)-isomers, (L)-isomers, the racemic mixtures thereof, and other mixtures thereof, as falling within the scope of the invention. Additional asymmetric carbon atoms may be present in a substituent such as an alkyl group. All such isomers, as well as mixtures thereof, are intended to be included in this invention.

If, for instance, a particular enantiomer of compound of the present invention is desired, it may be prepared by asymmetric synthesis, or by derivation with a chiral auxiliary, where the resulting diastereomeric mixture is separated and the auxiliary group cleaved to provide the pure desired enantiomers. Alternatively, where the molecule contains a basic functional group, such as amino, or an acidic functional group, such as carboxyl, diastereomeric salts are formed with an appropriate optically-active acid or base, followed by resolution of the diastereomers thus formed by fractional crystallization or chromatographic means well known in the art, and subsequent recovery of the pure enantiomers. Additionally, the enantiomers may be separated using a chiral chromatographic method including HPLC or SFC approaches.

It will be understood that "substitution" or "substituted with" includes the implicit proviso that such substitution is in accordance with permitted valence of the substituted atom and the substituent, and that the substitution results in a stable compound, e.g., which does not spontaneously undergo transformation such as by rearrangement, cyclization, elimination, or other reaction.

The term "substituted" is also contemplated to include all permissible substituents of organic compounds. In a broad aspect, the permissible substituents include acyclic and cyclic, branched and unbranched, carbocyclic and heterocyclic, aromatic and nonaromatic substituents of organic compounds. Illustrative substituents include, for example, those described herein above. The permissible substituents may be one or more and the same or different for appropriate organic compounds. For purposes of this invention, the heteroatoms such as nitrogen may have hydrogen substituents and/or any permissible

substituents of organic compounds described herein which satisfy the valences of the heteroatoms. This invention is not intended to be limited in any manner by the permissible substituents of organic compounds.

The phrase "protecting group" as used herein means temporary substituents which protect a potentially reactive functional group from undesired chemical transformations. Examples of such protecting groups include esters of carboxylic acids, silyl ethers of alcohols, and acetals and ketals of aldehydes and ketones, respectively. Examples of nitrogen protecting groups include an amide (-NRC(=O)R) or a urethane (-NRC(=O)OR), for example, as: a methyl amide (-NHC(=O)CH_3); a benzyloxy amide (-NHC(=O)$OCH_2C_6H_5$NHCbz); as a t-butoxy amide (-NHC(=O)$OC(CH_3)_3$, -NHBoc); a 2-biphenyl-2-propoxy amide (-NHC(=O)$OC(CH_3)_2C_6H_4C_6H_5$NHBoc), as a 9-fluorenylmethoxy amide (-NHFmoc), as a 6-nitroveratryloxy amide (-NHNvoc), as a 2-trimethylsilylethyloxy amide (-NHTeoc), as a 2,2,2-trichloroethyloxy amide (-NHTroc), as an allyloxy amide (-NHAlloc), as a 2-(phenylsulfonyl)ethyloxy amide (-NHPsec); or, in suitable cases (e.g., cyclic amines), as a nitroxide radical. The field of protecting group chemistry has been reviewed (Greene, T.W.; Wuts, P.G.M. *Protective Groups in Organic Synthesis*, 2nd ed.; Wiley: New York, 1991). Protected forms of the inventive compounds are included within the scope of this invention.

The term "pharmaceutically acceptable salt" or "salt" refers to a salt of one or more compounds. Suitable pharmaceutically acceptable salts of compounds include acid addition salts, such as those formed with mineral acids such as hydrochloric acid and hydrobromic acid, and also those formed with organic acids such as maleic acid. For example, acids commonly employed to form pharmaceutically acceptable salts include inorganic acids such as hydrogen bisulfide, hydrochloric, hydrobromic, hydroiodic, sulfuric and phosphoric acid, as well as organic acids such as para-toluenesulfonic, salicylic, tartaric, bitartaric, ascorbic, maleic, besylic, fumaric, gluconic, glucuronic, formic, glutamic, methanesulfonic, ethanesulfonic, benzenesulfonic, lactic, oxalic, para-bromophenylsulfonic, carbonic, succinic, citric, benzoic and acetic acid, and related inorganic and organic acids. Such pharmaceutically acceptable salts thus include sulfate, pyrosulfate, bisulfate, sulfite, bisulfite, phosphate, monohydrogenphosphate, dihydrogenphosphate, metaphosphate, pyrophosphate, chloride, bromide, iodide, acetate, propionate, decanoate, caprylate, acrylate, formate, isobutyrate, caprate, heptanoate, propiolate, oxalate, malonate, succinate, suberate, sebacate, fumarate, maleate, butyne-1,4-dioate, hexyne-1,6-dioate, benzoate,

chlorobenzoate, methylbenzoate, dinitrobenzoate, hydroxybenzoate, methoxybenzoate, phthalate, terephathalate, sulfonate, xylenesulfonate, phenylacetate, phenylpropionate, phenylbutyrate, citrate, lactate, β-hydroxybutyrate, glycolate, maleate, tartrate, methanesulfonate, propanesulfonate, naphthalene-1-sulfonate, naphthalene-2-sulfonate, mandelate and the like.

Where the compounds carry one or more acidic moieties, pharmaceutically acceptable salts may be formed by treatment of a solution of the compound with a solution of a pharmaceutically acceptable base. Suitable bases for forming pharmaceutically acceptable salts with acidic functional groups include, but are not limited to, hydroxides and carbonates of alkali metals such as sodium, potassium, and lithium; alkaline earth metal such as calcium and magnesium; and other metals, such as aluminum and zinc. Suitable bases also incllude ammonia, and organic amines, such as unsubstituted or hydroxy-substituted mono-, di-, or trialkylamines; dicyclohexylamine; tributyl amine; pyridine; N-methyl,N-ethylamine; diethylamine; triethylamine; mono-, bis-, or tris-(2-hydroxy-lower alkyl amines), such as mono-, bis-, or tris-(2-hydroxyethyl)amine, 2-hydroxy-tert-butylamine, or tris-(hydroxymethyl)methylamine, N,N-di alkyl-N-(hydroxy alkyl)-amines, such as N,N-dimethyl-N-(2-hydroxyethyl)amine, or tri-(2-hydroxyethyl)amine; N-methyl-D-glucamine; and amino acids such as arginine, lysine, and the like.

Certain compounds of the invention and their salts may exist in more than one crystalline form (i.e., polymorph); the present invention includes each of the crystal forms and mixtures thereof.

Certain compounds of the invention and their salts may also exist in the form of solvates, for example hydrates, and the present invention includes each solvate and mixtures thereof.

Certain compounds of the invention may contain one or more chiral centers, and exist in different optically active forms. When compounds of the invention contain one chiral center, the compounds exist in two enantiomeric forms and the present invention includes both enantiomers and mixtures of enantiomers, such as racemic mixtures thereof. The enantiomers may be resolved by methods known to those skilled in the art; for example, enantiomers may be resolved by formation of diastereoisomeric salts which may be separated, for example, by crystallization; formation of diastereoisomeric derivatives or complexes which may be separated, for example, by crystallization, gas-liquid or liquid

chromatography; selective reaction of one enantiomer with an enantiomer-specific reagent, for example, via enzymatic esterification; or gas-liquid or liquid chromatography in a chiral environment, for example, on a chiral support; suitable include chiral supports (e.g., silica with a bound chiral ligand) or in the presence of a chiral solvent. Where the desired enantiomer is converted into another chemical entity by one of the separation procedures described above, a further step may be used to liberate the desired purified enantiomer. Alternatively, specific enantiomers may be synthesized by asymmetric synthesis using optically active reagents, substrates, catalysts or solvents, or by converting one enantiomer into the other by asymmetric transformation.

When a compound of the invention contains more than one chiral center, it may exist in diastereoisomeric forms. The diastereoisomeric compounds may be separated by methods known to those skilled in the art (for example, chromatography or crystallization) and the individual enantiomers may be separated as described above. The present invention includes the various diastereoisomers of compounds of the invention, and mixtures thereof. Compounds of the invention may exist in different tautomeric forms or as different geometric isomers, and the present invention includes each tautomer and/or geometric isomer of compounds of the invention, and mixtures thereof. For example, any olefins present in the compounds may exist as either the E- or Z- geometric isomers or a mixture thereof unless stated otherwise. Compounds of the invention may exist in zwitterionic form. The present invention includes each zwitterionic form of compounds of the invention, and mixtures thereof.

As used herein the term "pro-drug" refers to an agent, which is converted into the parent drug in vivo by some physiological chemical process (e.g., a prodrug on being brought to the physiological pH is converted to the desired drug form). Pro-drugs are often useful because, in some situations, they may be easier to administer than the parent drug. They may, for instance, be bioavailable by oral administration whereas the parent drug is not. The prodrug may also have improved solubility in pharmacological compositions over the parent drug. An example, without limitation, of a pro-drug would be a compound of the present invention wherein it is administered as an ester (the "pro-drug") to facilitate transmittal across a cell membrane where water solubility is not beneficial, but then it is metabolically hydrolyzed to the carboxylic acid once inside the cell where water solubility is beneficial. Pro-drugs have many useful properties. For example, a pro-drug may be more water soluble than the ultimate drug, thereby facilitating intravenous administration of the

drug. A pro-drug may also have a higher level of oral bioavailability than the ultimate drug. After administration, the prodrug is enzymatically or chemically cleaved to deliver the ultimate drug in the blood or tissue.

Exemplary pro-drugs release an amine of a compound of the invention wherein the free hydrogen of an amine or alcohol is replaced by (C_1-C_6)alkanoyloxymethyl, 1-((C_1-C_6)alkanoyloxy)ethyl, 1-methyl-1-((C_1-C_6)alkanoyloxy)ethyl, (C_1-C_6)alkoxycarbonyl-oxymethyl, N-(C_1-C_6)alkoxycarbonylamino-methyl, succinoyl, (C_1-C_6)alkanoyl, α-amino(C_1-C_4)alkanoyl, arylactyl and α-aminoacyl, or α-aminoacyl-α-aminoacyl wherein said α-aminoacyl moieties are independently any of the naturally occurring L-amino acids found in proteins, -P(O)$(OH)_2$, -P(O)(O(C_1-C_6)alkyl)$_2$ or glycosyl (the radical resulting from detachment of the hydroxyl of the hemiacetal of a carbohydrate).

Other exemplary pro-drugs upon cleavage release a corresponding free acid, and such hydrolyzable ester-forming residues of the compounds of this invention include but are not limited to carboxylic acid substituents (e.g., -(CH_2)C(O)OH or a moiety that contains a carboxylic acid) wherein the free hydrogen is replaced by (C_1-C_4)alkyl, (C_2-C_{12})alkanoyloxymethyl, (C_4-C_9)1-(alkanoyloxy)ethyl, 1-methyl-1-(alkanoyloxy)-ethyl having from 5 to 10 carbon atoms, alkoxycarbonyloxymethyl having from 3 to 6 carbon atoms, 1-(alkoxycarbonyloxy)ethyl having from 4 to 7 carbon atoms, 1-methyl-1-(alkoxycarbonyloxy)ethyl having from 5 to 8 carbon atoms, N-(alkoxycarbonyl)aminomethyl having from 3 to 9 carbon atoms, 1-(N-(alkoxycarbonyl)amino)ethyl having from 4 to 10 carbon atoms, 3-phthalidyl, 4-crotonolactonyl, gamma-butyrolacton-4-yl, di-N,N-(C_1-C_2)alkylamino(C_2-C_3)alkyl (such as β-dimethylaminoethyl), carbamoyl-(C_1-C_2)alkyl, N,N-di(C_1-C_2)-alkylcarbamoyl-(C_1-C_2)alkyl and piperidino-, pyrrolidino- or morpholino(C_2-C_3)alkyl.

The term "subject" as used herein, refers to an animal, typically a mammal or a human, that will be or has been the object of treatment, observation, and/or experiment. When the term is used in conjunction with administration of a compound or drug, then the subject has been the object of treatment, observation, and/or administration of the compound or drug.

The terms "co-administration" and "co-administering" refer to both concurrent administration (administration of two or more therapeutic agents at the same time) and time varied administration (administration of one or more therapeutic agents at a time different

from that of the administration of an additional therapeutic agent or agents), as long as the therapeutic agents are present in the patient to some extent at the same time.

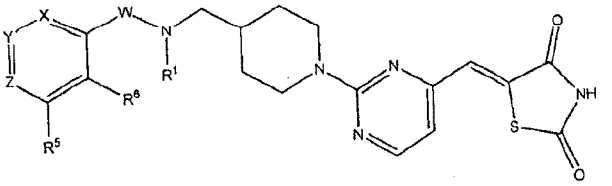
The term "therapeutically effective amount" as used herein, means that amount of active compound or pharmaceutical agent that elicits a biological or medicinal response in a cell culture, tissue system, animal, or human that is being sought by a researcher, veterinarian, clinician, or physician, which includes alleviation of the symptoms of the disease, condition, or disorder being treated.

The term "composition" is intended to encompass a product comprising the specified ingredients in the specified amounts, as well as any product that results, directly or indirectly, from combinations of the specified ingredients in the specified amounts.

The term "pharmaceutically acceptable carrier" refers to a medium that is used to prepare a desired dosage form of a compound. A pharmaceutically acceptable carrier can include one or more solvents, diluents, or other liquid vehicles; dispersion or suspension aids; surface active agents; isotonic agents; thickening or emulsifying agents; preservatives; solid binders; lubricants; and the like. Remington's Pharmaceutical Sciences, Fifteenth Edition, E. W. Martin (Mack Publishing Co., Easton, Pa., 1975) and Handbook of Pharmaceutical Excipients, Third Edition, A. H. Kibbe ed. (American Pharmaceutical Assoc. 2000), disclose various carriers used in formulating pharmaceutical compositions and known techniques for the preparation thereof.

COMPOUNDS

An aspect of the present invention relates to compounds that inhibit casein kinase 1 and/or casein kinase 2 and/or a PIM kinase. For example, an embodiment relates to a compound of formula 1 or a pharmaceutically acceptable salt thereof,



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wherein independently for each occurrence:

W is $C(R^1)_2$, $C(R^1)_2C(R^1)_2$, $C(R^1)_2C(R^1)_2C(R^1)_2$, or $S(O)_2$;

X is nitrogen or CR^2;

Y is nitrogen or CR^3;

Z is nitrogen or CR^4;

R^1 is hydrogen or alkyl;

R^2 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, trifluoromethyl, perfluoroalkyl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, halo, hydroxy, alkoxy, trifluoromethoxy, hydroxyalkyl, and alkoxyalkyl;

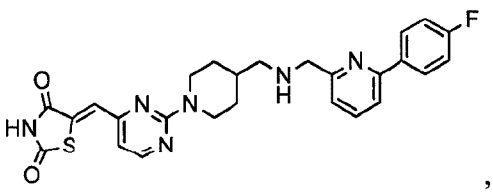
R^3 and R^4 are each independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, trifluoromethyl, perfluoroalkyl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, halo, hydroxy, alkoxy, trifluoromethoxy, hydroxyalkyl, and alkoxyalkyl; or R^3 and R^4 are joined together to form an optionally substituted heterocyclic ring;

R^5 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, trifluoromethyl, perfluoroalkyl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, halo, hydroxy, alkoxy, trifluoromethoxy, hydroxyalkyl, and alkoxyalkyl;

R^6 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, trifluoromethyl, perfluoroalkyl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, halo, hydroxy, alkoxy, trifluoromethoxy, hydroxyalkyl, and alkoxyalkyl;

wherein any one of the aforementioned alkyl, alkenyl, alkynyl, aryl, heteroaryl, heterocyclyl, aralkyl, heteroaralkyl, and heterocyclylalkyl may be optionally substituted;

wherein the compound is not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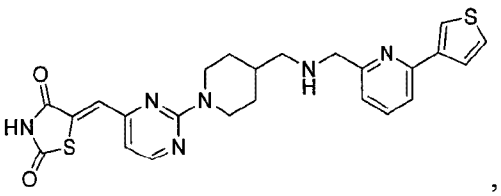
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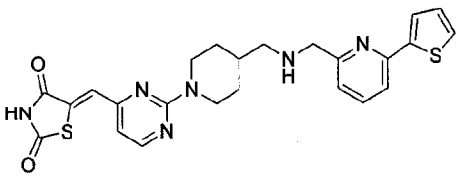
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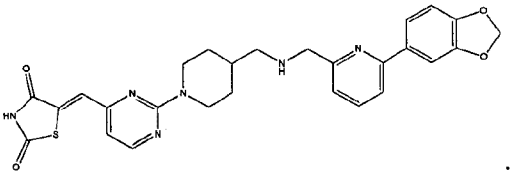
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In one embodiment, R^1 is hydrogen.

In one embodiment, R^1 is methyl.

In one embodiment, W is $S(O)_2$.

In one embodiment, W is CH_2.

In one embodiment, R^2 is selected from the group consisting of hydrogen, alkyl, aryl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, and halo.

In one embodiment, R^2 is hydrogen.

In one embodiment, R^2 is methyl.

In one embodiment, R^2 is fluorine.

In one embodiment, R^2 is an optionally substituted heteroaryl.

In one embodiment, R^2 is an optionally substituted aryl.

In one embodiment, R^3 is selected from the group consisting of hydrogen, alkyl, aryl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, and halo.

In one embodiment, R^3 is hydrogen.

In one embodiment, R^3 is methyl.

In one embodiment, R^3 is fluorine.

In one embodiment, R^3 is an optionally substituted heteroaryl.

In one embodiment, R^3 is an optionally substituted aryl.

In one embodiment, R^3 is an optionally substituted heterocyclylalkyl.

In one embodiment, R^3 and R^4 are joined together to form an optionally substituted aryl.

In one embodiment, R^3 and R^4 are joined together to form an optionally substituted heterocyclyl.

In one embodiment, R^3 and R^4 are joined together to form an optionally substituted heteroaryl.

In one embodiment, R^4 is selected from the group consisting of hydrogen, alkyl, aryl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, and halo.

In one embodiment, R^4 is hydrogen.

In one embodiment, R^4 is methyl.

In one embodiment, R^4 is fluorine.

In one embodiment, R^4 is an optionally substituted heteroaryl.

In one embodiment, R^4 is an optionally substituted aryl.

In one embodiment, R^4 is an optionally substituted heterocyclylalkyl.

In one embodiment, R^5 is selected from the group consisting of hydrogen, alkyl, aryl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, and halo.

In one embodiment, R^5 is hydrogen.

In one embodiment, R^5 is methyl.

In one embodiment, R^5 is fluorine.

In one embodiment, R^5 is an optionally substituted heteroaryl.

In one embodiment, R^5 is an optionally substituted aryl.

In one embodiment, R^5 is an optionally substituted heterocyclylalkyl.

In one embodiment, R^6 is selected from the group consisting of hydrogen, alkyl, aryl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, and halo.

In one embodiment, R^6 is hydrogen.

In one embodiment, R^6 is methyl.

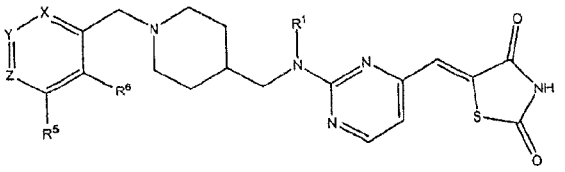
In one embodiment, R^6 is fluorine.

In one embodiment, R^6 is an optionally substituted heteroaryl.

In one embodiment, R^6 is an optionally substituted aryl.

In one embodiment, R^6 is an optionally substituted heterocyclylalkyl.

An aspect of the present invention relates to compounds that inhibit casein kinase 1 and/or casein kinase 2 and/or a PIM kinase. For example, an embodiment relates to a compound of formula 2 or a pharmaceutically acceptable salt thereof,



2

wherein independently for each occurrence:

X is nitrogen or CR^2;

Y is nitrogen or CR^3;

Z is nitrogen or CR^4;

R^1 is hydrogen or alkyl;

R^2 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, trifluoromethyl, perfluoroalkyl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, halo, hydroxy, alkoxy, trifluoromethoxy, hydroxyalkyl, and alkoxyalkyl;

R^3 and R^4 are each independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, trifluoromethyl, perfluoroalkyl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, halo, hydroxy, alkoxy, trifluoromethoxy, hydroxyalkyl, and alkoxyalkyl; or R^3 and R^4 are joined together to form an optionally substituted heterocyclic ring;

R^5 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, trifluoromethyl, perfluoroalkyl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, halo, hydroxy, alkoxy, trifluoromethoxy, hydroxyalkyl, and alkoxyalkyl;

R^6 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, trifluoromethyl, perfluoroalkyl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, halo, hydroxy, alkoxy, trifluoromethoxy, hydroxyalkyl, and alkoxyalkyl;

wherein any one of the aforementioned alkyl, alkenyl, alkynyl, aryl, heteroaryl, heterocyclyl, aralkyl, heteroaralkyl, and heterocyclylalkyl may be optionally substituted.

In one embodiment, R^1 is hydrogen.

In one embodiment, R^1 is methyl.

In one embodiment, R^2 is selected from the group consisting of hydrogen, alkyl, aryl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, and halo.

In one embodiment, R^2 is hydrogen.

In one embodiment, R^2 is methyl.

In one embodiment, R^2 is fluorine.

In one embodiment, R^2 is an optionally substituted heteroaryl.

In one embodiment, R^2 is an optionally substituted aryl.

In one embodiment, R^3 is selected from the group consisting of hydrogen, alkyl, aryl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, and halo.

In one embodiment, R^3 is hydrogen.

In one embodiment, R^3 is methyl.

In one embodiment, R^3 is fluorine.

In one embodiment, R^3 is an optionally substituted heteroaryl.

In one embodiment, R^3 is an optionally substituted aryl.

In one embodiment, R^3 is an optionally substituted heterocyclylalkyl.

In one embodiment, R^3 and R^4 are joined together to form an optionally substituted aryl.

In one embodiment, R^3 and R^4 are joined together to form an optionally substituted heterocyclyl.

In one embodiment, R^3 and R^4 are joined together to form an optionally substituted heteroaryl.

In one embodiment, R^4 is selected from the group consisting of hydrogen, alkyl, aryl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, and halo.

In one embodiment, R^4 is hydrogen.

In one embodiment, R^4 is methyl.

In one embodiment, R^4 is fluorine.

In one embodiment, R^4 is an optionally substituted heteroaryl.

In one embodiment, R^4 is an optionally substituted aryl.

In one embodiment, R^4 is an optionally substituted heterocyclylalkyl.

In one embodiment, R^5 is selected from the group consisting of hydrogen, alkyl, aryl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, and halo.

In one embodiment, R^5 is hydrogen.

In one embodiment, R^5 is methyl.

In one embodiment, R^5 is fluorine.

In one embodiment, R^5 is an optionally substituted heteroaryl.

In one embodiment, R^5 is an optionally substituted aryl.

In one embodiment, R^5 is an optionally substituted heterocyclylalkyl.

In one embodiment, R^6 is selected from the group consisting of hydrogen, alkyl, aryl, heterocyclylalkyl, aralkyl, heteroaryl, heteroaralkyl, and halo.

In one embodiment, R^6 is hydrogen.

In one embodiment, R^6 is methyl.

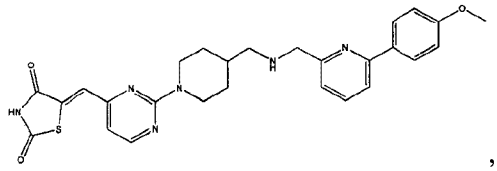
In one embodiment, R^6 is fluorine.

In one embodiment, R^6 is an optionally substituted heteroaryl.

In one embodiment, R^6 is an optionally substituted aryl.

In one embodiment, R^6 is an optionally substituted heterocyclylalkyl.

In one embodiment, a compound, or a pharmaceutically acceptable salt thereof, is selected from the group consisting of: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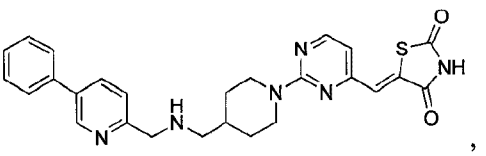
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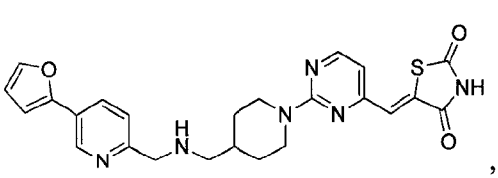
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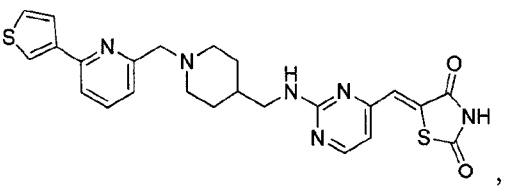
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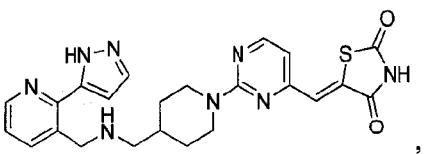
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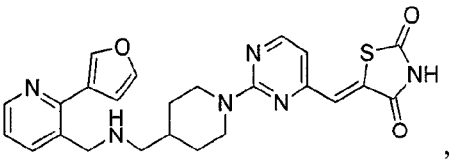
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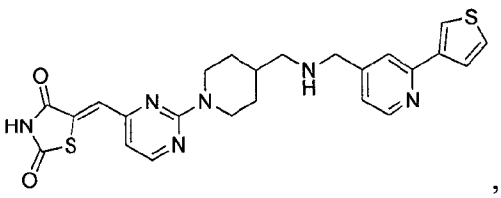
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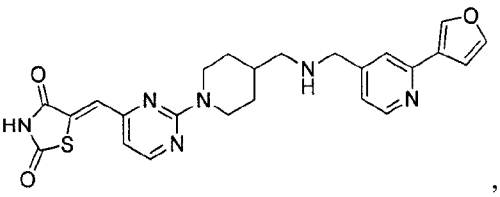
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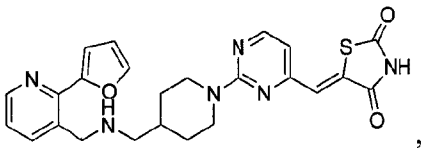
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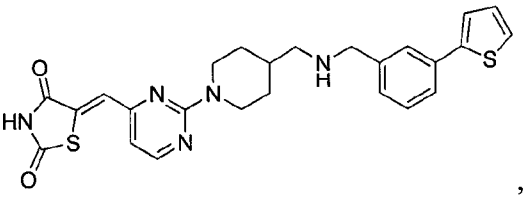
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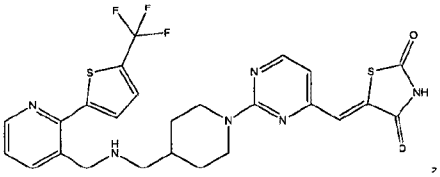
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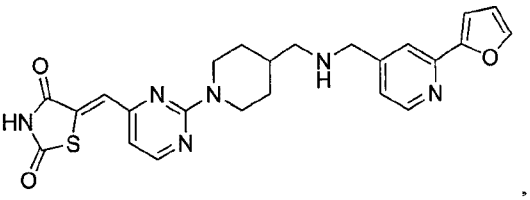
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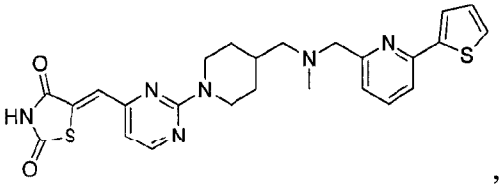
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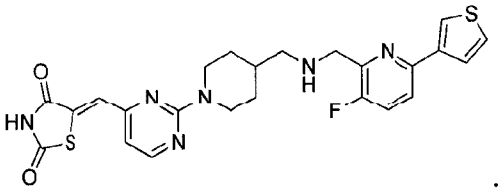
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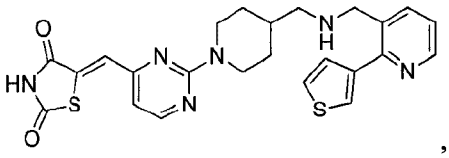
In one embodiment, a compound, or a pharmaceutically acceptable salt thereof, is selected from the group consisting of: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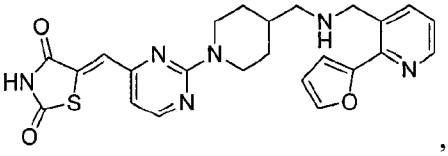
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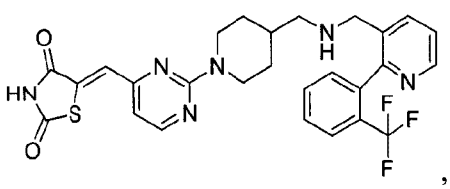
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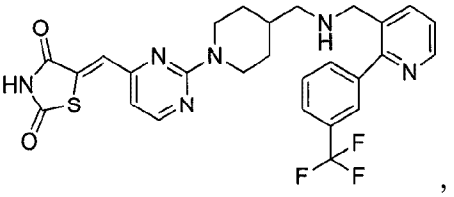
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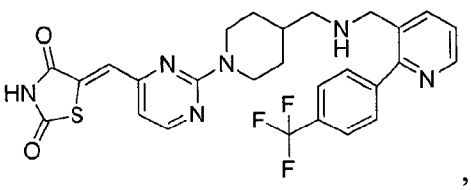
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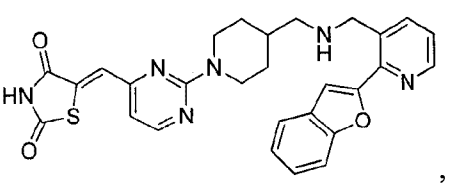
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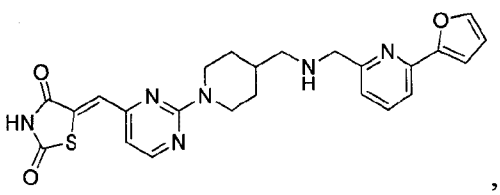
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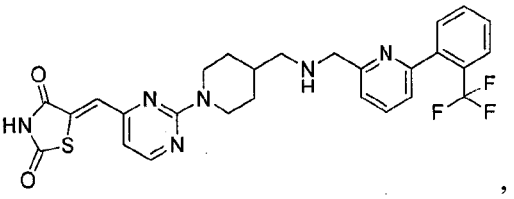
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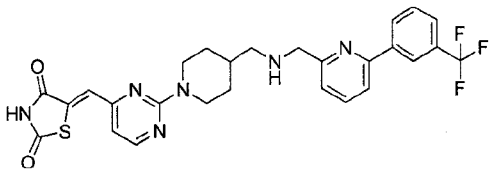
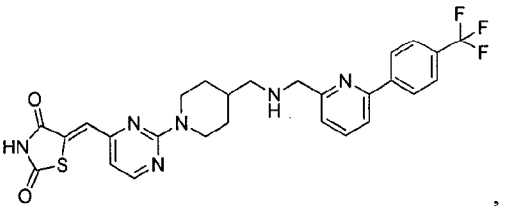
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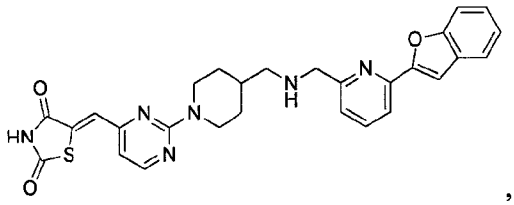
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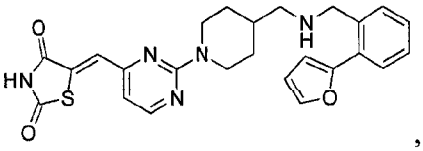
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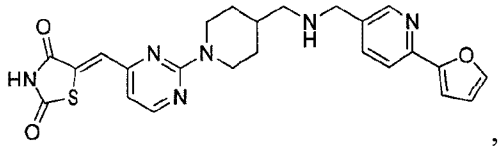
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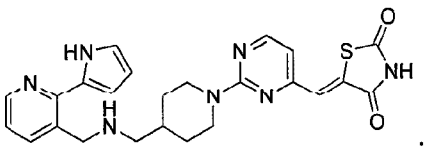
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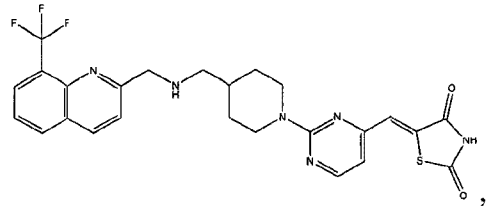
In one embodiment, a compound, or a pharmaceutically acceptable salt thereof, is selected from the group consisting of: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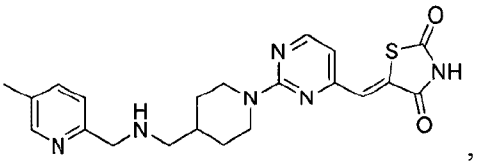
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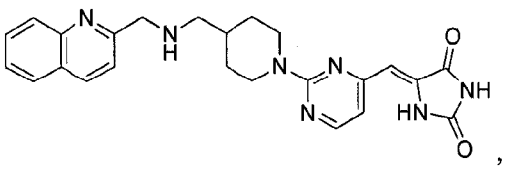
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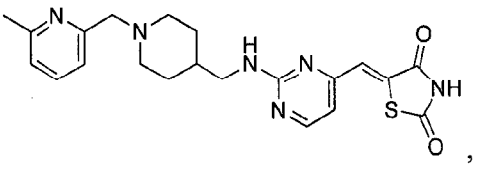
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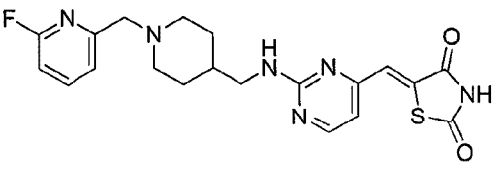
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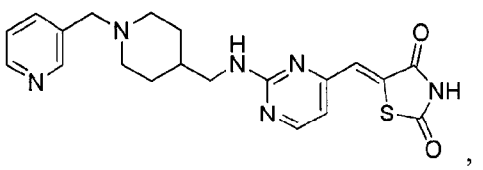
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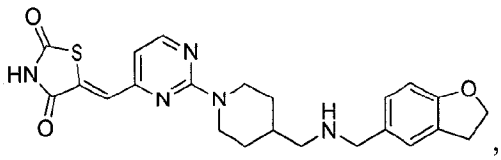
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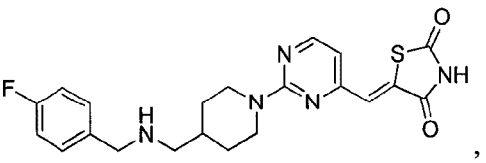
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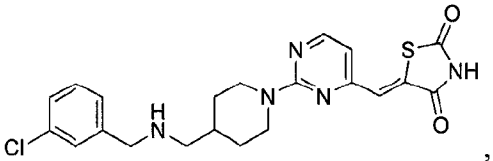
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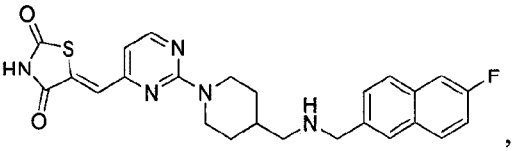
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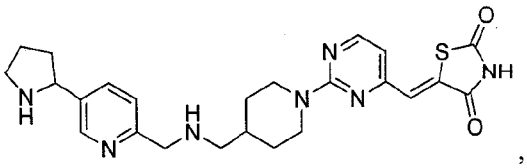
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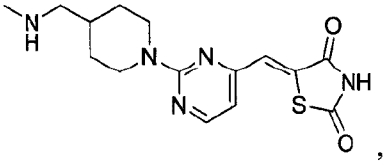
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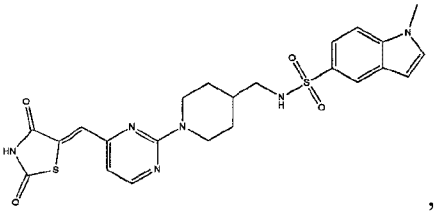
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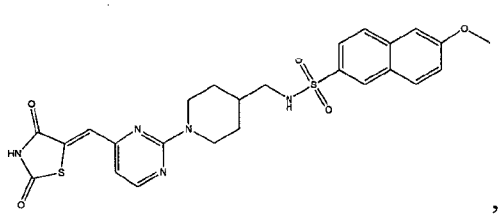
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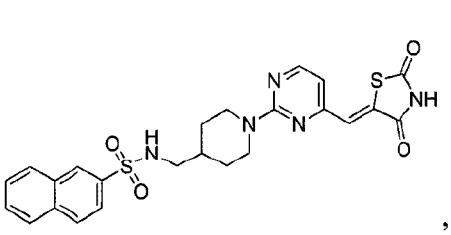
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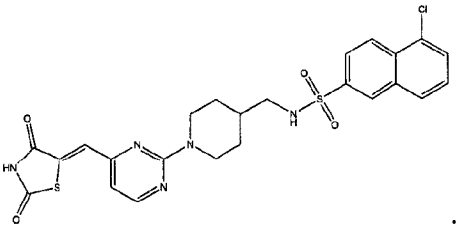
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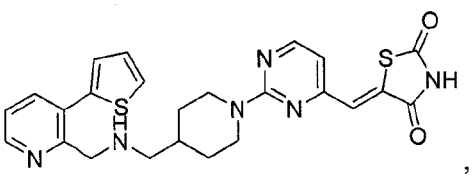
In one embodiment, a compound, or a pharmaceutically acceptable salt thereof, is selected from the group consisting of:



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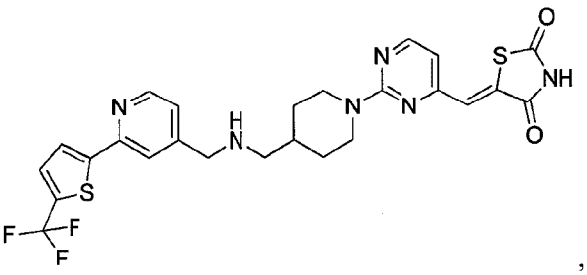

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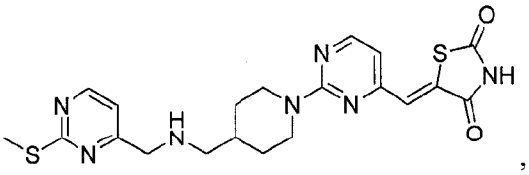

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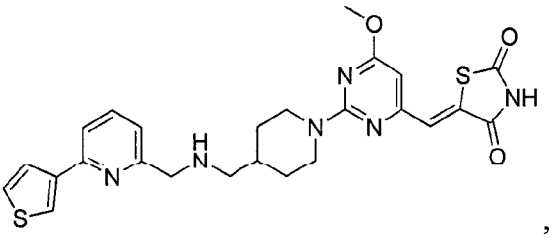

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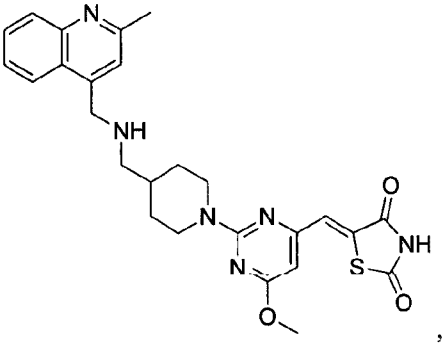

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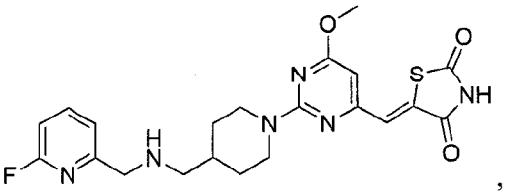

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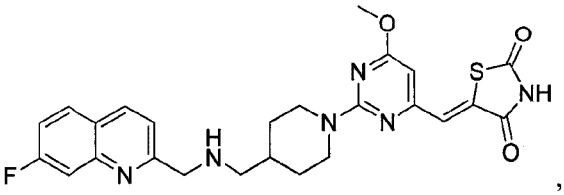

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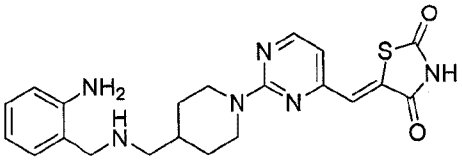
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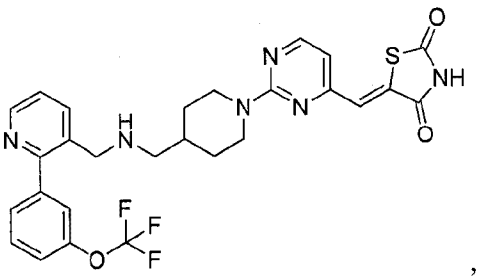
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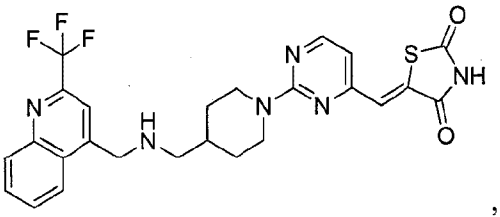
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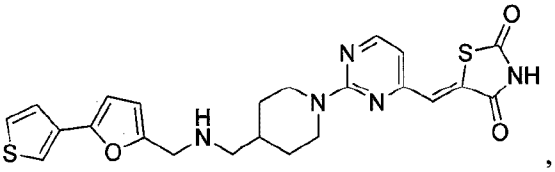
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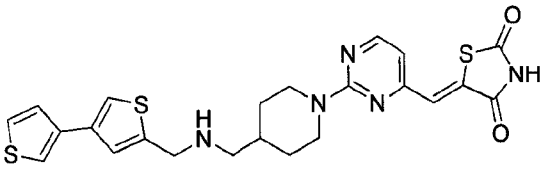
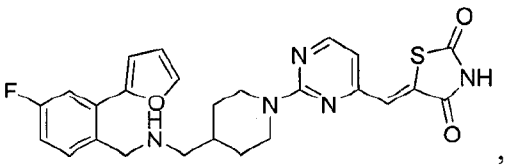

.

In one embodiment, a compound, or a pharmaceutically acceptable salt thereof, is selected from the group consisting of: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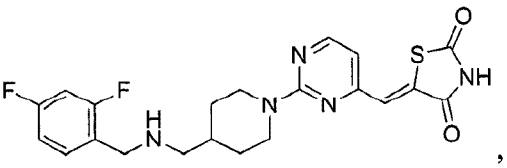
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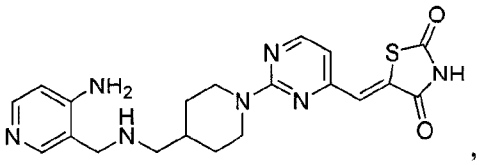
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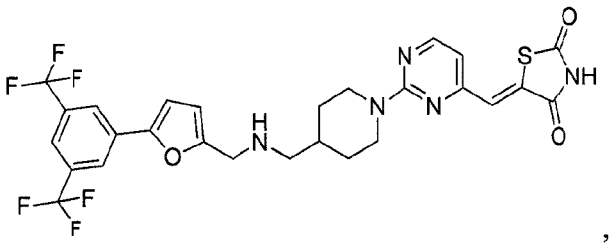
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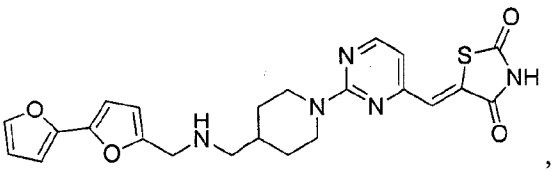
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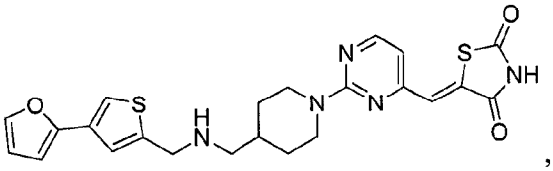
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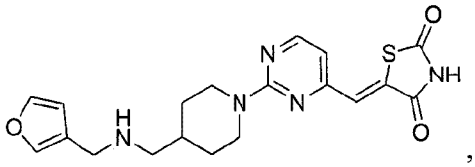
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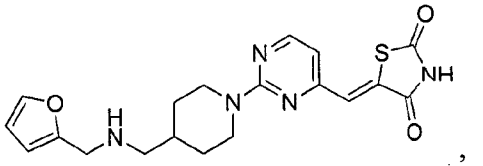
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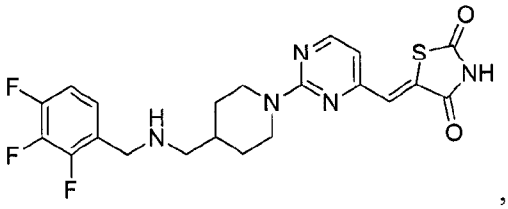
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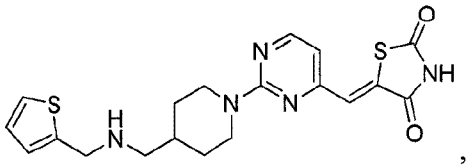
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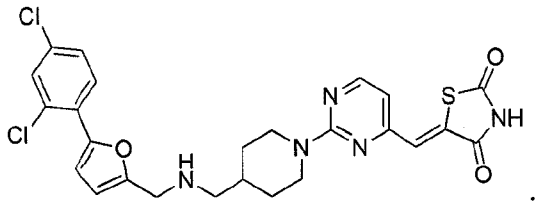
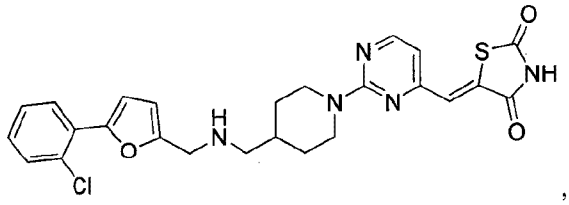

.

In one embodiment, a compound, or a pharmaceutically acceptable salt thereof, is selected from the group consisting of: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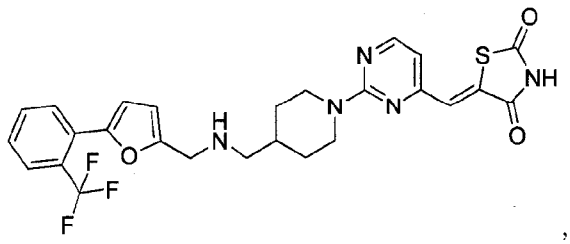
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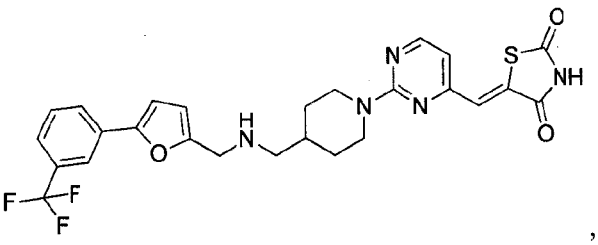

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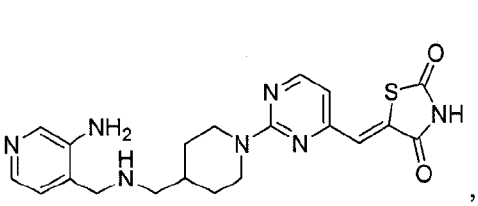

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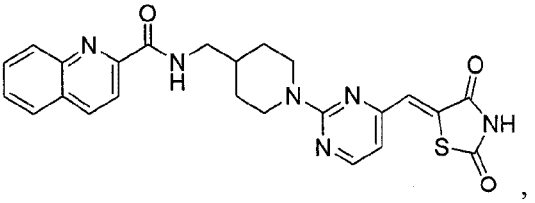

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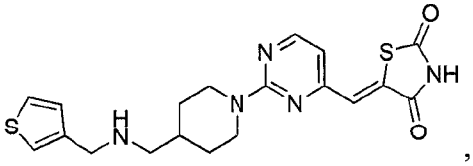

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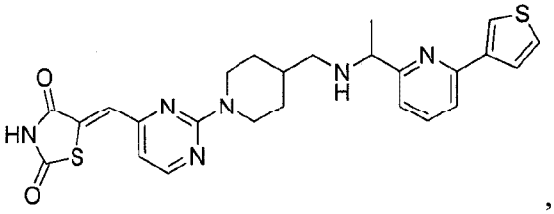

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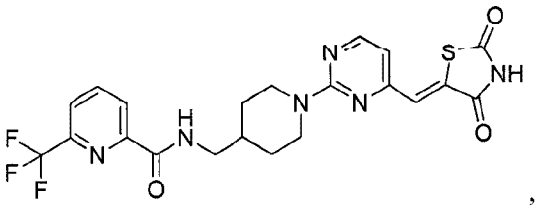

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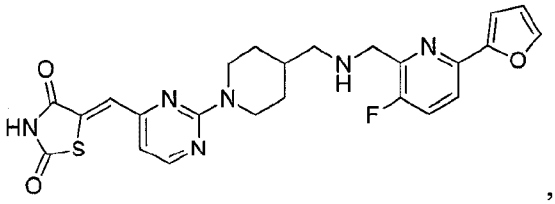

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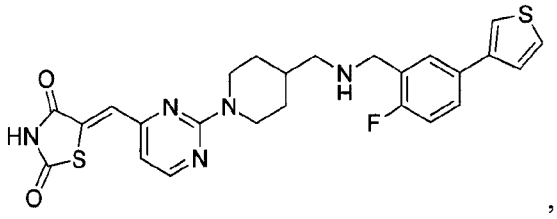

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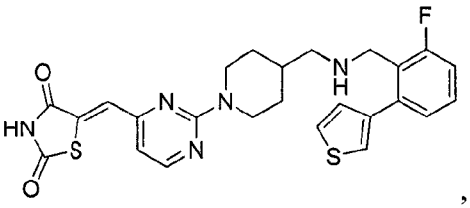

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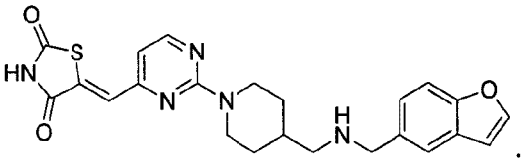
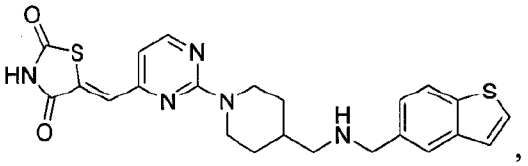


.

In one embodiment, a compound, or a pharmaceutically acceptable salt thereof, is selected from the group consisting of:



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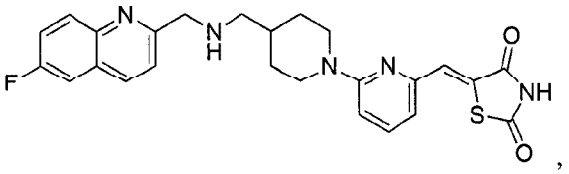

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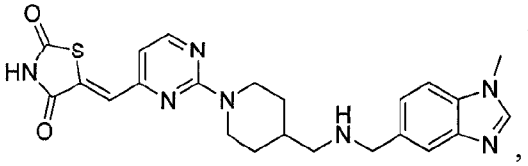

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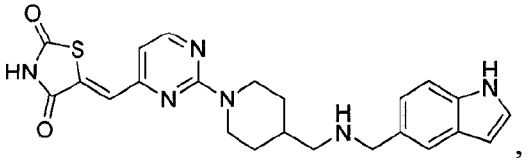

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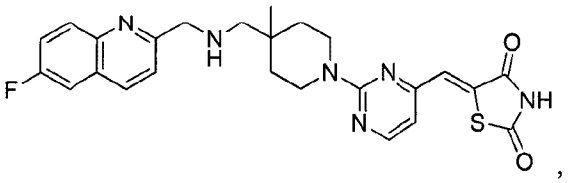

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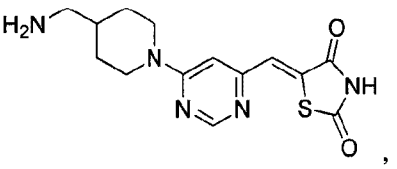

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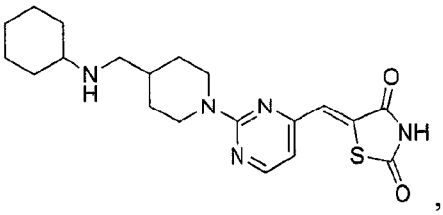
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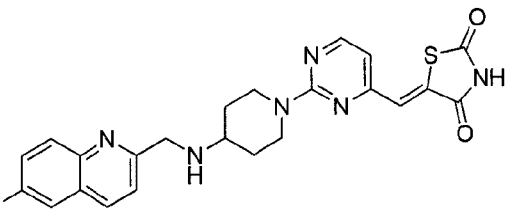
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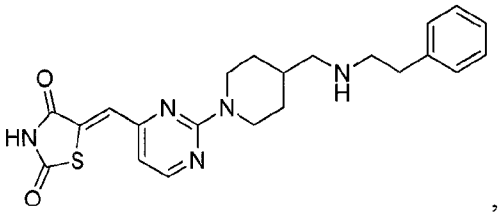
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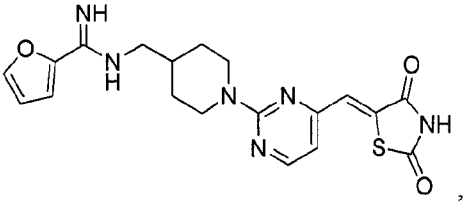
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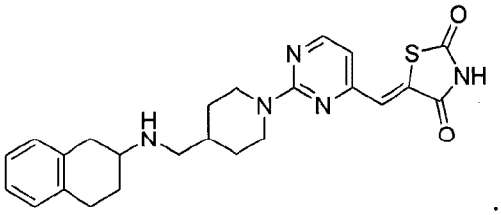
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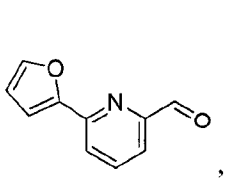
In one embodiment, a compound, or a pharmaceutically acceptable salt thereof, is selected from the group consisting of: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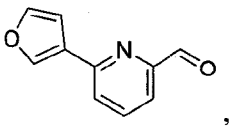
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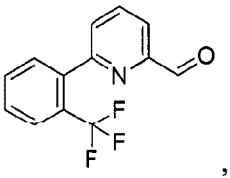
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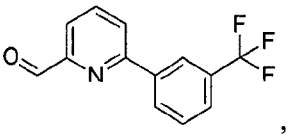
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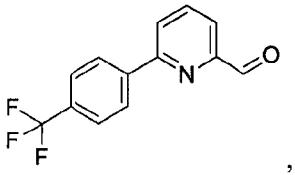
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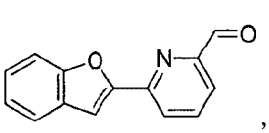
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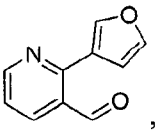
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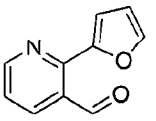
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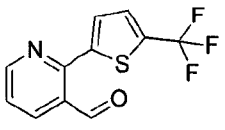
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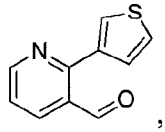
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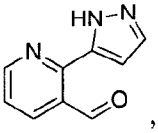
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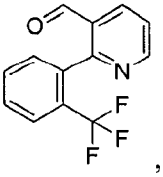
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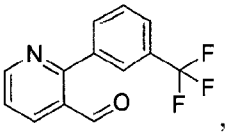
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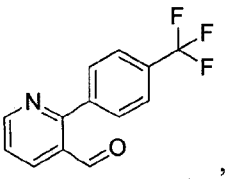
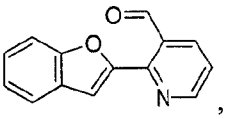
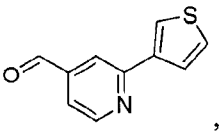
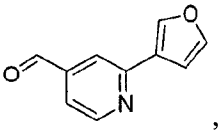
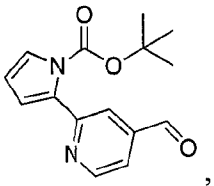
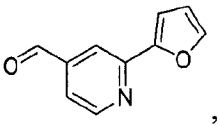
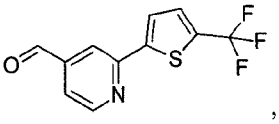
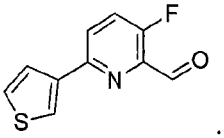
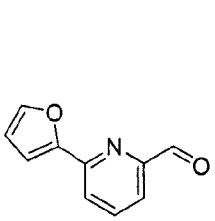
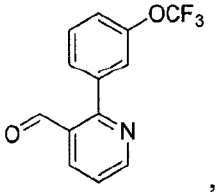
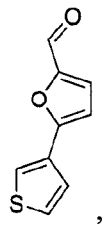
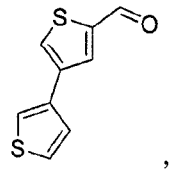
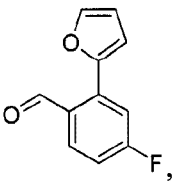
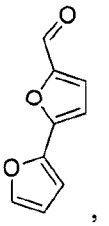
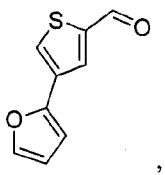
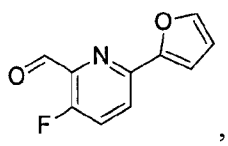
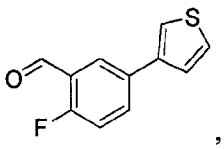
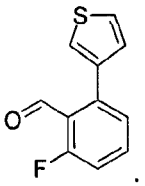







, and  .

In one embodiment, a compound, or a pharmaceutically acceptable salt thereof, is selected from the group consisting of:










, and  .

Any one of the aforementioned compounds may exist as the *E*-geometric isomer, the *Z*-geometric isomer, or mixtures thereof. For example, in one embodiment, "  " in the aforementioned structures represents the *E*-isomer of the particular compound. In another embodiment, "  " represents the *Z*-isomer of the particular compound. In yet another embodiment, "  " represents a mixture of *E* and *Z* isomers of the particular compound.

In one embodiment, any one of the aforementioned compounds is an inhibitor of CK1γ1, CK1γ2, or CK1γ3.

In one embodiment, any one of the aforementioned compounds is an inhibitor of CK2.

In one embodiment, any one of the aforementioned compounds is an inhibitor of the Wnt pathway.

In one embodiment, any one of the aforementioned compounds is an inhibitor of the JAK/STAT pathway.

In one embodiment, any one of the aforementioned compounds is an inhibitor of the mTOR pathway.

In one embodiment, any one of the aforementioned compounds is a mediator of Pgp degradation and/or drug efflux.

In one embodiment, any one of the aforementioned compounds is an inhibitor of the TGFβ pathway.

In some embodiments, the compound has an IC_{50} of less than 5000 nM for CK1γ1, CK1γ2, or CK1γ3.

In some embodiments, the compound has an IC_{50} of less than 1000 nM for CK1γ1, CK1γ2, or CK1γ3.

In some embodiments, the compound has an IC_{50} of less than 500 nM for CK1γ1, CK1γ2, or CK1γ3.

In one embodiment, any one of the aforementioned compounds is an inhibitor of CK2.

In one embodiment, the compound has an IC_{50} of less than 5000 nM for CK2.

In one embodiment, the compound has an IC_{50} of less than 1000 nM for CK2.

In one embodiment, the compound has an IC_{50} of less than 500 nM for CK2.

In one embodiment, any on of the aforementioned compounds is an inhibitor of Pim-1, Pim-2, or Pim-3.

In one embodiment, the compound has an IC_{50} of less than 5000 nM for Pim-1, Pim-2 or Pim-3.

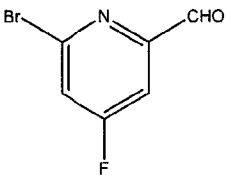
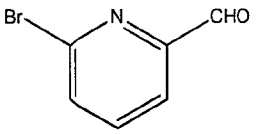
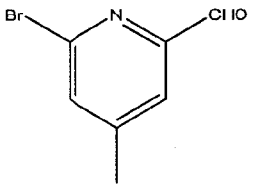
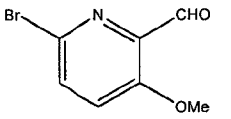
In one embodiment, the compound has an IC_{50} of less than 1000 nM for Pim-1, Pim-2 or Pim-3.

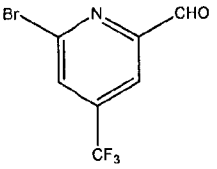
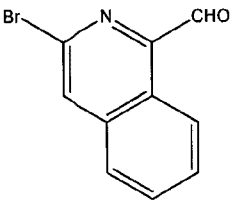
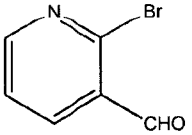
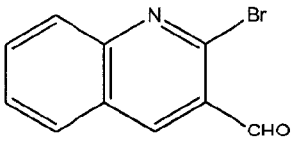
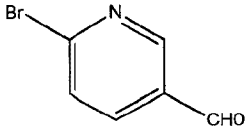
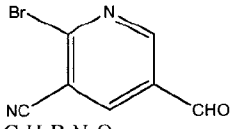
In one embodiment, the compound has an IC_{50} of less than 500 nM for Pim-1, Pim-2 or Pim-3.

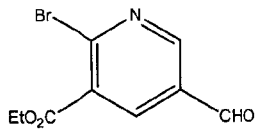
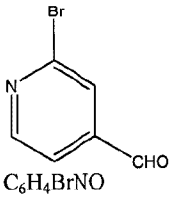
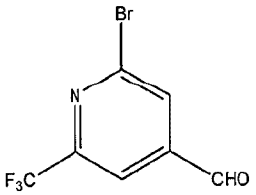
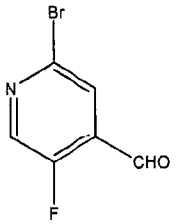
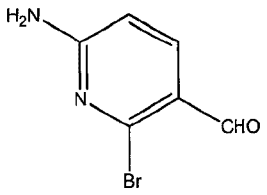
PROPHETIC EMBODIMENTS

Certain compounds of the invention could be made in accordance with the above schemes by reacting an amine (Reactant A) with the hydantoin core (Reactant B). Non-limiting prophetic examples of Reactant A and Reactant B are shown in Table 1 and Table 2, respectively.

Table 1: Reactant A Prophetic Examples.

Structure	ID	MW	Name
 C_6H_3BrFNO	A1	203.997	6-bromo-4-fluoropicolinaldehyde
 C_6H_4BrNO	A2	186.006	6-bromopicolinaldehyde
 C_7H_6BrNO	A3	200.033	6-bromo-4-methylpicolinaldehyde
 $C_7H_6BrNO_2$	A4	216.032	6-bromo-3-methoxypicolinaldehyde

 $C_7H_3BrF_3NO$	A5	254.004	6-bromo-4-(trifluoromethyl)picolinaldehyde
 $C_{10}H_6BrNO$	A6	236.065	3-bromoisoquinoline-1-carbaldehyde
 C_6H_4BrNO	A7	186.006	2-bromonicotinaldehyde
 $C_{10}H_6BrNO$	A8	236.065	2-bromoquinoline-3-carbaldehyde
 C_6H_4BrNO	A9	186.006	6-bromonicotinaldehyde
 $C_7H_3BrN_2O$	A10	211.016	2-bromo-5-formylnicotinonitrile

 $C_9H_8BrNO_3$	A11	258.069	ethyl 2-bromo-5-formylnicotinate
 C_6H_4BrNO	A12	186.006	2-bromoisonicotinaldehyde
 $C_7H_3BrF_3NO$	A13	254.004	2-bromo-6-(trifluoromethyl)isonicotinaldehyde
 C_6H_3BrFNO	A14	203.997	2-bromo-5-fluoroisonicotinaldehyde
 $C_6H_5BrN_2O$	A15	201.021	6-amino-2-bromonicotinaldehyde

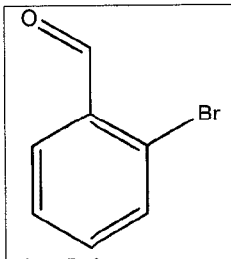
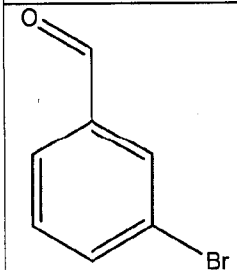
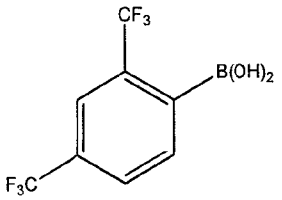
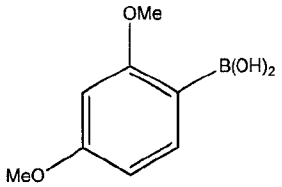
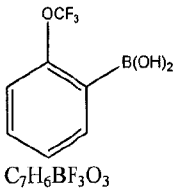
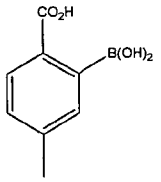
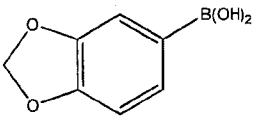
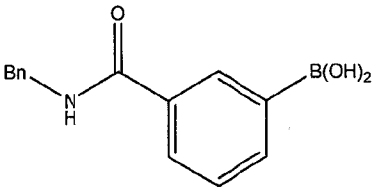
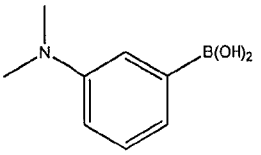
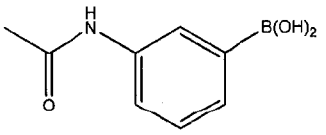
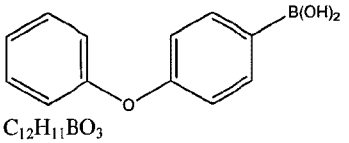
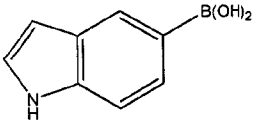
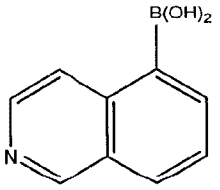
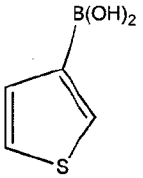
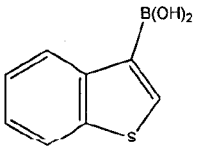
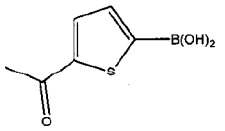
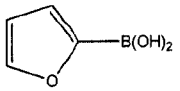
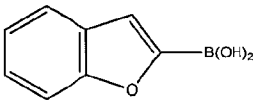
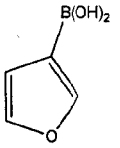
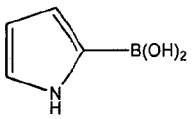
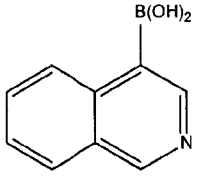
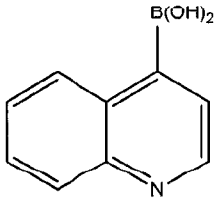
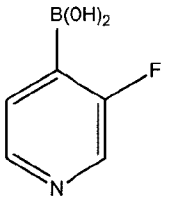
 C_7H_5BrO	A16	185.018	2-bromobenzaldehyde
 C_7H_5BrO	A17	185.018	3-bromobenzaldehyde

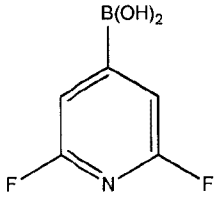
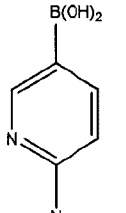
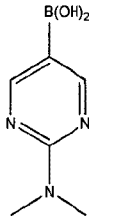
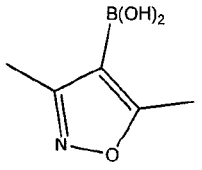
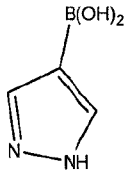
Table 2: Reactant B Prophetic Examples.

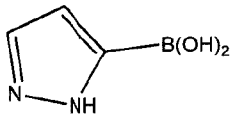
Structure	ID	MW	Name
 $C_8H_5BF_6O_2$	B1	257.926	(2,4-bis(trifluoromethyl)phenyl)boronic acid
 $C_8H_{11}BO_4$	B2	181.982	(2,4-dimethoxyphenyl)boronic acid
 $C_7H_6BF_3O_3$	B3	205.927	(2-(trifluoromethoxy)phenyl)boronic acid

 $C_8H_9BO_4$	B4	179.966	2-borono-4-methylbenzoic acid
 $C_7H_7BO_4$	B5	165.939	benzo[d][1,3]dioxol-5-ylboronic acid
 $C_{14}H_{14}BNO_3$	B6	255.077	(3-(benzylcarbamoyl)phenyl)boronic acid
 $C_8H_{12}BNO_2$	B7	164.997	(3-(dimethylamino)phenyl)boronic acid
 $C_8H_{10}BNO_3$	B8	178.981	(3-acetamidophenyl)boronic acid
 $C_{12}H_{11}BO_3$	B9	214.025	(4-phenoxyphenyl)boronic acid

 $C_8H_8BNO_2$	B10	160.966	(1H-indol-5-yl)boronic acid
 $C_9H_8BNO_2$	B11	172.976	isoquinolin-5-ylboronic acid
 $C_4H_5BO_2S$	B12	127.957	thiophen-3-ylboronic acid
 $C_8H_7BO_2S$	B13	178.016	benzo[b]thiophen-3-ylboronic acid
 $C_6H_7BO_3S$	B14	169.994	(5-acetylthiophen-2-yl)boronic acid
 $C_4H_5BO_3$	B15	111.892	furan-2-ylboronic acid

 $C_8H_7BO_3$	B16	161.95	benzofuran-2-ylboronic acid
 $C_4H_5BO_3$	B17	111.892	furan-3-ylboronic acid
 $C_4H_6BNO_2$	B18	110.907	(1H-pyrrol-2-yl)boronic acid
 $C_9H_8BNO_2$	B19	172.976	isoquinolin-4-ylboronic acid
 $C_9H_8BNO_2$	B20	172.976	quinolin-4-ylboronic acid
 $C_5H_5BFNO_2$	B21	140.908	(3-fluoropyridin-4-yl)boronic acid

 $C_5H_4BF_2NO_2$	B22	158.899	(2,6-difluoropyridin-4-yl)boronic acid
 $C_7H_{11}BN_2O_2$	B23	165.985	(6-(dimethylamino)pyridin-3-yl)boronic acid
 $C_6H_{10}BN_3O_2$	B24	166.973	(2-(dimethylamino)pyrimidin-5-yl)boronic acid
 $C_5H_8BNO_3$	B25	140.933	(3,5-dimethylisoxazol-4-yl)boronic acid
 $C_3H_5BN_2O_2$	B26	111.895	(1H-pyrazol-4-yl)boronic acid

 $C_3H_5BN_2O_2$	B27	111.895	(1H-pyrazol-5-yl)boronic acid

Additional prophetic embodiments of the invention that may be made in accordance with the above reaction schemes using Reactants A and B are listed in Table 3. The geometric isomers listed in Table 3 are believed to reflect the actual geometry of the prophetic compounds if they were to be made; however, final structural assignments may only be made if the compounds are synthesized and subjected to appropriate 2D NMR experiments. Further, although the compounds are listed as the "Z" geometric isomer, both the E and Z geometric isomers and mixtures thereof are contemplated.

Table 3: Additional prophetic embodiments of the invention.

No.	Chemical Name	Formula	Mol. Weight	Reactant A	Reactant B
1	(Z)-5-((2-(4-((((6-(2,4-bis(trifluoromethyl)phenyl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{23}F_7N_6O_2S$	640.575	A1	B1
2	(Z)-5-((2-(4-((((6-(2,4-bis(trifluoromethyl)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{24}F_6N_6O_2S$	622.585	A2	B1
3	(Z)-5-((2-(4-((((6-(2,4-bis(trifluoromethyl)phenyl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{26}F_6N_6O_2S$	636.611	A3	B1
4	(Z)-5-((2-(4-((((6-(2,4-bis(trifluoromethyl)phenyl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{26}F_6N_6O_3S$	652.611	A4	B1
5	(Z)-5-((2-(4-((((6-(2,4-bis(trifluoromethyl)phenyl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{23}F_9N_6O_2S$	690.583	A5	B1
6	(Z)-5-((2-(4-((((3-(2,4-bis(trifluoromethyl)phenyl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{26}F_6N_6O_2S$	672.643	A6	B1
7	(Z)-5-((2-(4-((((2-(2,4-bis(trifluoromethyl)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{24}F_6N_6O_2S$	622.585	A7	B1
8	(Z)-5-((2-(4-((((2-(2,4-bis(trifluoromethyl)phenyl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{26}F_6N_6O_2S$	672.643	A8	B1

9	(Z)-5-((2-(4-((((6-(2,4-bis(trifluoromethyl)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{24}F_6N_6O_2S$	622.585	A9	B1
10	(Z)-2-(2,4-bis(trifluoromethyl)phenyl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinonitrile	$C_{29}H_{23}F_6N_7O_2S$	647.594	A10	B1
11	(Z)-ethyl 2-(2,4-bis(trifluoromethyl)phenyl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinate	$C_{31}H_{28}F_6N_6O_4S$	694.647	A11	B1
12	(Z)-5-((2-(4-((((2-(2,4-bis(trifluoromethyl)phenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{24}F_6N_6O_2S$	622.585	A12	B1
13	(Z)-5-((2-(4-((((2-(2,4-bis(trifluoromethyl)phenyl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{23}F_9N_6O_2S$	690.583	A13	B1
14	(Z)-5-((2-(4-((((2-(2,4-bis(trifluoromethyl)phenyl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{23}F_7N_6O_2S$	640.575	A14	B1
15	(Z)-5-((2-(4-((((6-amino-2-(2,4-bis(trifluoromethyl)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{25}F_6N_7O_2S$	637.599	A15	B1
16	(Z)-5-((2-(4-((((6-(2,4-dimethoxyphenyl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{29}FN_6O_4S$	564.631	A1	B2
17	(Z)-5-((2-(4-((((6-(2,4-dimethoxyphenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{30}N_6O_4S$	546.641	A2	B2
18	(Z)-5-((2-(4-((((6-(2,4-dimethoxyphenyl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{32}N_6O_4S$	560.667	A3	B2
19	(Z)-5-((2-(4-((((6-(2,4-dimethoxyphenyl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{32}N_6O_5S$	576.667	A4	B2
20	(Z)-5-((2-(4-((((6-(2,4-dimethoxyphenyl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{29}F_3N_6O_4S$	614.639	A5	B2
21	(Z)-5-((2-(4-((((3-(2,4-dimethoxyphenyl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{32}N_6O_4S$	596.699	A6	B2
22	(Z)-5-((2-(4-((((2-(2,4-dimethoxyphenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{30}N_6O_4S$	546.641	A7	B2
23	(Z)-5-((2-(4-((((2-(2,4-dimethoxyphenyl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{32}N_6O_4S$	596.699	A8	B2
24	(Z)-5-((2-(4-((((6-(2,4-dimethoxyphenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{30}N_6O_4S$	546.641	A9	B2

25	(Z)-2-(2,4-dimethoxyphenyl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinonitrile	$C_{29}H_{29}N_7O_4S$	571.65	A10	B2
26	(Z)-ethyl 2-(2,4-dimethoxyphenyl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinate	$C_{31}H_{34}N_6O_6S$	618.703	A11	B2
27	(Z)-5-((2-(4-((((2-(2,4-dimethoxyphenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{30}N_6O_4S$	546.641	A12	B2
28	(Z)-5-((2-(4-((((2-(2,4-dimethoxyphenyl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{29}F_3N_6O_4S$	614.639	A13	B2
29	(Z)-5-((2-(4-((((2-(2,4-dimethoxyphenyl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{29}FN_6O_4S$	564.631	A14	B2
30	(Z)-5-((2-(4-((((6-amino-2-(2,4-dimethoxyphenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{31}N_7O_4S$	561.655	A15	B2
31	(Z)-5-((2-(4-((((4-fluoro-6-(2-(trifluoromethoxy)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{24}F_4N_6O_3S$	588.576	A1	B3
32	(Z)-5-((2-(4-((((6-(2-(trifluoromethoxy)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{25}F_3N_6O_3S$	570.586	A2	B3
33	(Z)-5-((2-(4-((((4-methyl-6-(2-(trifluoromethoxy)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{27}F_3N_6O_3S$	584.613	A3	B3
34	(Z)-5-((2-(4-((((3-methoxy-6-(2-(trifluoromethoxy)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{27}F_3N_6O_4S$	600.612	A4	B3
35	(Z)-5-((2-(4-((((6-(2-(trifluoromethoxy)phenyl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{24}F_6N_6O_3S$	638.584	A5	B3
36	(Z)-5-((2-(4-((((3-(2-(trifluoromethoxy)phenyl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{31}H_{27}F_3N_6O_3S$	620.645	A6	B3
37	(Z)-5-((2-(4-((((2-(2-(trifluoromethoxy)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{25}F_3N_6O_3S$	570.586	A7	B3
38	(Z)-5-((2-(4-((((2-(2-(trifluoromethoxy)phenyl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{31}H_{27}F_3N_6O_3S$	620.645	A8	B3
39	(Z)-5-((2-(4-((((6-(2-(trifluoromethoxy)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{25}F_3N_6O_3S$	570.586	A9	B3

40	(Z)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(2-(trifluoromethoxy)phenyl)nicotinonitrile	$C_{28}H_{24}F_3N_7O_3S$	595.595	A10	B3
41	(Z)-ethyl 5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(2-(trifluoromethoxy)phenyl)nicotinate	$C_{30}H_{29}F_3N_6O_5S$	642.649	A11	B3
42	(Z)-5-((2-(4-((((2-(2-(trifluoromethoxy)phenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{25}F_3N_6O_3S$	570.586	A12	B3
43	(Z)-5-((2-(4-((((2-(2-(trifluoromethoxy)phenyl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{24}F_6N_6O_3S$	638.584	A13	B3
44	(Z)-5-((2-(4-((((5-fluoro-2-(2-(trifluoromethoxy)phenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{24}F_4N_6O_3S$	588.576	A14	B3
45	(Z)-5-((2-(4-((((6-amino-2-(2-(trifluoromethoxy)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{26}F_3N_7O_3S$	585.601	A15	B3
46	(Z)-2-(6-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-4-fluoropyridin-2-yl)-4-methylbenzoic acid	$C_{28}H_{27}FN_6O_4S$	562.615	A1	B4
47	(Z)-2-(6-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)pyridin-2-yl)-4-methylbenzoic acid	$C_{28}H_{28}N_6O_4S$	544.625	A2	B4
48	(Z)-2-(6-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-4-methylpyridin-2-yl)-4-methylbenzoic acid	$C_{29}H_{30}N_6O_4S$	558.651	A3	B4
49	(Z)-2-(6-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-5-methoxypyridin-2-yl)-4-methylbenzoic acid	$C_{29}H_{30}N_6O_5S$	574.651	A4	B4
50	(Z)-2-(6-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-4-(trifluoromethyl)pyridin-2-yl)-4-methylbenzoic acid	$C_{29}H_{27}F_3N_6O_4S$	612.623	A5	B4
51	(Z)-2-(1-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)isoquinolin-3-yl)-4-methylbenzoic acid	$C_{32}H_{30}N_6O_4S$	594.683	A6	B4
52	(Z)-2-(3-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)pyridin-2-yl)-4-methylbenzoic acid	$C_{28}H_{28}N_6O_4S$	544.625	A7	B4
53	(Z)-2-(3-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)quinolin-2-yl)-4-methylbenzoic acid	$C_{32}H_{30}N_6O_4S$	594.683	A8	B4

54	(Z)-2-(5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)pyridin-2-yl)-4-methylbenzoic acid	$C_{28}H_{28}N_6O_4S$	544.625	A9	B4
55	(Z)-2-(3-cyano-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)pyridin-2-yl)-4-methylbenzoic acid	$C_{29}H_{27}N_7O_4S$	569.634	A10	B4
56	(Z)-2-(5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-3-(ethoxycarbonyl)pyridin-2-yl)-4-methylbenzoic acid	$C_{31}H_{32}N_6O_6S$	616.687	A11	B4
57	(Z)-2-(4-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)pyridin-2-yl)-4-methylbenzoic acid	$C_{28}H_{28}N_6O_4S$	544.625	A12	B4
58	(Z)-2-(4-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-6-(trifluoromethyl)pyridin-2-yl)-4-methylbenzoic acid	$C_{29}H_{27}F_3N_6O_4S$	612.623	A13	B4
59	(Z)-2-(4-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-5-fluoropyridin-2-yl)-4-methylbenzoic acid	$C_{28}H_{27}FN_6O_4S$	562.615	A14	B4
60	(Z)-2-(6-amino-3-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)pyridin-2-yl)-4-methylbenzoic acid	$C_{28}H_{29}N_7O_4S$	559.639	A15	B4
61	(Z)-5-((2-(4-((((6-(benzo[d][1,3]dioxol-5-yl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{25}FN_6O_4S$	548.589	A1	B5
62	(Z)-5-((2-(4-((((6-(benzo[d][1,3]dioxol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{26}N_6O_4S$	530.598	A2	B5
63	(Z)-5-((2-(4-((((6-(benzo[d][1,3]dioxol-5-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{28}N_6O_4S$	544.625	A3	B5
64	(Z)-5-((2-(4-((((6-(benzo[d][1,3]dioxol-5-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{28}N_6O_5S$	560.624	A4	B5
65	(Z)-5-((2-(4-((((6-(benzo[d][1,3]dioxol-5-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{25}F_3N_6O_4S$	598.596	A5	B5
66	(Z)-5-((2-(4-((((3-(benzo[d][1,3]dioxol-5-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{31}H_{28}N_6O_4S$	580.657	A6	B5
67	(Z)-5-((2-(4-((((2-(benzo[d][1,3]dioxol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{26}N_6O_4S$	530.598	A7	B5
68	(Z)-5-((2-(4-((((2-(benzo[d][1,3]dioxol-5-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{31}H_{28}N_6O_4S$	580.657	A8	B5
69	(Z)-5-((2-(4-((((6-(benzo[d][1,3]dioxol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{26}N_6O_4S$	530.598	A9	B5

70	(Z)-2-(benzo[d][1,3]dioxol-5-yl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinonitrile	$C_{28}H_{25}N_7O_4S$	555.608	A10	B5
71	(Z)-ethyl 2-(benzo[d][1,3]dioxol-5-yl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinate	$C_{30}H_{30}N_6O_6S$	602.661	A11	B5
72	(Z)-5-((2-(4-((((2-(benzo[d][1,3]dioxol-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{26}N_6O_4S$	530.598	A12	B5
73	(Z)-5-((2-(4-((((2-(benzo[d][1,3]dioxol-5-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{25}F_3N_6O_4S$	598.596	A13	B5
74	(Z)-5-((2-(4-((((2-(benzo[d][1,3]dioxol-5-yl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{25}FN_6O_4S$	548.589	A14	B5
75	(Z)-5-((2-(4-((((6-amino-2-(benzo[d][1,3]dioxol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{27}N_7O_4S$	545.613	A15	B5
76	(Z)-N-benzyl-3-(6-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-4-fluoropyridin-2-yl)benzamide	$C_{34}H_{32}FN_7O_3S$	637.726	A1	B6
77	(Z)-N-benzyl-3-(6-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)pyridin-2-yl)benzamide	$C_{34}H_{33}N_7O_3S$	619.736	A2	B6
78	(Z)-N-benzyl-3-(6-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-4-methylpyridin-2-yl)benzamide	$C_{35}H_{35}N_7O_3S$	633.763	A3	B6
79	(Z)-N-benzyl-3-(6-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-5-methoxypyridin-2-yl)benzamide	$C_{35}H_{35}N_7O_4S$	649.762	A4	B6
80	(Z)-N-benzyl-3-(6-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-4-(trifluoromethyl)pyridin-2-yl)benzamide	$C_{35}H_{32}F_3N_7O_3S$	687.734	A5	B6
81	(Z)-N-benzyl-3-(1-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)isoquinolin-3-yl)benzamide	$C_{38}H_{35}N_7O_3S$	669.795	A6	B6
82	(Z)-N-benzyl-3-(3-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)pyridin-2-yl)benzamide	$C_{34}H_{33}N_7O_3S$	619.736	A7	B6
83	(Z)-N-benzyl-3-(3-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)quinolin-2-yl)benzamide	$C_{38}H_{35}N_7O_3S$	669.795	A8	B6
84	(Z)-N-benzyl-3-(5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)pyridin-2-yl)benzamide	$C_{34}H_{33}N_7O_3S$	619.736	A9	B6
85	(Z)-N-benzyl-3-(3-cyano-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)pyridin-2-yl)benzamide	$C_{35}H_{32}N_8O_3S$	644.745	A10	B6
86	(Z)-ethyl 2-(3-(benzylcarbamoyl)phenyl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinate	$C_{37}H_{37}N_7O_5S$	691.799	A11	B6

87	(Z)-N-benzyl-3-(4-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)pyridin-2-yl)benzamide	$C_{34}H_{33}N_7O_3S$	619.736	A12	B6
88	(Z)-N-benzyl-3-(4-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-6-(trifluoromethyl)pyridin-2-yl)benzamide	$C_{35}H_{32}F_3N_7O_3S$	687.734	A13	B6
89	(Z)-N-benzyl-3-(4-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-5-fluoropyridin-2-yl)benzamide	$C_{34}H_{32}FN_7O_3S$	637.726	A14	B6
90	(Z)-3-(6-amino-3-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)pyridin-2-yl)-N-benzylbenzamide	$C_{34}H_{34}N_8O_3S$	634.751	A15	B6
91	(Z)-5-((2-(4-((((6-(3-(dimethylamino)phenyl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{30}FN_7O_2S$	547.647	A1	B7
92	(Z)-5-((2-(4-((((6-(3-(dimethylamino)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{31}N_7O_2S$	529.656	A2	B7
93	(Z)-5-((2-(4-((((6-(3-(dimethylamino)phenyl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{33}N_7O_2S$	543.683	A3	B7
94	(Z)-5-((2-(4-((((6-(3-(dimethylamino)phenyl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{33}N_7O_3S$	559.682	A4	B7
95	(Z)-5-((2-(4-((((6-(3-(dimethylamino)phenyl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{30}F_3N_7O_2S$	597.654	A5	B7
96	(Z)-5-((2-(4-((((3-(3-(dimethylamino)phenyl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{33}N_7O_2S$	579.715	A6	B7
97	(Z)-5-((2-(4-((((2-(3-(dimethylamino)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{31}N_7O_2S$	529.656	A7	B7
98	(Z)-5-((2-(4-((((2-(3-(dimethylamino)phenyl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{33}N_7O_2S$	579.715	A8	B7
99	(Z)-5-((2-(4-((((6-(3-(dimethylamino)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{31}N_7O_2S$	529.656	A9	B7
100	(Z)-2-(3-(dimethylamino)phenyl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinonitrile	$C_{29}H_{30}N_8O_2S$	554.666	A10	B7
101	(Z)-ethyl 2-(3-(dimethylamino)phenyl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinate	$C_{31}H_{35}N_7O_4S$	601.719	A11	B7
102	(Z)-5-((2-(4-((((2-(3-(dimethylamino)phenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{31}N_7O_2S$	529.656	A12	B7

103	(Z)-5-((2-(4-((((2-(3-(dimethylamino)phenyl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{30}F_3N_7O_2S$	597.654	A13	B7
104	(Z)-5-((2-(4-((((2-(3-(dimethylamino)phenyl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{30}FN_7O_2S$	547.647	A14	B7
105	(Z)-5-((2-(4-((((6-amino-2-(3-(dimethylamino)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{32}N_8O_2S$	544.671	A15	B7
106	(Z)-N-(3-(6-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-4-fluoropyridin-2-yl)phenyl)acetamide	$C_{28}H_{28}FN_7O_3S$	561.63	A1	B8
107	(Z)-N-(3-(6-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)pyridin-2-yl)phenyl)acetamide	$C_{28}H_{29}N_7O_3S$	543.64	A2	B8
108	(Z)-N-(3-(6-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-4-methylpyridin-2-yl)phenyl)acetamide	$C_{29}H_{31}N_7O_3S$	557.667	A3	B8
109	(Z)-N-(3-(6-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-5-methoxypyridin-2-yl)phenyl)acetamide	$C_{29}H_{31}N_7O_4S$	573.666	A4	B8
110	(Z)-N-(3-(6-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-4-(trifluoromethyl)pyridin-2-yl)phenyl)acetamide	$C_{29}H_{28}F_3N_7O_3S$	611.638	A5	B8
111	(Z)-N-(3-(1-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)isoquinolin-3-yl)phenyl)acetamide	$C_{32}H_{31}N_7O_3S$	593.699	A6	B8
112	(Z)-N-(3-(3-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)pyridin-2-yl)phenyl)acetamide	$C_{28}H_{29}N_7O_3S$	543.64	A7	B8
113	(Z)-N-(3-(3-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)quinolin-2-yl)phenyl)acetamide	$C_{32}H_{31}N_7O_3S$	593.699	A8	B8
114	(Z)-N-(3-(5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)pyridin-2-yl)phenyl)acetamide	$C_{28}H_{29}N_7O_3S$	543.64	A9	B8
115	(Z)-N-(3-(3-cyano-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)pyridin-2-yl)phenyl)acetamide	$C_{29}H_{28}N_8O_3S$	568.649	A10	B8
116	(Z)-ethyl 2-(3-acetamidophenyl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinate	$C_{31}H_{33}N_7O_5S$	615.703	A11	B8
117	(Z)-N-(3-(4-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)pyridin-2-yl)phenyl)acetamide	$C_{28}H_{29}N_7O_3S$	543.64	A12	B8

118	(Z)-N-(3-(4-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-6-(trifluoromethyl)pyridin-2-yl)phenyl)acetamide	$C_{29}H_{28}F_3N_7O_3S$	611.638	A13	B8
119	(Z)-N-(3-(4-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-5-fluoropyridin-2-yl)phenyl)acetamide	$C_{28}H_{28}FN_7O_3S$	561.63	A14	B8
120	(Z)-N-(3-(6-amino-3-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)pyridin-2-yl)phenyl)acetamide	$C_{28}H_{30}N_8O_3S$	558.655	A15	B8
121	(Z)-5-((2-(4-((((4-fluoro-6-(4-phenoxyphenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{29}FN_6O_3S$	596.674	A1	B9
122	(Z)-5-((2-(4-((((6-(4-phenoxyphenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{30}N_6O_3S$	578.684	A2	B9
123	(Z)-5-((2-(4-((((4-methyl-6-(4-phenoxyphenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{33}H_{32}N_6O_3S$	592.711	A3	B9
124	(Z)-5-((2-(4-((((3-methoxy-6-(4-phenoxyphenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{33}H_{32}N_6O_4S$	608.71	A4	B9
125	(Z)-5-((2-(4-((((6-(4-phenoxyphenyl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{33}H_{29}F_3N_6O_3S$	646.682	A5	B9
126	(Z)-5-((2-(4-((((3-(4-phenoxyphenyl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{36}H_{32}N_6O_3S$	628.743	A6	B9
127	(Z)-5-((2-(4-((((2-(4-phenoxyphenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{30}N_6O_3S$	578.684	A7	B9
128	(Z)-5-((2-(4-((((2-(4-phenoxyphenyl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{36}H_{32}N_6O_3S$	628.743	A8	B9
129	(Z)-5-((2-(4-((((6-(4-phenoxyphenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{30}N_6O_3S$	578.684	A9	B9
130	(Z)-5-(((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(4-phenoxyphenyl)nicotinonitrile	$C_{33}H_{29}N_7O_3S$	603.693	A10	B9
131	(Z)-ethyl 5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(4-phenoxyphenyl)nicotinate	$C_{35}H_{34}N_6O_5S$	650.747	A11	B9
132	(Z)-5-((2-(4-((((2-(4-phenoxyphenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{30}N_6O_3S$	578.684	A12	B9
133	(Z)-5-((2-(4-((((2-(4-phenoxyphenyl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{33}H_{29}F_3N_6O_3S$	646.682	A13	B9

134	(Z)-5-((2-(4-((((5-fluoro-2-(4-phenoxyphenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{29}FN_6O_3S$	596.674	A14	B9
135	(Z)-5-((2-(4-((((6-amino-2-(4-phenoxyphenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{31}N_7O_3S$	593.699	A15	B9
136	(Z)-5-((2-(4-((((4-fluoro-6-(1H-indol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{26}FN_7O_2S$	543.615	A1	B10
137	(Z)-5-((2-(4-((((6-(1H-indol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{27}N_7O_2S$	525.625	A2	B10
138	(Z)-5-((2-(4-((((6-(1H-indol-5-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{29}N_7O_2S$	539.651	A3	B10
139	(Z)-5-((2-(4-((((6-(1H-indol-5-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{29}N_7O_3S$	555.651	A4	B10
140	(Z)-5-((2-(4-((((6-(1H-indol-5-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{26}F_3N_7O_2S$	593.623	A5	B10
141	(Z)-5-((2-(4-((((3-(1H-indol-5-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{29}N_7O_2S$	575.683	A6	B10
142	(Z)-5-((2-(4-((((2-(1H-indol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{27}N_7O_2S$	525.625	A7	B10
143	(Z)-5-((2-(4-((((2-(1H-indol-5-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{29}N_7O_2S$	575.683	A8	B10
144	(Z)-5-((2-(4-((((6-(1H-indol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{27}N_7O_2S$	525.625	A9	B10
145	(Z)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(1H-indol-5-yl)nicotinonitrile	$C_{29}H_{26}N_8O_2S$	550.634	A10	B10
146	(Z)-ethyl 5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(1H-indol-5-yl)nicotinate	$C_{31}H_{31}N_7O_4S$	597.687	A11	B10
147	(Z)-5-((2-(4-((((2-(1H-indol-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{27}N_7O_2S$	525.625	A12	B10
148	(Z)-5-((2-(4-((((2-(1H-indol-5-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{26}F_3N_7O_2S$	593.623	A13	B10
149	(Z)-5-((2-(4-((((5-fluoro-2-(1H-indol-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{26}FN_7O_2S$	543.615	A14	B10
150	(Z)-5-((2-(4-((((6-amino-2-(1H-indol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{28}N_8O_2S$	540.639	A15	B10
151	(Z)-5-((2-(4-((((4-fluoro-6-(isoquinolin-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{26}FN_7O_2S$	555.626	A1	B11

152	(Z)-5-((2-(4-((((6-(isoquinolin-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{27}N_7O_2S$	537.635	A2	B11
153	(Z)-5-((2-(4-((((6-(isoquinolin-5-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{29}N_7O_2S$	551.662	A3	B11
154	(Z)-5-((2-(4-((((6-(isoquinolin-5-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{29}N_7O_3S$	567.661	A4	B11
155	(Z)-5-((2-(4-((((6-(isoquinolin-5-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{26}F_3N_7O_2S$	605.633	A5	B11
156	(Z)-5-((2-(4-((([3,5'-biisoquinolin]-1-ylmethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{33}H_{29}N_7O_2S$	587.694	A6	B11
157	(Z)-5-((2-(4-((((2-(isoquinolin-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{27}N_7O_2S$	537.635	A7	B11
158	(Z)-5-((2-(4-((((2-(isoquinolin-5-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{33}H_{29}N_7O_2S$	587.694	A8	B11
159	(Z)-5-((2-(4-((((6-(isoquinolin-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{27}N_7O_2S$	537.635	A9	B11
160	(Z)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(isoquinolin-5-yl)nicotinonitrile	$C_{30}H_{26}N_8O_2S$	562.645	A10	B11
161	(Z)-ethyl 5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(isoquinolin-5-yl)nicotinate	$C_{32}H_{31}N_7O_4S$	609.698	A11	B11
162	(Z)-5-((2-(4-((((2-(isoquinolin-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{27}N_7O_2S$	537.635	A12	B11
163	(Z)-5-((2-(4-((((2-(isoquinolin-5-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{26}F_3N_7O_2S$	605.633	A13	B11
164	(Z)-5-((2-(4-((((5-fluoro-2-(isoquinolin-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{26}FN_7O_2S$	555.626	A14	B11
165	(Z)-5-((2-(4-((((6-amino-2-(isoquinolin-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{28}N_8O_2S$	552.65	A15	B11
166	(Z)-5-((2-(4-((((4-fluoro-6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{23}FN_6O_2S_2$	510.607	A1	B12
167	(Z)-5-((2-(4-((((6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{24}N_6O_2S_2$	492.616	A2	B12
168	(Z)-5-((2-(4-((((4-methyl-6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{26}N_6O_2S_2$	506.643	A3	B12

169	(Z)-5-((2-(4-((((3-methoxy-6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{26}N_6O_3S_2$	522.642	A4	B12
170	(Z)-5-((2-(4-((((6-(thiophen-3-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{23}F_3N_6O_2S_2$	560.614	A5	B12
171	(Z)-5-((2-(4-((((3-(thiophen-3-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{26}N_6O_2S_2$	542.675	A6	B12
172	(Z)-5-((2-(4-((((2-(thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{24}N_6O_2S_2$	492.616	A7	B12
173	(Z)-5-((2-(4-((((2-(thiophen-3-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{26}N_6O_2S_2$	542.675	A8	B12
174	(Z)-5-((2-(4-((((6-(thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{24}N_6O_2S_2$	492.616	A9	B12
175	(Z)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(thiophen-3-yl)nicotinonitrile	$C_{25}H_{23}N_7O_2S_2$	517.626	A10	B12
176	(Z)-ethyl 5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(thiophen-3-yl)nicotinate	$C_{27}H_{28}N_6O_4S_2$	564.679	A11	B12
177	(Z)-5-((2-(4-((((2-(thiophen-3-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{24}N_6O_2S_2$	492.616	A12	B12
178	(Z)-5-((2-(4-((((2-(thiophen-3-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{23}F_3N_6O_2S_2$	560.614	A13	B12
179	(Z)-5-((2-(4-((((5-fluoro-2-(thiophen-3-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{23}FN_6O_2S_2$	510.607	A14	B12
180	(Z)-5-((2-(4-((((6-amino-2-(thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{25}N_7O_2S_2$	507.631	A15	B12
181	(Z)-5-((2-(4-((((6-(benzo[b]thiophen-3-yl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{25}FN_6O_2S_2$	560.666	A1	B13
182	(Z)-5-((2-(4-((((6-(benzo[b]thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{26}N_6O_2S_2$	542.675	A2	B13
183	(Z)-5-((2-(4-((((6-(benzo[b]thiophen-3-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{28}N_6O_2S_2$	556.702	A3	B13
184	(Z)-5-((2-(4-((((6-(benzo[b]thiophen-3-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{28}N_6O_3S_2$	572.701	A4	B13
185	(Z)-5-((2-(4-((((6-(benzo[b]thiophen-3-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{25}F_3N_6O_2S_2$	610.673	A5	B13

186	(Z)-5-((2-(4-((((3-(benzo[b]thiophen-3-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{28}N_6O_2S_2$	592.734	A6	B13
187	(Z)-5-((2-(4-((((2-(benzo[b]thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{26}N_6O_2S_2$	542.675	A7	B13
188	(Z)-5-((2-(4-((((2-(benzo[b]thiophen-3-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{28}N_6O_2S_2$	592.734	A8	B13
189	(Z)-5-((2-(4-((((6-(benzo[b]thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{26}N_6O_2S_2$	542.675	A9	B13
190	(Z)-2-(benzo[b]thiophen-3-yl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinonitrile	$C_{29}H_{25}N_7O_2S_2$	567.685	A10	B13
191	(Z)-ethyl 2-(benzo[b]thiophen-3-yl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinate	$C_{31}H_{30}N_6O_4S_2$	614.738	A11	B13
192	(Z)-5-((2-(4-((((2-(benzo[b]thiophen-3-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{26}N_6O_2S_2$	542.675	A12	B13
193	(Z)-5-((2-(4-((((2-(benzo[b]thiophen-3-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{25}F_3N_6O_2S_2$	610.673	A13	B13
194	(Z)-5-((2-(4-((((2-(benzo[b]thiophen-3-yl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{25}FN_6O_2S_2$	560.666	A14	B13
195	(Z)-5-((2-(4-((((6-amino-2-(benzo[b]thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{27}N_7O_2S_2$	557.69	A15	B13
196	(Z)-5-((2-(4-((((6-(5-acetylthiophen-2-yl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{25}FN_6O_3S_2$	552.644	A1	B14
197	(Z)-5-((2-(4-((((6-(5-acetylthiophen-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{26}N_6O_3S_2$	534.653	A2	B14
198	(Z)-5-((2-(4-((((6-(5-acetylthiophen-2-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{28}N_6O_3S_2$	548.68	A3	B14
199	(Z)-5-((2-(4-((((6-(5-acetylthiophen-2-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{28}N_6O_4S_2$	564.679	A4	B14
200	(Z)-5-((2-(4-((((6-(5-acetylthiophen-2-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{25}F_3N_6O_3S_2$	602.651	A5	B14
201	(Z)-5-((2-(4-((((3-(5-acetylthiophen-2-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{28}N_6O_3S_2$	584.712	A6	B14
202	(Z)-5-((2-(4-((((2-(5-acetylthiophen-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{26}N_6O_3S_2$	534.653	A7	B14

203	(Z)-5-((2-(4-((((2-(5-acetylthiophen-2-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{28}N_6O_3S_2$	584.712	A8	B14
204	(Z)-5-((2-(4-((((6-(5-acetylthiophen-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{26}N_6O_3S_2$	534.653	A9	B14
205	(Z)-2-(5-acetylthiophen-2-yl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinonitrile	$C_{27}H_{25}N_7O_3S_2$	559.663	A10	B14
206	(Z)-ethyl 2-(5-acetylthiophen-2-yl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinate	$C_{29}H_{30}N_6O_5S_2$	606.716	A11	B14
207	(Z)-5-((2-(4-((((2-(5-acetylthiophen-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{26}N_6O_3S_2$	534.653	A12	B14
208	(Z)-5-((2-(4-((((2-(5-acetylthiophen-2-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{25}F_3N_6O_3S_2$	602.651	A13	B14
209	(Z)-5-((2-(4-((((2-(5-acetylthiophen-2-yl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{25}FN_6O_3S_2$	552.644	A14	B14
210	(Z)-5-((2-(4-((((2-(5-acetylthiophen-2-yl)-6-aminopyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{27}N_7O_3S_2$	549.668	A15	B14
211	(Z)-5-((2-(4-((((4-fluoro-6-(furan-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{23}FN_6O_3S$	494.541	A1	B15
212	(Z)-5-((2-(4-((((6-(furan-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{24}N_6O_3S$	476.551	A2	B15
213	(Z)-5-((2-(4-((((6-(furan-2-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{26}N_6O_3S$	490.577	A3	B15
214	(Z)-5-((2-(4-((((6-(furan-2-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{26}N_6O_4S$	506.577	A4	B15
215	(Z)-5-((2-(4-((((6-(furan-2-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{23}F_3N_6O_3S$	544.549	A5	B15
216	(Z)-5-((2-(4-((((3-(furan-2-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{26}N_6O_3S$	526.609	A6	B15
217	(Z)-5-((2-(4-((((2-(furan-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{24}N_6O_3S$	476.551	A7	B15
218	(Z)-5-((2-(4-((((2-(furan-2-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{26}N_6O_3S$	526.609	A8	B15
219	(Z)-5-((2-(4-((((6-(furan-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{24}N_6O_3S$	476.551	A9	B15
220	(Z)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(furan-2-yl)nicotinonitrile	$C_{25}H_{23}N_7O_3S$	501.56	A10	B15

221	(Z)-ethyl 5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(furan-2-yl)nicotinate	$C_{27}H_{28}N_6O_5S$	548.613	A11	B15
222	(Z)-5-((2-(4-((((2-(furan-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{24}N_6O_3S$	476.551	A12	B15
223	(Z)-5-((2-(4-((((2-(furan-2-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{23}F_3N_6O_3S$	544.549	A13	B15
224	(Z)-5-((2-(4-((((5-fluoro-2-(furan-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{23}FN_6O_3S$	494.541	A14	B15
225	(Z)-5-((2-(4-((((6-amino-2-(furan-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{25}N_7O_3S$	491.565	A15	B15
226	(Z)-5-((2-(4-((((6-(benzofuran-2-yl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{25}FN_6O_3S$	544.6	A1	B16
227	(Z)-5-((2-(4-((((6-(benzofuran-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{26}N_6O_3S$	526.609	A2	B16
228	(Z)-5-((2-(4-((((6-(benzofuran-2-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{28}N_6O_3S$	540.636	A3	B16
229	(Z)-5-((2-(4-((((6-(benzofuran-2-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{28}N_6O_4S$	556.635	A4	B16
230	(Z)-5-((2-(4-((((6-(benzofuran-2-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{25}F_3N_6O_3S$	594.607	A5	B16
231	(Z)-5-((2-(4-((((3-(benzofuran-2-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{28}N_6O_3S$	576.668	A6	B16
232	(Z)-5-((2-(4-((((2-(benzofuran-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{26}N_6O_3S$	526.609	A7	B16
233	(Z)-5-((2-(4-((((2-(benzofuran-2-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{32}H_{28}N_6O_3S$	576.668	A8	B16
234	(Z)-5-((2-(4-((((6-(benzofuran-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{26}N_6O_3S$	526.609	A9	B16
235	(Z)-2-(benzofuran-2-yl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinonitrile	$C_{29}H_{25}N_7O_3S$	551.619	A10	B16
236	(Z)-ethyl 2-(benzofuran-2-yl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinate	$C_{31}H_{30}N_6O_5S$	598.672	A11	B16
237	(Z)-5-((2-(4-((((2-(benzofuran-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{26}N_6O_3S$	526.609	A12	B16

238	(Z)-5-((2-(4-((((2-(benzofuran-2-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{25}F_3N_6O_3S$	594.607	A13	B16
239	(Z)-5-((2-(4-((((2-(benzofuran-2-yl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{25}FN_6O_3S$	544.6	A14	B16
240	(Z)-5-((2-(4-((((6-amino-2-(benzofuran-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{27}N_7O_3S$	541.624	A15	B16
241	(Z)-5-((2-(4-((((4-fluoro-6-(furan-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{23}FN_6O_3S$	494.541	A1	B17
242	(Z)-5-((2-(4-((((6-(furan-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{24}N_6O_3S$	476.551	A2	B17
243	(Z)-5-((2-(4-((((6-(furan-3-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{26}N_6O_3S$	490.577	A3	B17
244	(Z)-5-((2-(4-((((6-(furan-3-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{26}N_6O_4S$	506.577	A4	B17
245	(Z)-5-((2-(4-((((6-(furan-3-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{23}F_3N_6O_3S$	544.549	A5	B17
246	(Z)-5-((2-(4-((((3-(furan-3-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{26}N_6O_3S$	526.609	A6	B17
247	(Z)-5-((2-(4-((((2-(furan-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{24}N_6O_3S$	476.551	A7	B17
248	(Z)-5-((2-(4-((((2-(furan-3-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{26}N_6O_3S$	526.609	A8	B17
249	(Z)-5-((2-(4-((((6-(furan-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{24}N_6O_3S$	476.551	A9	B17
250	(Z)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(furan-3-yl)nicotinonitrile	$C_{25}H_{23}N_7O_3S$	501.56	A10	B17
251	(Z)-ethyl 5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(furan-3-yl)nicotinate	$C_{27}H_{28}N_6O_5S$	548.613	A11	B17
252	(Z)-5-((2-(4-((((2-(furan-3-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{24}N_6O_3S$	476.551	A12	B17
253	(Z)-5-((2-(4-((((2-(furan-3-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{23}F_3N_6O_3S$	544.549	A13	B17
254	(Z)-5-((2-(4-((((5-fluoro-2-(furan-3-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{23}FN_6O_3S$	494.541	A14	B17
255	(Z)-5-((2-(4-((((6-amino-2-(furan-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{25}N_7O_3S$	491.565	A15	B17

256	(Z)-5-((2-(4-((((4-fluoro-6-(1H-pyrrol-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{24}FN_7O_2S$	493.556	A1	B18
257	(Z)-5-((2-(4-((((6-(1H-pyrrol-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{25}N_7O_2S$	475.566	A2	B18
258	(Z)-5-((2-(4-((((4-methyl-6-(1H-pyrrol-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{27}N_7O_2S$	489.593	A3	B18
259	(Z)-5-((2-(4-((((3-methoxy-6-(1H-pyrrol-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{27}N_7O_3S$	505.592	A4	B18
260	(Z)-5-((2-(4-((((6-(1H-pyrrol-2-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{24}F_3N_7O_2S$	543.564	A5	B18
261	(Z)-5-((2-(4-((((3-(1H-pyrrol-2-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{27}N_7O_2S$	525.625	A6	B18
262	(Z)-5-((2-(4-((((2-(1H-pyrrol-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{25}N_7O_2S$	475.566	A7	B18
263	(Z)-5-((2-(4-((((2-(1H-pyrrol-2-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{27}N_7O_2S$	525.625	A8	B18
264	(Z)-5-((2-(4-((((6-(1H-pyrrol-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{25}N_7O_2S$	475.566	A9	B18
265	(Z)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(1H-pyrrol-2-yl)nicotinonitrile	$C_{25}H_{24}N_8O_2S$	500.575	A10	B18
266	(Z)-ethyl 5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(1H-pyrrol-2-yl)nicotinate	$C_{27}H_{29}N_7O_4S$	547.629	A11	B18
267	(Z)-5-((2-(4-((((2-(1H-pyrrol-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{25}N_7O_2S$	475.566	A12	B18
268	(Z)-5-((2-(4-((((2-(1H-pyrrol-2-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{24}F_3N_7O_2S$	543.564	A13	B18
269	(Z)-5-((2-(4-((((5-fluoro-2-(1H-pyrrol-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{24}FN_7O_2S$	493.556	A14	B18
270	(Z)-5-((2-(4-((((6-amino-2-(1H-pyrrol-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{26}N_8O_2S$	490.581	A15	B18
271	(Z)-5-((2-(4-((((4-fluoro-6-(isoquinolin-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{26}FN_7O_2S$	555.626	A1	B19
272	(Z)-5-((2-(4-((((6-(isoquinolin-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{27}N_7O_2S$	537.635	A2	B19
273	(Z)-5-((2-(4-((((6-(isoquinolin-4-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{29}N_7O_2S$	551.662	A3	B19

274	(Z)-5-((2-(4-((((6-(isoquinolin-4-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{29}N_7O_3S$	567.661	A4	B19
275	(Z)-5-((2-(4-((((6-(isoquinolin-4-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{26}F_3N_7O_2S$	605.633	A5	B19
276	(Z)-5-((2-(4-((([3,4'-biisoquinolin]-1-ylmethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{33}H_{29}N_7O_2S$	587.694	A6	B19
277	(Z)-5-((2-(4-((((2-(isoquinolin-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{27}N_7O_2S$	537.635	A7	B19
278	(Z)-5-((2-(4-((((2-(isoquinolin-4-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{33}H_{29}N_7O_2S$	587.694	A8	B19
279	(Z)-5-((2-(4-((((6-(isoquinolin-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{27}N_7O_2S$	537.635	A9	B19
280	(Z)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(isoquinolin-4-yl)nicotinonitrile	$C_{30}H_{26}N_8O_2S$	562.645	A10	B19
281	(Z)-ethyl 5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(isoquinolin-4-yl)nicotinate	$C_{32}H_{31}N_7O_4S$	609.698	A11	B19
282	(Z)-5-((2-(4-((((2-(isoquinolin-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{27}N_7O_2S$	537.635	A12	B19
283	(Z)-5-((2-(4-((((2-(isoquinolin-4-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{26}F_3N_7O_2S$	605.633	A13	B19
284	(Z)-5-((2-(4-((((5-fluoro-2-(isoquinolin-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{26}FN_7O_2S$	555.626	A14	B19
285	(Z)-5-((2-(4-((((6-amino-2-(isoquinolin-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{28}N_8O_2S$	552.65	A15	B19
286	(Z)-5-((2-(4-((((4-fluoro-6-(quinolin-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{26}FN_7O_2S$	555.626	A1	B20
287	(Z)-5-((2-(4-((((6-(quinolin-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{27}N_7O_2S$	537.635	A2	B20
288	(Z)-5-((2-(4-((((4-methyl-6-(quinolin-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{29}N_7O_2S$	551.662	A3	B20
289	(Z)-5-((2-(4-((((3-methoxy-6-(quinolin-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{29}N_7O_3S$	567.661	A4	B20
290	(Z)-5-((2-(4-((((6-(quinolin-4-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{26}F_3N_7O_2S$	605.633	A5	B20

291	(Z)-5-((2-(4-((((3-(quinolin-4-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{33}H_{29}N_7O_2S$	587.694	A6	B20
292	(Z)-5-((2-(4-((((2-(quinolin-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{27}N_7O_2S$	537.635	A7	B20
293	(Z)-5-((2-(4-((([2,4'-biquinolin]-3-ylmethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{33}H_{29}N_7O_2S$	587.694	A8	B20
294	(Z)-5-((2-(4-((((6-(quinolin-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{27}N_7O_2S$	537.635	A9	B20
295	(Z)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(quinolin-4-yl)nicotinonitrile	$C_{30}H_{26}N_8O_2S$	562.645	A10	B20
296	(Z)-ethyl 5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(quinolin-4-yl)nicotinate	$C_{32}H_{31}N_7O_4S$	609.698	A11	B20
297	(Z)-5-((2-(4-((((2-(quinolin-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{27}N_7O_2S$	537.635	A12	B20
298	(Z)-5-((2-(4-((((2-(quinolin-4-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{26}F_3N_7O_2S$	605.633	A13	B20
299	(Z)-5-((2-(4-((((5-fluoro-2-(quinolin-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{26}FN_7O_2S$	555.626	A14	B20
300	(Z)-5-((2-(4-((((6-amino-2-(quinolin-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{28}N_8O_2S$	552.65	A15	B20
301	(Z)-5-((2-(4-((((3',4-difluoro-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{23}F_2N_7O_2S$	523.558	A1	B21
302	(Z)-5-((2-(4-((((3'-fluoro-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{24}FN_7O_2S$	505.567	A2	B21
303	(Z)-5-((2-(4-((((3'-fluoro-4-methyl-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{26}FN_7O_2S$	519.594	A3	B21
304	(Z)-5-((2-(4-((((3'-fluoro-5-methoxy-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{26}FN_7O_3S$	535.593	A4	B21
305	(Z)-5-((2-(4-((((3'-fluoro-4-(trifluoromethyl)-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{23}F_4N_7O_2S$	573.565	A5	B21
306	(Z)-5-((2-(4-((((3-(3-fluoropyridin-4-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{26}FN_7O_2S$	555.626	A6	B21
307	(Z)-5-((2-(4-((((3'-fluoro-[2,4'-bipyridin]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{24}FN_7O_2S$	505.567	A7	B21
308	(Z)-5-((2-(4-((((2-(3-fluoropyridin-4-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{26}FN_7O_2S$	555.626	A8	B21
309	(Z)-5-((2-(4-((((3'-fluoro-[2,4'-bipyridin]-5-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{24}FN_7O_2S$	505.567	A9	B21

310	(Z)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-3'-fluoro-[2,4'-bipyridine]-3-carbonitrile	$C_{26}H_{23}FN_8O_2S$	530.577	A10	B21
311	(Z)-ethyl 5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-3'-fluoro-[2,4'-bipyridine]-3-carboxylate	$C_{28}H_{28}FN_7O_4S$	577.63	A11	B21
312	(Z)-5-((2-(4-((((3'-fluoro-[2,4'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{24}FN_7O_2S$	505.567	A12	B21
313	(Z)-5-((2-(4-((((3'-fluoro-6-(trifluoromethyl)-[2,4'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{23}F_4N_7O_2S$	573.565	A13	B21
314	(Z)-5-((2-(4-((((3',5-difluoro-[2,4'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{23}F_2N_7O_2S$	523.558	A14	B21
315	(Z)-5-((2-(4-((((6-amino-3'-fluoro-[2,4'-bipyridin]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{25}FN_8O_2S$	520.582	A15	B21
316	(Z)-5-((2-(4-((((2',4,6'-trifluoro-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{22}F_3N_7O_2S$	541.548	A1	B22
317	(Z)-5-((2-(4-((((2',6'-difluoro-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{23}F_2N_7O_2S$	523.558	A2	B22
318	(Z)-5-((2-(4-((((2',6'-difluoro-4-methyl-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{25}F_2N_7O_2S$	537.584	A3	B22
319	(Z)-5-((2-(4-((((2',6'-difluoro-5-methoxy-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{25}F_2N_7O_3S$	553.584	A4	B22
320	(Z)-5-((2-(4-((((2',6'-difluoro-4-(trifluoromethyl)-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{22}F_5N_7O_2S$	591.556	A5	B22
321	(Z)-5-((2-(4-((((3-(2,6-difluoropyridin-4-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{25}F_2N_7O_2S$	573.616	A6	B22
322	(Z)-5-((2-(4-((((2',6'-difluoro-[2,4'-bipyridin]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{23}F_2N_7O_2S$	523.558	A7	B22
323	(Z)-5-((2-(4-((((2-(2,6-difluoropyridin-4-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{25}F_2N_7O_2S$	573.616	A8	B22
324	(Z)-5-((2-(4-((((2',6'-difluoro-[2,4'-bipyridin]-5-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{23}F_2N_7O_2S$	523.558	A9	B22
325	(Z)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2',6'-difluoro-[2,4'-bipyridine]-3-carbonitrile	$C_{26}H_{22}F_2N_8O_2S$	548.567	A10	B22
326	(Z)-ethyl 5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2',6'-difluoro-[2,4'-bipyridine]-3-carboxylate	$C_{28}H_{27}F_2N_7O_4S$	595.62	A11	B22

327	(Z)-5-((2-(4-((((2',6'-difluoro-[2,4'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{23}F_2N_7O_2S$	523.558	A12	B22
328	(Z)-5-((2-(4-((((2',6'-difluoro-6-(trifluoromethyl)-[2,4'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{22}F_5N_7O_2S$	591.556	A13	B22
329	(Z)-5-((2-(4-((((2',5,6'-trifluoro-[2,4'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{22}F_3N_7O_2S$	541.548	A14	B22
330	(Z)-5-((2-(4-((((6-amino-2',6'-difluoro-[2,4'-bipyridin]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{24}F_2N_8O_2S$	538.572	A15	B22
331	(Z)-5-((2-(4-((((6'-(dimethylamino)-4-fluoro-[2,3'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{29}FN_8O_2S$	548.635	A1	B23
332	(Z)-5-((2-(4-((((6'-(dimethylamino)-[2,3'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{30}N_8O_2S$	530.645	A2	B23
333	(Z)-5-((2-(4-((((6'-(dimethylamino)-4-methyl-[2,3'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{32}N_8O_2S$	544.671	A3	B23
334	(Z)-5-((2-(4-((((6'-(dimethylamino)-5-methoxy-[2,3'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{32}N_8O_3S$	560.67	A4	B23
335	(Z)-5-((2-(4-((((6'-(dimethylamino)-4-(trifluoromethyl)-[2,3'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{29}F_3N_8O_2S$	598.642	A5	B23
336	(Z)-5-((2-(4-((((3-(6-(dimethylamino)pyridin-3-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{31}H_{32}N_8O_2S$	580.703	A6	B23
337	(Z)-5-((2-(4-((((6'-(dimethylamino)-[2,3'-bipyridin]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{30}N_8O_2S$	530.645	A7	B23
338	(Z)-5-((2-(4-((((2-(6-(dimethylamino)pyridin-3-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{31}H_{32}N_8O_2S$	580.703	A8	B23
339	(Z)-5-((2-(4-((((6'-(dimethylamino)-[2,3'-bipyridin]-5-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{30}N_8O_2S$	530.645	A9	B23
340	(Z)-6'-(dimethylamino)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-[2,3'-bipyridine]-3-carbonitrile	$C_{28}H_{29}N_9O_2S$	555.654	A10	B23
341	(Z)-ethyl 6'-(dimethylamino)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-[2,3'-bipyridine]-3-carboxylate	$C_{30}H_{34}N_8O_4S$	602.707	A11	B23
342	(Z)-5-((2-(4-((((6'-(dimethylamino)-[2,3'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{30}N_8O_2S$	530.645	A12	B23
343	(Z)-5-((2-(4-((((6'-(dimethylamino)-6-(trifluoromethyl)-[2,3'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{29}F_3N_8O_2S$	598.642	A13	B23

344	(Z)-5-((2-(4-((((6'-(dimethylamino)-5-fluoro-[2,3'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{29}FN_8O_2S$	548.635	A14	B23
345	(Z)-5-((2-(4-((((6-amino-6'-(dimethylamino)-[2,3'-bipyridin]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{31}N_9O_2S$	545.659	A15	B23
346	(Z)-5-((2-(4-((((6-(2-(dimethylamino)pyrimidin-5-yl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{28}FN_9O_2S$	549.623	A1	B24
347	(Z)-5-((2-(4-((((6-(2-(dimethylamino)pyrimidin-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{29}N_9O_2S$	531.633	A2	B24
348	(Z)-5-((2-(4-((((6-(2-(dimethylamino)pyrimidin-5-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{31}N_9O_2S$	545.659	A3	B24
349	(Z)-5-((2-(4-((((6-(2-(dimethylamino)pyrimidin-5-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{31}N_9O_3S$	561.659	A4	B24
350	(Z)-5-((2-(4-((((6-(2-(dimethylamino)pyrimidin-5-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{28}F_3N_9O_2S$	599.631	A5	B24
351	(Z)-5-((2-(4-((((3-(2-(dimethylamino)pyrimidin-5-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{31}N_9O_2S$	581.691	A6	B24
352	(Z)-5-((2-(4-((((2-(2-(dimethylamino)pyrimidin-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{29}N_9O_2S$	531.633	A7	B24
353	(Z)-5-((2-(4-((((2-(2-(dimethylamino)pyrimidin-5-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{31}N_9O_2S$	581.691	A8	B24
354	(Z)-5-((2-(4-((((6-(2-(dimethylamino)pyrimidin-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{29}N_9O_2S$	531.633	A9	B24
355	(Z)-2-(2-(dimethylamino)pyrimidin-5-yl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinonitrile	$C_{27}H_{28}N_{10}O_2S$	556.642	A10	B24
356	(Z)-ethyl 2-(2-(dimethylamino)pyrimidin-5-yl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinate	$C_{29}H_{33}N_9O_4S$	603.695	A11	B24
357	(Z)-5-((2-(4-((((2-(2-(dimethylamino)pyrimidin-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{29}N_9O_2S$	531.633	A12	B24
358	(Z)-5-((2-(4-((((2-(2-(dimethylamino)pyrimidin-5-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{28}F_3N_9O_2S$	599.631	A13	B24
359	(Z)-5-((2-(4-((((2-(2-(dimethylamino)pyrimidin-5-yl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{28}FN_9O_2S$	549.623	A14	B24

360	(Z)-5-((2-(4-((((6-amino-2-(2-(dimethylamino)pyrimidin-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{30}N_{10}O_2S$	546.647	A15	B24
361	(Z)-5-((2-(4-((((6-(3,5-dimethylisoxazol-4-yl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{26}FN_7O_3S$	523.582	A1	B25
362	(Z)-5-((2-(4-((((6-(3,5-dimethylisoxazol-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{27}N_7O_3S$	505.592	A2	B25
363	(Z)-5-((2-(4-((((6-(3,5-dimethylisoxazol-4-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{29}N_7O_3S$	519.619	A3	B25
364	(Z)-5-((2-(4-((((6-(3,5-dimethylisoxazol-4-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{29}N_7O_4S$	535.618	A4	B25
365	(Z)-5-((2-(4-((((6-(3,5-dimethylisoxazol-4-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{26}F_3N_7O_3S$	573.59	A5	B25
366	(Z)-5-((2-(4-((((3-(3,5-dimethylisoxazol-4-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{29}N_7O_3S$	555.651	A6	B25
367	(Z)-5-((2-(4-((((2-(3,5-dimethylisoxazol-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{27}N_7O_3S$	505.592	A7	B25
368	(Z)-5-((2-(4-((((2-(3,5-dimethylisoxazol-4-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{29}N_7O_3S$	555.651	A8	B25
369	(Z)-5-((2-(4-((((6-(3,5-dimethylisoxazol-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{27}N_7O_3S$	505.592	A9	B25
370	(Z)-2-(3,5-dimethylisoxazol-4-yl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinonitrile	$C_{26}H_{26}N_8O_3S$	530.601	A10	B25
371	(Z)-ethyl 2-(3,5-dimethylisoxazol-4-yl)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)nicotinate	$C_{28}H_{31}N_7O_5S$	577.655	A11	B25
372	(Z)-5-((2-(4-((((2-(3,5-dimethylisoxazol-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{27}N_7O_3S$	505.592	A12	B25
373	(Z)-5-((2-(4-((((2-(3,5-dimethylisoxazol-4-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{26}F_3N_7O_3S$	573.59	A13	B25
374	(Z)-5-((2-(4-((((2-(3,5-dimethylisoxazol-4-yl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{26}FN_7O_3S$	523.582	A14	B25
375	(Z)-5-((2-(4-((((6-amino-2-(3,5-dimethylisoxazol-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{28}N_8O_3S$	520.607	A15	B25
376	(Z)-5-((2-(4-((((4-fluoro-6-(1H-pyrazol-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{23}H_{23}FN_8O_2S$	494.545	A1	B26

377	(Z)-5-((2-(4-((((6-(1H-pyrazol-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{23}H_{24}N_8O_2S$	476.554	A2	B26
378	(Z)-5-((2-(4-((((4-methyl-6-(1H-pyrazol-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{26}N_8O_2S$	490.581	A3	B26
379	(Z)-5-((2-(4-((((3-methoxy-6-(1H-pyrazol-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{26}N_8O_3S$	506.58	A4	B26
380	(Z)-5-((2-(4-((((6-(1H-pyrazol-4-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{23}F_3N_8O_2S$	544.552	A5	B26
381	(Z)-5-((2-(4-((((3-(1H-pyrazol-4-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{26}N_8O_2S$	526.613	A6	B26
382	(Z)-5-((2-(4-((((2-(1H-pyrazol-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{23}H_{24}N_8O_2S$	476.554	A7	B26
383	(Z)-5-((2-(4-((((2-(1H-pyrazol-4-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{26}N_8O_2S$	526.613	A8	B26
384	(Z)-5-((2-(4-((((6-(1H-pyrazol-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{23}H_{24}N_8O_2S$	476.554	A9	B26
385	(Z)-5-(((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(1H-pyrazol-4-yl)nicotinonitrile	$C_{24}H_{23}N_9O_2S$	501.564	A10	B26
386	(Z)-ethyl 5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(1H-pyrazol-4-yl)nicotinate	$C_{26}H_{28}N_8O_4S$	548.617	A11	B26
387	(Z)-5-((2-(4-((((2-(1H-pyrazol-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{23}H_{24}N_8O_2S$	476.554	A12	B26
388	(Z)-5-((2-(4-((((2-(1H-pyrazol-4-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{23}F_3N_8O_2S$	544.552	A13	B26
389	(Z)-5-((2-(4-((((5-fluoro-2-(1H-pyrazol-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{23}H_{23}FN_8O_2S$	494.545	A14	B26
390	(Z)-5-((2-(4-((((6-amino-2-(1H-pyrazol-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{23}H_{25}N_9O_2S$	491.569	A15	B26
391	(Z)-5-((2-(4-((((4-fluoro-6-(1H-pyrazol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{23}H_{23}FN_8O_2S$	494.545	A1	B27
392	(Z)-5-((2-(4-((((6-(1H-pyrazol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{23}H_{24}N_8O_2S$	476.554	A2	B27
393	(Z)-5-((2-(4-((((4-methyl-6-(1H-pyrazol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{26}N_8O_2S$	490.581	A3	B27
394	(Z)-5-((2-(4-((((3-methoxy-6-(1H-pyrazol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{26}N_8O_3S$	506.58	A4	B27

395	(Z)-5-((2-(4-((((6-(1H-pyrazol-5-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{23}F_3N_8O_2S$	544.552	A5	B27
396	(Z)-5-((2-(4-((((3-(1H-pyrazol-5-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{26}N_8O_2S$	526.613	A6	B27
397	(Z)-5-((2-(4-((((2-(1H-pyrazol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{23}H_{24}N_8O_2S$	476.554	A7	B27
398	(Z)-5-((2-(4-((((2-(1H-pyrazol-5-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{26}N_8O_2S$	526.613	A8	B27
399	(Z)-5-((2-(4-((((6-(1H-pyrazol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{23}H_{24}N_8O_2S$	476.554	A9	B27
400	(Z)-5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(1H-pyrazol-5-yl)nicotinonitrile	$C_{24}H_{23}N_9O_2S$	501.564	A10	B27
401	(Z)-ethyl 5-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-2-(1H-pyrazol-5-yl)nicotinate	$C_{26}H_{28}N_8O_4S$	548.617	A11	B27
402	(Z)-5-((2-(4-((((2-(1H-pyrazol-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{23}H_{24}N_8O_2S$	476.554	A12	B27
403	(Z)-5-((2-(4-((((2-(1H-pyrazol-5-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{23}F_3N_8O_2S$	544.552	A13	B27
404	(Z)-5-((2-(4-((((5-fluoro-2-(1H-pyrazol-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{23}H_{23}FN_8O_2S$	494.545	A14	B27
405	(Z)-5-((2-(4-((((6-amino-2-(1H-pyrazol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{23}H_{25}N_9O_2S$	491.569	A15	B27
406	(Z)-5-((2-(4-((((2',4'-bis(trifluoromethyl)-[1,1'-biphenyl]-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{25}F_6N_5O_2S$	621.597	A16	B1
407	(Z)-5-((2-(4-((((2',4'-bis(trifluoromethyl)-[1,1'-biphenyl]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{25}F_6N_5O_2S$	621.597	A17	B1
408	(Z)-5-((2-(4-((((2',4'-dimethoxy-[1,1'-biphenyl]-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{31}N_5O_4S$	545.653	A16	B2
409	(Z)-5-((2-(4-((((2',4'-dimethoxy-[1,1'-biphenyl]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{31}N_5O_4S$	545.653	A17	B2
410	(Z)-5-((2-(4-((((2'-(trifluoromethoxy)-[1,1'-biphenyl]-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{26}F_3N_5O_3S$	569.598	A16	B3
411	(Z)-5-((2-(4-((((2'-(trifluoromethoxy)-[1,1'-biphenyl]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{26}F_3N_5O_3S$	569.598	A17	B3
412	(Z)-2'-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-5-methyl-[1,1'-biphenyl]-2-carboxylic acid	$C_{29}H_{29}N_5O_4S$	543.637	A16	B4

413	(Z)-3'-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-5-methyl-[1,1'-biphenyl]-2-carboxylic acid	$C_{29}H_{29}N_5O_4S$	543.637	A17	B4
414	(Z)-5-((2-(4-(((2-(benzo[d][1,3]dioxol-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{27}N_5O_4S$	529.61	A16	B5
415	(Z)-5-((2-(4-(((3-(benzo[d][1,3]dioxol-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{27}N_5O_4S$	529.61	A17	B5
416	(Z)-N-benzyl-2'-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-[1,1'-biphenyl]-3-carboxamide	$C_{35}H_{34}N_6O_3S$	618.748	A16	B6
417	(Z)-N-benzyl-3'-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-[1,1'-biphenyl]-3-carboxamide	$C_{35}H_{34}N_6O_3S$	618.748	A17	B6
418	(Z)-5-((2-(4-((((3'-(dimethylamino)-[1,1'-biphenyl]-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{32}N_6O_2S$	528.668	A16	B7
419	(Z)-5-((2-(4-((((3'-(dimethylamino)-[1,1'-biphenyl]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{32}N_6O_2S$	528.668	A17	B7
420	(Z)-N-(2'-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-[1,1'-biphenyl]-3-yl)acetamide	$C_{29}H_{30}N_6O_3S$	542.652	A16	B8
421	(Z)-N-(3'-((((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)amino)methyl)-[1,1'-biphenyl]-3-yl)acetamide	$C_{29}H_{30}N_6O_3S$	542.652	A17	B8
422	(Z)-5-((2-(4-((((4'-phenoxy-[1,1'-biphenyl]-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{33}H_{31}N_5O_3S$	577.696	A16	B9
423	(Z)-5-((2-(4-((((4'-phenoxy-[1,1'-biphenyl]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{33}H_{31}N_5O_3S$	577.696	A17	B9
424	(Z)-5-((2-(4-(((2-(1H-indol-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{28}N_6O_2S$	524.637	A16	B10
425	(Z)-5-((2-(4-(((3-(1H-indol-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{28}N_6O_2S$	524.637	A17	B10
426	(Z)-5-((2-(4-(((2-(isoquinolin-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{28}N_6O_2S$	536.647	A16	B11
427	(Z)-5-((2-(4-(((3-(isoquinolin-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{28}N_6O_2S$	536.647	A17	B11
428	(Z)-5-((2-(4-(((2-(thiophen-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{25}N_5O_2S_2$	491.628	A16	B12
429	(Z)-5-((2-(4-(((3-(thiophen-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{25}N_5O_2S_2$	491.628	A17	B12
430	(Z)-5-((2-(4-(((2-(benzo[b]thiophen-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{27}N_5O_2S_2$	541.687	A16	B13

431	(Z)-5-((2-(4-(((3-(benzo[b]thiophen-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{27}N_5O_2S_2$	541.687	A17	B13
432	(Z)-5-((2-(4-(((2-(5-acetylthiophen-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{27}N_5O_3S_2$	533.665	A16	B14
433	(Z)-5-((2-(4-(((3-(5-acetylthiophen-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{27}N_5O_3S_2$	533.665	A17	B14
434	(Z)-5-((2-(4-(((2-(furan-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{25}N_5O_3S$	475.563	A16	B15
435	(Z)-5-((2-(4-(((3-(furan-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{25}N_5O_3S$	475.563	A17	B15
436	(Z)-5-((2-(4-(((2-(benzofuran-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{27}N_5O_3S$	525.621	A16	B16
437	(Z)-5-((2-(4-(((3-(benzofuran-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{29}H_{27}N_5O_3S$	525.621	A17	B16
438	(Z)-5-((2-(4-(((2-(furan-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{25}N_5O_3S$	475.563	A16	B17
439	(Z)-5-((2-(4-(((3-(furan-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{25}N_5O_3S$	475.563	A17	B17
440	(Z)-5-((2-(4-(((2-(1H-pyrrol-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{26}N_6O_2S$	474.578	A16	B18
441	(Z)-5-((2-(4-(((3-(1H-pyrrol-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{25}H_{26}N_6O_2S$	474.578	A17	B18
442	(Z)-5-((2-(4-(((2-(isoquinolin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{28}N_6O_2S$	536.647	A16	B19
443	(Z)-5-((2-(4-(((3-(isoquinolin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{28}N_6O_2S$	536.647	A17	B19
444	(Z)-5-((2-(4-(((2-(quinolin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{28}N_6O_2S$	536.647	A16	B20
445	(Z)-5-((2-(4-(((3-(quinolin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{30}H_{28}N_6O_2S$	536.647	A17	B20
446	(Z)-5-((2-(4-(((2-(3-fluoropyridin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{25}FN_6O_2S$	504.579	A16	B21
447	(Z)-5-((2-(4-(((3-(3-fluoropyridin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{25}FN_6O_2S$	504.579	A17	B21
448	(Z)-5-((2-(4-(((2-(2,6-difluoropyridin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{24}F_2N_6O_2S$	522.57	A16	B22
449	(Z)-5-((2-(4-(((3-(2,6-difluoropyridin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{24}F_2N_6O_2S$	522.57	A17	B22

450	(Z)-5-((2-(4-(((2-(6-(dimethylamino)pyridin-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{31}N_7O_2S$	529.656	A16	B23
451	(Z)-5-((2-(4-(((3-(6-(dimethylamino)pyridin-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{28}H_{31}N_7O_2S$	529.656	A17	B23
452	(Z)-5-((2-(4-(((2-(2-(dimethylamino)pyrimidin-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{30}N_8O_2S$	530.645	A16	B24
453	(Z)-5-((2-(4-(((3-(2-(dimethylamino)pyrimidin-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{27}H_{30}N_8O_2S$	530.645	A17	B24
454	(Z)-5-((2-(4-(((2-(3,5-dimethylisoxazol-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{28}N_6O_3S$	504.604	A16	B25
455	(Z)-5-((2-(4-(((3-(3,5-dimethylisoxazol-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{26}H_{28}N_6O_3S$	504.604	A17	B25
456	(Z)-5-((2-(4-(((2-(1H-pyrazol-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{25}N_7O_2S$	475.566	A16	B26
457	(Z)-5-((2-(4-(((3-(1H-pyrazol-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{25}N_7O_2S$	475.566	A17	B26
458	(Z)-5-((2-(4-(((2-(1H-pyrazol-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{25}N_7O_2S$	475.566	A16	B27
459	(Z)-5-((2-(4-(((3-(1H-pyrazol-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione	$C_{24}H_{25}N_7O_2S$	475.566	A17	B27

In addition, it may be convenient or desirable to prepare, purify, and/or handle the active compound in a chemically protected form. The term "chemically protected form," as used herein, pertains to a compound in which one or more reactive functional groups are protected from undesirable chemical reactions (i.e., they have been modified with a protecting group).

By protecting a reactive functional group, reactions involving other unprotected reactive functional groups can be performed without affecting the protected group; the protecting group may be removed, usually in a subsequent step, without substantially affecting the remainder of the molecule. See, for example, *Protective Groups in Organic Synthesis* (T. Green and P. Wuts, Wiley, 1991), and *Protective Groups in Organic Synthesis* (T. Green and P. Wuts; 3rd Edition; John Wiley and Sons, 1999).

For example, a hydroxy group may be protected as an ether (-OR) or an ester (-OC(=O)R), for example, as: a t-butyl ether; a benzyl, benzhydryl (diphenylmethyl), or trityl (triphenylmethyl) ether; a trimethylsilyl or t-butyldimethylsilyl ether; or an acetyl ester (-OC(=O)CH_3,-OAc).

For example, an aldehyde or ketone group may be protected as an acetal or ketal, respectively, in which the carbonyl group (C(=O)) is converted to a diether ($C(OR)_2$), by reaction with, for example, a primary alcohol. The aldehyde or ketone group is readily regenerated by hydrolysis using a large excess of water in the presence of acid.

For example, an amine group may be protected, for example, as an amide (-NRC(=O)R) or a urethane (-NRC(=O)OR), for example, as: a methyl amide (-NHC(=O)CH_3); a benzyloxy amide (-NHC(=O)$OCH_2C_6H_5$NHCbz); as a t-butoxy amide (-NHC(=O)$OC(CH_3)_3$, -NHBoc); a 2-biphenyl-2-propoxy amide (-NHC(=O)$OC(CH_3)_2C_6H_4C_6H_5$NHBoc), as a 9-fluorenylmethoxy amide (-NHFmoc), as a 6-nitroveratryloxy amide (-NHNvoc), as a 2-trimethylsilylethyloxy amide (-NHTeoc), as a 2,2,2-trichloroethyloxy amide (-NHTroc), as an allyloxy amide (-NHAlloc), as a 2-(phenylsulfonyl)ethyloxy amide (-NHPsec); or, in suitable cases (e.g., cyclic amines), as a nitroxide radical.

For example, a carboxylic acid group may be protected as an ester or an amide, for example, as: a benzyl ester; a t-butyl ester; a methyl ester; or a methyl amide.

For example, a thiol group may be protected as a thioether (-SR), for example, as: a benzyl thioether; or an acetamidomethyl ether (-SCH_2NHC(=O)CH_3).

PHARMACEUTICAL COMPOSITIONS

One or more compounds of this invention can be administered to a mammal by themselves or in pharmaceutical compositions where they are mixed with suitable carriers or excipient(s) at doses to treat or ameliorate a disease or condition as described herein. Mixtures of these compounds can also be administered to the patient as a simple mixture or in suitable formulated pharmaceutical compositions. For example, one aspect of the invention relates to pharmaceutical composition comprising a therapeutically effective dose of a compound of formula **I**, or a pharmaceutically acceptable salt, solvate, enantiomer or stereoisomer thereof; and a pharmaceutically acceptable diluent or carrier.

Techniques for formulation and administration of the compounds of the instant application may be found in references well known to one of ordinary skill in the art, such as "Remington's Pharmaceutical Sciences," Mack Publishing Co., Easton, PA, latest edition.

Suitable routes of administration may, for example, include oral, eyedrop, rectal, transmucosal, topical, or intestinal administration; parenteral delivery, including intramuscular, subcutaneous, intramedullary injections, as well as intrathecal, direct intraventricular, intravenous, intraperitoneal, intranasal, or intraocular injections.

Alternatively, one may administer a compound in a local rather than a systemic manner, for example, via injection of the compound directly into an edematous site, often in a depot or sustained release formulation.

Furthermore, one may administer a compound in a targeted drug delivery system, for example, in a liposome coated with endothelial-cell-specific antibody.

The pharmaceutical compositions of the present invention may be manufactured, e.g., by means of conventional mixing, dissolving, granulating, dragee-making, levigating, emulsifying, encapsulating, entrapping or lyophilizing processes.

Pharmaceutical compositions for use in accordance with the present invention thus may be formulated in a conventional manner using one or more physiologically acceptable carriers comprising excipients and auxiliaries which facilitate processing of the active compounds into preparations which can be used pharmaceutically. Proper formulation is dependent upon the route of administration chosen.

For injection, the agents of the invention may be formulated in aqueous solutions, preferably in physiologically compatible buffers such as Hanks' solution, Ringer's solution, or physiological saline buffer. For transmucosal administration, penetrants are used in the formulation appropriate to the barrier to be permeated. Such penetrants are generally known in the art.

For oral administration, the compounds can be formulated readily by combining the active compounds with pharmaceutically acceptable carriers well known in the art. Such carriers enable the compounds of the invention to be formulated as tablets, pills, dragees, capsules, liquids, gels, syrups, slurries, suspensions and the like, for oral ingestion by a patient to be treated. Pharmaceutical preparations for oral use can be obtained by combining the active compound with a solid excipient, optionally grinding a resulting mixture, and processing the mixture of granules, after adding suitable auxiliaries, if desired, to obtain tablets or dragee cores. Suitable excipients include fillers such as sugars, including lactose, sucrose, mannitol, or sorbitol; cellulose preparations such as, for example, maize starch, wheat starch, rice starch, potato starch, gelatin, gum tragacanth,

methyl cellulose, hydroxypropylmethyl-cellulose, sodium carboxymethylcellulose, and/or polyvinylpyrrolidone (PVP). If desired, disintegrating agents may be added, such as the cross-linked polyvinyl pyrrolidone, agar, or alginic acid or a salt thereof such as sodium alginate.

Dragee cores are provided with suitable coatings. For this purpose, concentrated sugar solutions may be used, which may optionally contain gum arabic, talc, polyvinyl pyrrolidone, carbopol gel, polyethylene glycol, and/or titanium dioxide, lacquer solutions, and suitable organic solvents or solvent mixtures. Dyestuffs or pigments may be added to the tablets or dragee coatings for identification or to characterize different combinations of active compound doses.

Pharmaceutical preparations which can be used orally include push-fit capsules made of gelatin, as well as soft, sealed capsules made of gelatin and a plasticizer, such as glycerol or sorbitol. The push-fit capsules can contain the active ingredients in admixture with filler such as lactose, binders such as starches, and/or lubricants such as talc or magnesium stearate and, optionally, stabilizers. In soft capsules, the active compounds may be dissolved or suspended in suitable liquids, such as fatty oils, liquid paraffin, or liquid polyethylene glycols. In addition, stabilizers may be added.

For buccal administration, the compositions may take the form of tablets or lozenges formulated in conventional manner.

For administration by inhalation, the compounds for use according to the present invention are conveniently delivered in the form of an aerosol spray presentation from pressurized packs or a nebuliser, with the use of a suitable propellant, e.g., dichlorodifluoromethane, trichlorofluoromethane, dichlorotetrafluoroethane, carbon dioxide or other suitable gas. In the case of pressurized aerosol the dosage unit may be determined by providing a valve to deliver a metered amount. Capsules and cartridges of e.g., gelatin for use in an inhaler or insufflator may be formulated containing a powder mix of the compound and a suitable powder base such as lactose or starch.

The compounds can be formulated for parenteral administration by injection, e.g., bolus injection or continuous infusion. Formulations for injection may be presented in unit dosage form, e.g., in ampoules or in multi-dose containers, with an added preservative. The compositions may take such forms as suspensions, solutions or emulsions in oily or

aqueous vehicles, and may contain formulatory agents such as suspending, stabilizing and/or dispersing agents.

Pharmaceutical formulations for parenteral administration include aqueous solutions of the active compounds in water-soluble form. Additionally, suspensions of the active compounds may be prepared as appropriate oily injection suspensions. Suitable lipophilic solvents or vehicles include fatty oils such as sesame oil, or synthetic fatty acid esters, such as ethyl oleate or triglycerides, or liposomes. Aqueous injection suspensions may contain substances which increase the viscosity of the suspension, such as sodium carboxymethyl cellulose, sorbitol, or dextran. Optionally, the suspension may also contain suitable stabilizers or agents which increase the solubility of the compounds to allow for the preparation of highly concentrated solutions.

Alternatively, the active ingredient may be in powder form for reconstitution before use with a suitable vehicle, e.g., sterile pyrogen-free water.

The compounds may also be formulated in rectal compositions such as suppositories or retention enemas, e.g., containing conventional suppository bases such as cocoa butter or other glycerides.

In addition to the formulations described previously, the compounds may also be formulated as a depot preparation. Such long acting formulations may be administered by implantation (for example, subcutaneously or intramuscularly or by intramuscular injection). Thus, for example, the compounds may be formulated with suitable polymeric or hydrophobic materials (for example as an emulsion in an acceptable oil) or ion exchange resins, or as sparingly soluble derivatives (for example, as a sparingly soluble salt).

Alternatively, other delivery systems for hydrophobic pharmaceutical compounds may be employed. Liposomes and emulsions are examples of delivery vehicles or carriers for hydrophobic drugs. Certain organic solvents such as dimethysulfoxide also may be employed. Additionally, the compounds may be delivered using a sustained-release system, such as semi-permeable matrices of solid hydrophobic polymers containing the therapeutic agent. Various sustained-release materials have been established and are well known by those skilled in the art. Sustained-release capsules may, depending on their chemical nature, release the compounds for a few weeks up to over 100 days. Depending on the chemical nature and the biological stability of the therapeutic reagent, additional strategies for protein stabilization may be employed.

The pharmaceutical compositions may also comprise suitable solid or gel phase carriers or excipients. Examples of such carriers or excipients include but are not limited to calcium carbonate, calcium phosphate, various sugars, starches, cellulose derivatives, gelatin, and polymers, such as polyethylene glycols or cyclodextrins.

METHODS OF TREATMENT

Provided herein are methods of modulating the activity of CK1 and subtypes thereof, CK2, the Wnt pathway, and/or the TGFβ pathway. Also provided herein are methods of treating or preventing conditions and diseases the course of which can be influenced by modulating the activity of CK1 (e.g., CK1γ), CK2, the Wnt pathway, and/or the TGFβ pathway. Such methods typically comprise administering to a subject in need thereof a therapeutically effective amount of a compound or composition of the invention.

Also provided herein are methods of modulating the activity of PIM, such as PIM 1, PIM 2 or PIM 3, the JAK/STAT pathway, and/or the mTOR pathway, and/or Pgp. Also provided herein are methods of treating or preventing conditions and diseases, the course of which can be influenced by modulating the activity of the PIMs, the JAK/STAT pathway, and/or the mTOR pathway, and/or Pgp. Such methods typically comprise administering to a subject in need thereof a therapeutically effective amount of a compound or composition of the invention.

Various diseases, such as cancers, inflammation, and inflammatory diseases (e.g., osteoarthritis and rheumatoid arthritis), and neurological conditions (e.g., Alzheimer's disease) and neurodegeneration can be treated by administration of modulators of CK1 (e.g., CK1γ), CK2, the Wnt pathway and/or the TGFβ pathway. Bone-related diseases and conditions, including osteoporosis and bone formation, also can be treated by administration of modulators of CK1 (e.g., CK1γ), CK2, the Wnt pathway and/or the TGFβ pathway. Bone restoration can be facilitated by administration of modulators of CK1 (e.g., CK1γ), CK2, the Wnt pathway and/or the TGFβ pathway. Additional conditions that can be treated by administration of modulators of CK1 (e.g., CK1γ), CK2, the Wnt pathway and/or the TGFβ pathway include hypoglycemia, metabolic syndrome and diabetes. Modulators of CK1 (e.g., CK1γ), CK2, the Wnt pathway and/or the TGFβ pathway are also useful for influencing apoptosis (e.g., increasing the rate of apoptosis in cancerous cells). Modulators of CK1 (e.g., CK1γ), CK2, the Wnt pathway and/or the TGFβ pathway are also useful in treatment or prevention of aberrant embryonic development.

Based at least on the fact that increased CK1γ has been found to be associated with certain cancers, a method for treating cancer in a subject comprises administering to the subject in need thereof a therapeutically effective amount of a compound that inhibits CK1γ. Pim-1, Pim-2, Pim-3, the JAK/STAT pathway, and/or the mTOR pathway have also been found to be associated with certain cancers. Therefore, provided herein is a method for treating cancer comprising administering to a subject in need thereof a therapeutically effective amount of a compound that inhibits Pim-1 and/or Pim-2 and/or Pim-3.

Pim-1, Pim-2, and Pim-3 have also been associated with protecting Pgp from degradation, which can regulate drug efflux and drug resistance. Therefore, provided herein is a method for treating malignancies comprising administering to a subject in need thereof a therapeutically effective amount of a compound that inhibits Pim-1 and/or Pim-2 and/or Pim-3 in conjunction with another drug, compound or material to abrogate resistance to the drug, compound or material.

The compounds described herein can be used for modulating cell proliferation, generally. Accordingly, diseases that may be treated include hyperproliferative diseases, such as benign cell growth and malignant cell growth.

Exemplary cancers that may be treated include leukemias, e.g., acute lymphoid leukemia and myeloid leukemia, and carcinomas, such as colorectal carcinoma and hepatocarcinoma. Other cancers include Acute Lymphoblastic Leukemia; Acute Lymphoblastic Leukemia; Acute Myeloid Leukemia; Acute Myeloid Leukemia; Adrenocortical Carcinoma Adrenocortical Carcinoma; AIDS-Related Cancers; AIDS-Related Lymphoma; Anal Cancer; Astrocytoma, Childhood Cerebellar; Astrocytoma, Childhood Cerebral; Basal Cell Carcinoma, see Skin Cancer (non-Melanoma); Bile Duct Cancer, Extrahepatic; Bladder Cancer; Bladder Cancer; Bone Cancer, osteosarcoma/Malignant Fibrous Histiocytoma; Brain Stem Glioma; Brain Tumor; Brain Tumor, Brain Stem Glioma; Brain Tumor, Cerebellar Astrocytoma; Brain Tumor, Cerebral Astrocytoma/Malignant Glioma; Brain Tumor, Ependymoma; Brain Tumor, Medulloblastoma; Brain Tumor, Supratentorial Primitive Neuroectodermal Tumors; Brain Tumor, Visual Pathway and Hypothalamic Glioma; Brain Tumor; Breast Cancer; Breast Cancer and Pregnancy; Breast Cancer; Breast Cancer, Male; Bronchial Adenomas/Carcinoids; Burkitt's Lymphoma; Carcinoid Tumor; Carcinoid Tumor, Gastrointestinal; Carcinoma of Unknown Primary; Central Nervous System Lymphoma,

Primary; Cerebellar Astrocytoma; Cerebral Astrocytoma/Malignant Glioma; Cervical Cancer; Childhood Cancers; Chronic Lymphocytic Leukemia; Chronic Myelogenous Leukemia; Chronic Myeloproliferative Disorders; Colon Cancer; Colorectal Cancer; Cutaneous T-Cell Lymphoma, see Mycosis Fungoides and Sezary Syndrome; Endometrial Cancer; Ependymoma; Esophageal Cancer; Esophageal Cancer; Ewing's Family of Tumors; Extracranial Germ Cell Tumor; Extragonadal Germ Cell Tumor; Extrahepatic Bile Duct Cancer; Eye Cancer, Intraocular Melanoma; Eye Cancer, Retinoblastoma; Gallbladder Cancer; Gastric (Stomach) Cancer; Gastric (Stomach) Cancer; Gastrointestinal Carcinoid Tumor; Germ Cell Tumor, Extracranial; Germ Cell Tumor, Extragonadal; Germ Cell Tumor, Ovarian; Gestational Trophoblastic Tumor; Glioma; Glioma, Childhood Brain Stem; Glioma, Childhood Cerebral Astrocytoma; Glioma, Childhood Visual Pathway and Hypothalamic; Hairy Cell Leukemia; Head and Neck Cancer; Hematologic (Blood) Cancer, Hepatocellular (Liver) Cancer, Adult (Primary); Hepatocellular (Liver) Cancer, Childhood (Primary); Hodgkin's Lymphoma; Hodgkin's Lymphoma; Hodgkin's Lymphoma During Pregnancy; Hypopharyngeal Cancer; Hypothalamic and Visual Pathway Glioma; Intraocular Melanoma; Islet Cell Carcinoma (Endocrine Pancreas); Kaposi's Sarcoma; Kidney (Renal Cell) Cancer; Kidney Cancer; Laryngeal Cancer; Laryngeal Cancer; Leukemia, Acute Lymphoblastic; Leukemia, Acute Lymphoblastic; Leukemia, Acute Myeloid; Leukemia, Acute Myeloid; Leukemia, Chronic Lymphocytic; Leukemia; Chronic Myelogenous; Leukemia, Hairy Cell; Lip and Oral Cavity Cancer; Liver Cancer, Adult (Primary); Liver Cancer, Childhood (Primary); Lung Cancer, Non-Small Cell; Lung Cancer, Small Cell; Lymphoma, AIDS-Related; Lymphoma, Burkitt's; Lymphoma, Cutaneous T-Cell, see Mycosis Fungoides and Sezary Syndrome; Lymphoma, Hodgkin's; Lymphoma, Hodgkin's; Lymphoma, Hodgkin's During Pregnancy; Lymphoma, Non-Hodgkin's; Lymphoma, Non-Hodgkin's; Lymphoma, Non-Hodgkin's During Pregnancy; Lymphoma, Primary Central Nervous System; Macroglobulinemia, Waldenstrom's; Malignant Fibrous Histiocytoma of Bone/Osteosarcoma; Medulloblastoma; Melanoma; Melanoma, Intraocular (Eye); Merkel Cell Carcinoma; Mesothelioma, Adult Malignant; Mesothelioma; Metastatic Squamous Neck Cancer with Occult Primary; Multiple Endocrine Neoplasia Syndrome; Multiple Myeloma/Plasma Cell Neoplasm' Mycosis Fungoides; Myelodysplastic Syndromes; Myelodysplastic/Myeloproliferative Diseases; Myelogenous Leukemia, Chronic; Myeloid Leukemia, Adult Acute; Myeloid Leukemia, Childhood Acute; Myeloma, Multiple; Myeloproliferative Disorders, Chronic; Nasal Cavity

and Paranasal Sinus Cancer; Nasopharyngeal Cancer; Nasopharyngeal Cancer; Neuroblastoma; Non-Hodgkin's Lymphoma; Non-Hodgkin's Lymphoma; Non-Hodgkin's Lymphoma During Pregnancy; Non-Small Cell Lung Cancer; Oral Cancer; Oral Cavity Cancer, Lip and; Oropharyngeal Cancer; Osteosarcoma/Malignant Fibrous Histiocytoma of Bone; Ovarian Cancer; Ovarian Epithelial Cancer; Ovarian Germ Cell Tumor; Ovarian Low Malignant Potential Tumor; Pancreatic Cancer; Islet Cell; Paranasal Sinus and Nasal Cavity Cancer; Parathyroid Cancer; Penile Cancer; Pheochromocytoma; Pineoblastoma and Supratentorial Primitive Neuroectodermal Tumors; Pituitary Tumor; Plasma Cell Neoplasm/Multiple Myeloma; Pleuropulmonary Blastoma; Pregnancy and Breast Cancer; Pregnancy and Hodgkin's Lymphoma; Pregnancy and Non-Hodgkin's Lymphoma; Primary Central Nervous System Lymphoma; Prostate Cancer; Rectal Cancer; Renal Cell (Kidney) Cancer; Renal Cell (Kidney) Cancer; Renal Pelvis and Ureter, Transitional Cell Cancer; Retinoblastoma; Rhabdomyosarcoma; Salivary Gland Cancer; Salivary Gland Cancer; Sarcoma, Ewing's Family of Tumors; Sarcoma, Kaposi's; Sarcoma, Soft Tissue; Sarcoma, Soft Tissue; Sarcoma, Uterine; Sezary Syndrome; Skin Cancer (non-Melanoma); Skin Cancer; Skin Cancer (Melanoma); Skin Carcinoma, Merkel Cell; Small Cell Lung Cancer; Small Intestine Cancer; Soft Tissue Sarcoma; Soft Tissue Sarcoma; Squamous Cell Carcinoma, see Skin Cancer (non-Melanoma); Squamous Neck Cancer with Occult Primary, Metastatic; Stomach (Gastric) Cancer; Stomach (Gastric) Cancer; Supratentorial Primitive Neuroectodermal Tumors; T-Cell Lymphoma, Cutaneous, see Mycosis Fungoides and Sezary Syndrome; Testicular Cancer; Thymoma; Thymoma and Thymic Carcinoma; Thyroid Cancer; Thyroid Cancer; Transitional Cell Cancer of the Renal Pelvis and Ureter; Trophoblastic Tumor, Gestational; Unknown Primary Site, Carcinoma of; Unknown Primary Site, Cancer of; Unusual Cancers of Childhood; Ureter and Renal Pelvis, Transitional Cell Cancer; Urethral Cancer; Uterine Cancer, Endometrial; Uterine Sarcoma; Vaginal Cancer; Visual Pathway and Hypothalamic Glioma; Vulvar Cancer; Waldenstrom's Macroglobulinemia; Wilms' Tumor; and Women's Cancers.

Neurologic diseases that may be treated include epilepsy, schizophrenia, bipolar disorder or other psychological and/or psychiatric disorders, neuropathies, skeletal muscle atrophy, and neurodegenerative diseases, e.g., a neurodegenerative disease. Exemplary neurodegenerative diseases include: Alzheimer's disease, Amyotrophic Lateral Sclerosis (ALS), and Parkinson's disease. Another class of neurodegenerative diseases includes diseases caused at least in part by aggregation of poly-glutamine. Diseases of this class

include: Huntington's Diseases, Spinalbulbar Muscular Atrophy (SBMA or Kennedy's Disease), Dentatorubropallidoluysian Atrophy (DRPLA), Spinocerebellar Ataxia 1 (SCA1), Spinocerebellar Ataxia 2 (SCA2), Machado-Joseph Disease (MJD; SCA3), Spinocerebellar Ataxia 6 (SCA6), Spinocerebellar Ataxia 7 (SCA7), and Spinocerebellar Ataxia 12 (SCA12).

Any other disease in which the Wnt pathway, TGFβ pathway, JAK/STAT pathway, the mTOR pathway, Pgp modulation, CK1, CK1γ, CK2, or PIMs plays a role may be treatable or preventable using compounds and methods described herein.

DOSAGE

As used herein, a "therapeutically effective amount" or "therapeutically effective dose" is an amount of a compound of the invention or a combination of two or more such compounds, which inhibits, totally or partially, the progression of the condition or alleviates, at least partially, one or more symptoms of the condition. A therapeutically effective amount can also be an amount which is prophylactically effective. The amount which is therapeutically effective will depend upon the patient's size and gender, the condition to be treated, the severity of the condition and the result sought. For a given patient, a therapeutically effective amount may be determined by methods known to those of skill in the art.

A therapeutically effective dose refers to that amount of the compound that results in amelioration of symptoms in a patient. Toxicity and therapeutic efficacy of such compounds can be determined by standard pharmaceutical procedures in cell cultures or experimental animals, e.g., for determining the maximum tolerated dose (MTD) and the ED_{50} (effective dose for 50% maximal response). The dose ratio between toxic and therapeutic effects is the therapeutic index and it can be expressed as the ratio between MTD and ED_{50}. The data obtained from these cell culture assays and animal studies can be used in formulating a range of dosage for use in humans. The dosage of such compounds lies preferably within a range of circulating concentrations that include the ED_{50} with little or no toxicity. The dosage may vary within this range depending upon the dosage form employed and the route of administration utilized. The exact formulation, route of administration and dosage can be chosen by the individual physician in view of the patient's condition. In the treatment of crises, the administration of an acute bolus or an infusion approaching the MTD may be required to obtain a rapid response.

Dosage amount and interval may be adjusted individually to provide plasma levels of the active moiety which are sufficient to maintain the CK1, CK1γ, CK2, Pim1-3, Wnt pathway, TGFβ pathway, JAK/STAT pathway, mTOR pathway, or Pgp modulating effects, or minimal effective concentration (MEC). The MEC will vary for each compound but can be estimated from *in vitro* data. Dosages necessary to achieve the MEC will depend on individual characteristics and route of administration. HPLC assays or bioassays can be used to determine plasma concentrations.

Dosage intervals can also be determined using the MEC value. Compounds should be administered using a regimen which maintains plasma levels above the MEC for 10-90% of the time, preferably between 30-90% and most preferably between 50-90% until the desired amelioration of symptoms is achieved. In cases of local administration or selective uptake, the effective local concentration of the drug may not be related to plasma concentration.

The amount of composition administered will, of course, be dependent on the subject being treated, on the subject's weight, the severity of the affliction, the manner of administration and the judgment of the prescribing physician.

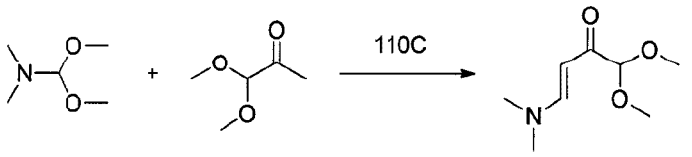
KITS

The compounds and compositions of the invention (e.g., compounds and compositions of formula **I** and formula **II**) may, if desired, be presented in a pack or dispenser device which may contain one or more unit dosage forms containing the active ingredient. The pack may for example comprise metal or plastic foil, such as a blister pack. The pack or dispenser device may be accompanied by instructions for administration. Compositions comprising a compound of the invention formulated in a compatible pharmaceutical carrier may also be prepared, placed in an appropriate container, and labelled for treatment of an indicated condition. Instructions for use may also be provided.

EXEMPLIFICATION

The invention now being generally described, it will be more readily understood by reference to the following examples, which are included merely for purposes of illustration of certain aspects and embodiments of the present invention, and are not intended to limit the invention. The geometric isomers depicted below are believed to be correct, but final structural assignment will be made via 2-D NMR experiments. Although the exemplary compounds described below are believed to be the Z-geometric isomers, the E-geometric isomers and mixtures of the E-and Z-isomers are also contemplated by the present disclosure.

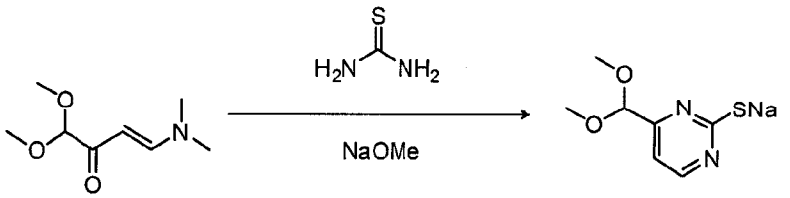
EXAMPLE 1



1

(E)-4-(dimethylamino)-1,1-dimethoxybut-3-en-2-one (1): 1,1-dimethoxy-N,N-dimethylmethanamine (100 g, 839 mmol, 1.02 equiv.) and 1,1-dimethoxypropan-2-one (97 g, 821 mmol) were added and stirred at 110°C for 3 hours. The produced methanol was removed by a Dean-Stark apparatus. After the solution was cooled to room temperature, the remaining volatile materials were removed *in vacuo* to provide 130 g of the crude product, **(E)-4-(dimethylamino)-1,1-dimethoxybut-3-en-2-one (1)** (130 g, 143 g theoretical, 91%). LC-MS *m/z* 283 (M+1). Reference: WO 2006/0097341 A1, pg. 67

EXAMPLE 2



1 2

Sodium 4-(dimethoxymethyl)pyrimidine-2-thiolate (2): A solution of thiourea (64.7 g,

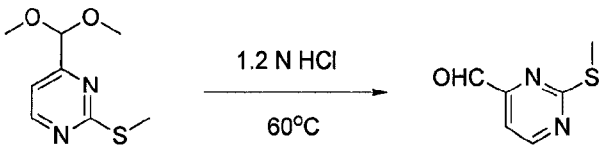
850 mmol, 1.13 equiv.), sodium methanolate (95%, 40.5 g, 751 mmol, 1.0 equiv.) in methanol (500 mL, 1.5 M) was stirred at room temperature for 30 minutes. A solution of **(E)-4-(dimethylamino)-1,1-dimethoxybut-3-en-2-one (1)** (130 g, 751 mmol) in methanol (200 mL) was added and the reaction stirred at room temperature for 2 h. The crude **sodium 4-(dimethoxymethyl)pyrimidine-2-thiolate (2)** was used directly in the next step without further purification. LC-MS *m/z* 209 (M+1). Reference: WO 2006/0097341 A1, pg. 67

EXAMPLE 3

2 **3**

4-(dimethoxymethyl)-2-(methylthio)pyrimidine (3): Iodomethane (128 g, 902 mmol, 1.20 equiv.) was added carefully to the crude solution of **sodium 4-(dimethoxymethyl)pyrimidine-2-thiolate (2)** (156 g, 751 mmol) in methanol (700 mL, 1.1 M) while maintaining the reaction temperature below 28°C using an ice-water bath for cooling. The resulting mixture was stirred at room temperature for 16 h. After removal of the solvent under reduced pressure, the residue was diluted with water (300 mL) and extracted with ethyl acetate (2 x 150 mL). The combined organic layer was concentrated under reduced pressure and the crude residue purified by passing through a short silica gel pad and washing with diethyl ether (200 mL) to afford **4-(dimethoxymethyl)-2-(methylthio)pyrimidine (3)** as a brown oil (53.7 g, 150 g theoretical, 35.7%). LC-MS *m/z* 201 (M+1). Reference: WO 2006/0097341 A1, pg. 67

EXAMPLE 4

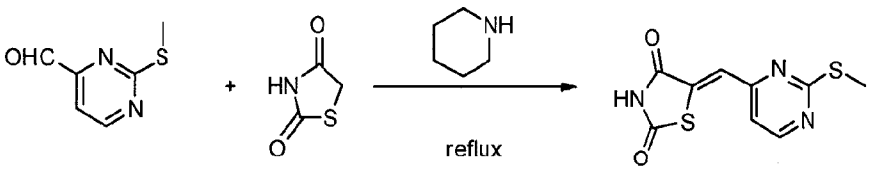


3 **4**

2-(methylthio)pyrimidine-4-carbaldehyde (4): 4-(dimethoxymethyl)-2-

(methylthio)pyrimidine (3) (53.7 g, 268 mmol) was added carefully to 1.2 N aqueous HCl (300 mL, 268 mmol, 1.0 equiv.) and stirred at 60°C for 3hours. The reaction mixture was then cooled to room temperature and neutralized by the slow addition of solid sodium bicarbonate. The crude mixture was extracted with diethyl ether (3 x 150 mL) and the combined organic layer was concentrated under reduced pressure to afford **2-(methylthio)pyrimidine-4-carbaldehyde (4)** as a yellow solid (14.2 g, 41.5 g theoretical, 34%). LC-MS *m/z* 155 (M+1). Reference: WO 2006/009734 A1, pg. 67

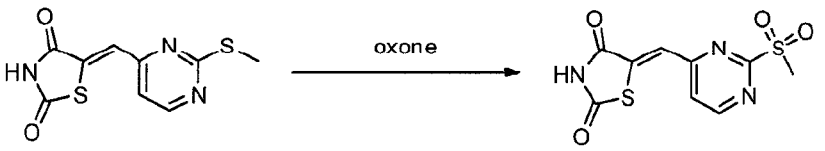
EXAMPLE 5



4 **5**

(Z)-5-((2-(methylthio)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione (5): A 40 mL round-bottomed vial was charged with **2-(methylthio)pyrimidine-4-carbaldehyde (4)** (771 mg, 5 mmol), thiazolidine-2,4-dione (586 mg, 5 mmol, 1.0 equiv.), and piperidine (400 µL, 4 mmol, 0.8 equiv.) in ethanol (20 mL, 0.25 M). The reaction mixture was heated to 80°C and shaken for 20 h. The resulting yellow precipitate was isolated by filtration and washed with ethanol (1 x 20 mL) and dried *in vacuo* to afford **(Z)-5-((2-(methylthio)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione (5)** as a yellow solid (550 mg, 898 mg theoretical, 61%). LC-MS *m/z* 254 (M+1).

EXAMPLE 6

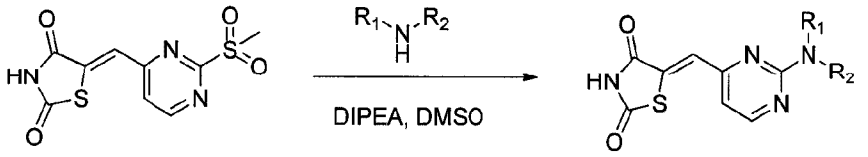


5 **6**

(Z)-5-((2-(methylsulfonyl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione (6): A mixture of **(Z)-5-((2-(methylthio)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione (5)** (3.5 g, 13.82 mmol) in THF (100 mL, 0.13 M) was treated with a solution of oxone (25.8 g,

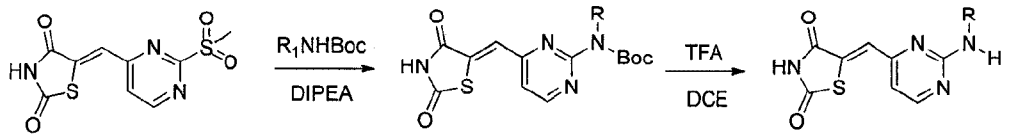
41.5 mmol, 3.0 equiv.) in water (175 mL). The resulting mixture was stirred at room temperature for 48 h. The resulting precipitate was filtered and washed with water (20 mL) and diethyl ether (20 mL) to afford **(Z)-5-((2-(methylsulfonyl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione (6) as a solid** (2.48 g, 3.94 g theoretical, 63%). LC-MS *m/z* 286 (M+1).

EXAMPLE 7



General Displacement Procedure: 2-dram round-bottomed vials were charged with **(Z)-5-((2-(methylsulfonyl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione** (25 mg, 0.0877 mmol) prepared according to the general procedure, DMSO (1 mL, 0.08 M), diisopropylethylamine (50 µL, 0.288 mmol, 3.2 equiv.), and the appropriate amine (0.0877 mmol, 1.0 equiv.). The reaction mixture was heated to 110°C and shaken for 24 h. The solvent was removed under reduced pressure (Genvac HT-4) and the crude residues were purified using reverse phase HPLC (MS-triggered fraction collection) with an acetonitrile/water gradient and trifluoroacetic acid as a modifier. The pure fractions were then concentrated under reduced pressure (Genevac HT-4).

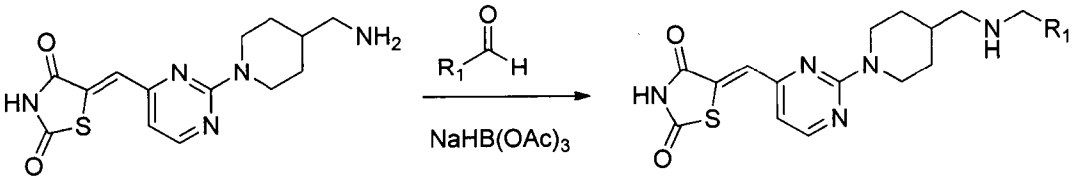
EXAMPLE 8



Displacement/De-protection of mono-Boc Diamines

General De-Protection Procedure: The crude protected amine was prepared using the General Displacement Procedure and was then treated with 2 mL DCE and 500 µL of TFA and shaken for 24 h. The solvent was removed under reduced pressure (Genevac HT-4) and the crude residues were purified using reverse phase HPLC (MS-triggered fraction collection) with an acetonitrile/water or methanol/water gradient and trifluoroacetic acid as a modifier. The pure fractions were then concentrated under reduced pressure (Genevac HT-4).

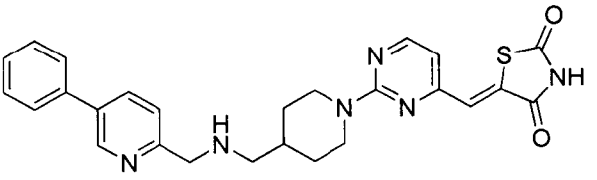
EXAMPLE 9



Reductive Amination Analogs

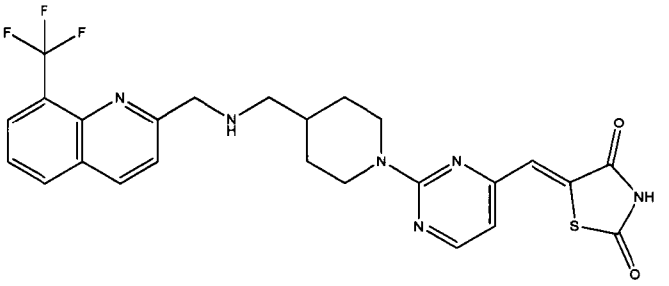
General Reductive Amination Procedure: A 2-dram round-bottomed vial was charged with the crude amine/TFA salt prepared using the general displacement procedure followed by the general TFA de-protection procedure (0.115 mmol), DCE (2 mL), DIPEA (6 eq. 0.690 mmol), DMF (1 mL), the aldehyde or ketone (1 equiv., 0.115 mmol), and the reaction mixture was shaken for 1 h at RT. The reaction mixture was then treated with $NaBH(OAc)_3$ (2.5 equiv., 0.230 mmol) and the reaction was shaken 16 h at RT. The reaction mixture was then diluted with DCE (2 mL) and $NaHCO_3$ (2 mL). The aqueous layer was back extracted with DCE (2 x 2 mL) and the combined organic layer was concentrated under reduced pressure (Genevac HT-4) and the crude residue was purified using reverse phase HPLC (MS-triggered fraction collection) with an acetonitrile/water or methanol/water gradient and trifluoroacetic acid as the modifier. The pure fractions were then concentrated under reduced pressure (Genevac HT-4) to afford the pure products as the TFA salt.

EXAMPLE 10



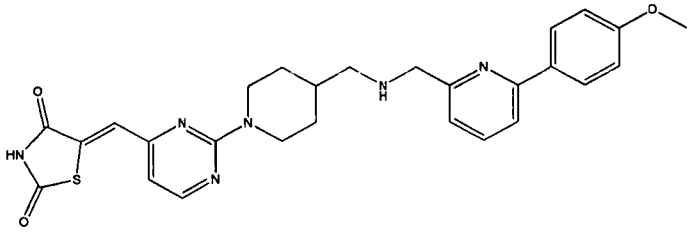
(Z)-5-((2-(4-((((5-phenylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 5-phenylpicolinaldehyde (33.7 mg, 40.4 mg theoretical, 83%). LC-MS m/z 487.6 (M+1).

EXAMPLE 11



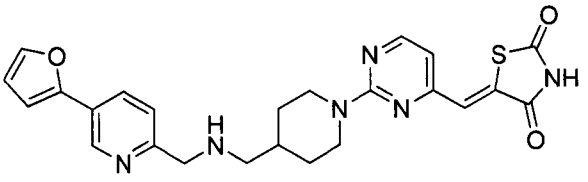
(Z)-5-((2-(4-((((8-(trifluoromethyl)quinolin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 8-(trifluoromethyl)-2-naphthaldehyde (8.5 mg, 43.9 mg theoretical, 19.3%). LC-MS m/z 529.5 (M+1).

EXAMPLE 12



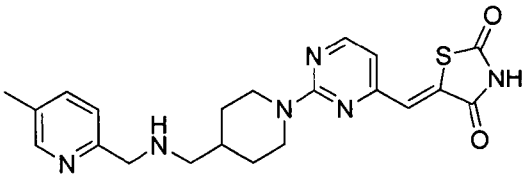
(Z)-5-((2-(4-((((6-(4-methoxyphenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 5-phenylpicolinaldehyde (32 mg, 42.9 mg theoretical, 74.6%). LC-MS m/z 517.6 (M+1).

EXAMPLE 13



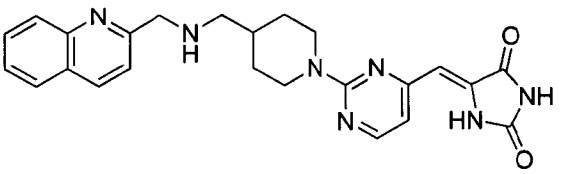
(Z)-5-((2-(4-((((5-(furan-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 5-(furan-2-yl)picolinaldehyde (24 mg, 39.6 mg theoretical, 60.7%). LC-MS m/z 477.6 (M+1).

EXAMPLE 14



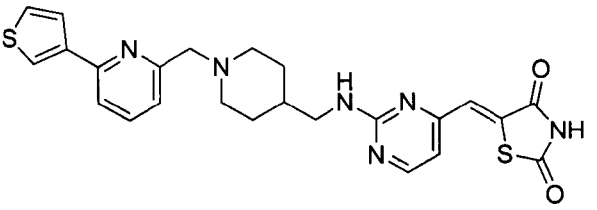
(Z)-5-((2-(4-((((5-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 5-methylpicolinaldehyde (25.3 mg, 35.2 mg theoretical, 71.8%). LC-MS m/z 425.5 (M+1).

EXAMPLE 15



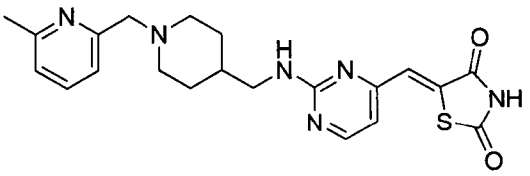
(Z)-5-((2-(4-(((quinolin-2-ylmethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)imidazolidine-2,4-dione was prepared using the general reductive amination procedure and quinoline-2-carbaldehyde (3.2 mg, 24.9 mg theoretical, 12.8%). LC-MS m/z 444.5 (M+1).

EXAMPLE 16



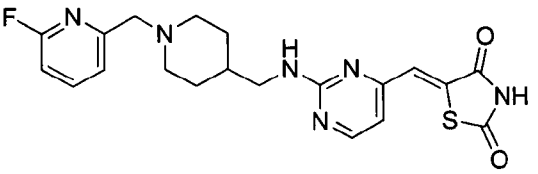
(Z)-5-((2-(((1-((6-(thiophen-3-yl)pyridin-2-yl)methyl)piperidin-4-yl)methyl)amino)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 6-(thiophen-3-yl)picolinaldehyde (38.8 mg, 46.8 mg theoretical, 83%). LC-MS m/z 493.6 (M+1).

EXAMPLE 17



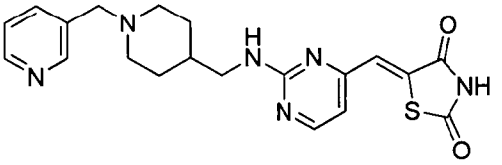
(Z)-5-((2-(((1-((6-methylpyridin-2-yl)methyl)piperidin-4-yl)methyl)amino)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 6-methylpicolinaldehyde (40.3 mg, 40.3 mg theoretical, 100%). LC-MS m/z 425.5 (M+1).

EXAMPLE 18



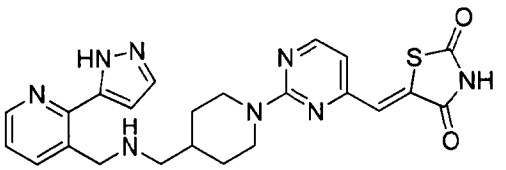
(Z)-5-((2-(((1-((6-fluoropyridin-2-yl)methyl)piperidin-4-yl)methyl)amino)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 6-fluoropicolinaldehyde (16.2 mg, 40.7 mg theoretical, 39.8%). LC-MS m/z 429.5 (M+1).

EXAMPLE 19



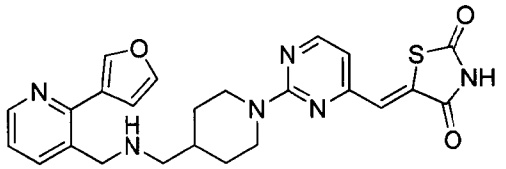
(Z)-5-((2-(((1-(pyridin-3-ylmethyl)piperidin-4-yl)methyl)amino)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and nicotinaldehyde (38.6 mg, 39.0 mg theoretical, 99%). LC-MS m/z 411.5 (M+1).

EXAMPLE 20



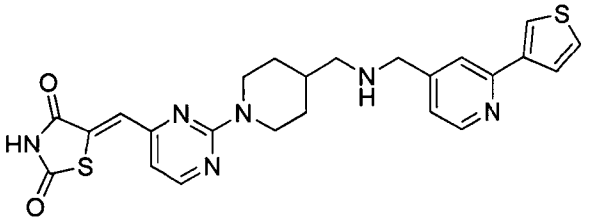
(Z)-5-((2-(4-((((2-(1H-pyrazol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and tert-butyl 5-(3-formylpyridin-2-yl)-1H-pyrazole-1-carboxylate followed by the general de-protection procedure (6.8 mg, 34.3 mg theoretical, 19.8%). LC-MS m/z 477.6 (M+1).

EXAMPLE 21



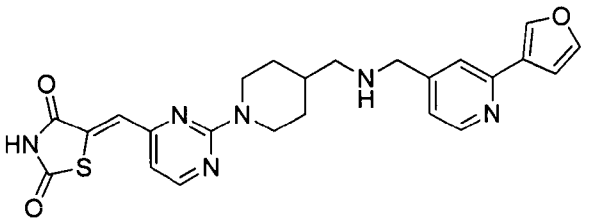
(Z)-5-((2-(4-((((2-(furan-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-(furan-3-yl)nicotinaldehyde (40.5 mg, 42.5 mg theoretical, 95%). LC-MS m/z 477.6 (M+1).

EXAMPLE 22



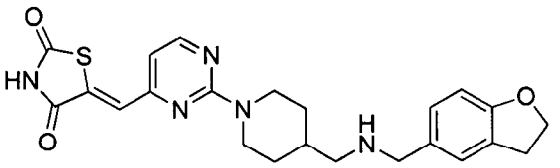
(Z)-5-((2-(4-((((2-(thiophen-3-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-(thiophen-3-yl)isonicotinaldehyde (20.8 mg, 35.5 mg theoretical, 58.6%). LC-MS m/z 493.6 (M+1).

EXAMPLE 23



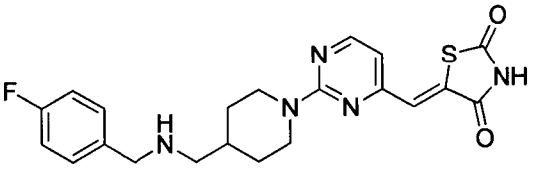
(Z)-5-((2-(4-((((2-(furan-3-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-(furan-3-yl)isonicotinaldehyde (22.2 mg, 34.3 mg theoretical, 64.7%). LC-MS m/z 477.6 (M+1).

EXAMPLE 24



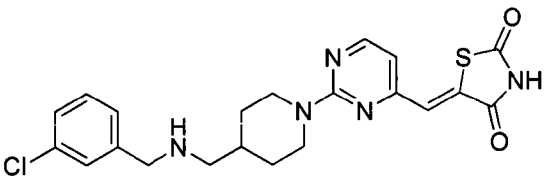
(Z)-5-((2-(4-((((2,3-dihydrobenzofuran-5-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2,3-dihydrobenzofuran-5-carbaldehyde (2.0 mg, 32.5 mg theoretical, 6.1%). LC-MS m/z 452.5 (M+1).

EXAMPLE 25



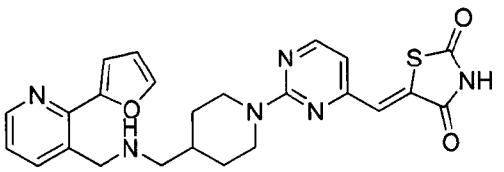
(Z)-5-((2-(4-(((4-fluorobenzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 4-fluorobenzaldehyde (8.7 mg, 30.8 mg theoretical, 28.3%). LC-MS m/z 428.5 (M+1).

EXAMPLE 26



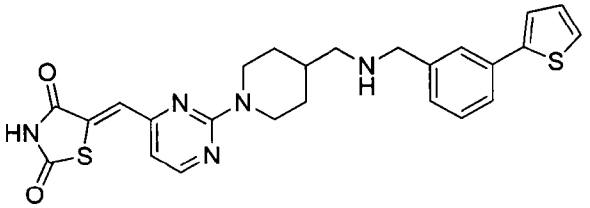
(Z)-5-((2-(4-(((3-chlorobenzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 3-chlorobenzaldehyde (13.8 mg, 32.0 mg theoretical, 43.2%). LC-MS m/z 444.9 (M+1).

EXAMPLE 27



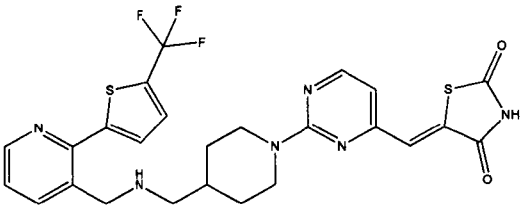
(Z)-5-((2-(4-((((2-(furan-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-(furan-2-yl)nicotinaldehyde (14.0 mg, 34.3 mg theoretical, 40.8%). LC-MS m/z 477.6 (M+1).

EXAMPLE 28



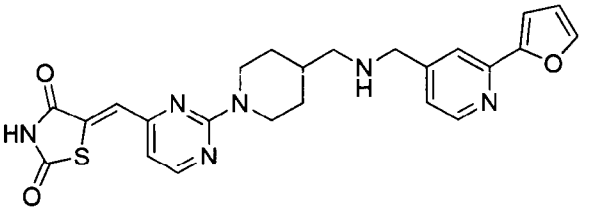
(Z)-5-((2-(4-(((3-(thiophen-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 3-(thiophen-2-yl)benzaldehyde (34.0 mg, 46.2 mg theoretical, 73.6%). LC-MS m/z 492.6 (M+1).

EXAMPLE 29



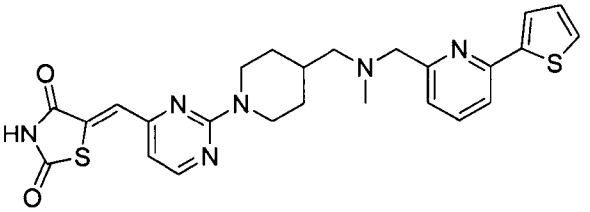
(Z)-5-((2-(4-((((2-(5-(trifluoromethyl)thiophen-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-(5-(trifluoromethyl)thiophen-2-yl)nicotinaldehyde (19.9 mg, 26.9 mg theoretical, 74%). LC-MS m/z 561.6 (M+1).

EXAMPLE 30



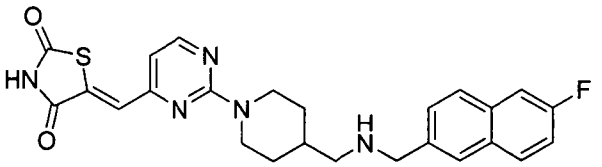
(Z)-5-((2-(4-((((2-(furan-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-(furan-2-yl)isonicotinaldehyde (16.0 mg, 34.3 mg theoretical, 46.6%). LC-MS m/z 477.6 (M+1).

EXAMPLE 31



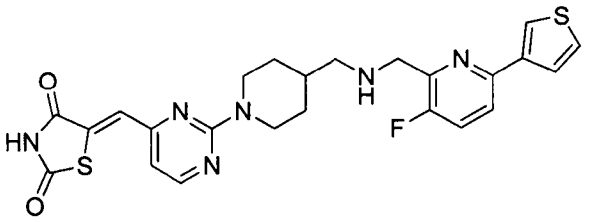
(Z)-5-((2-(4-((methyl((6-(thiophen-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 6-(thiophen-2-yl)picolinaldehyde (14.0 mg, 34.4 mg theoretical, 46.1%). LC-MS m/z 507.6 (M+1).

EXAMPLE 32



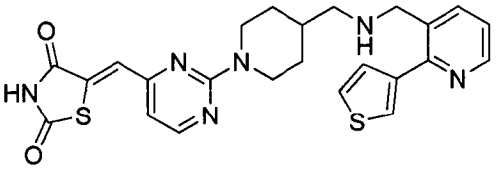
(Z)-5-((2-(4-((((6-fluoronaphthalen-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 6-fluoro-2-naphthaldehyde (18.7 mg, 22.9 mg theoretical, 82%). LC-MS m/z 478.6 (M+1).

EXAMPLE 33



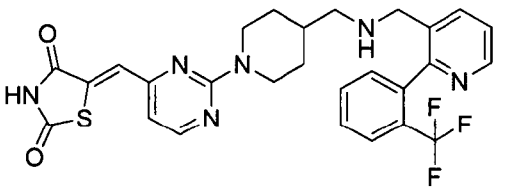
(Z)-5-((2-(4-((((3-fluoro-6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 3-fluoro-6-(thiophen-3-yl)picolinaldehyde (13.3 mg, 24.5 mg theoretical, 54.3%). LC-MS m/z 511.6 (M+1).

EXAMPLE 34



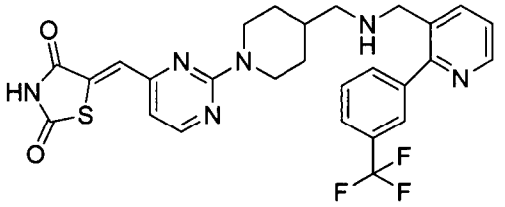
(Z)-5-((2-(4-((((2-(thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-(thiophen-3-yl)nicotinaldehyde (21.0 mg, 26.6 mg theoretical, 79%). LC-MS m/z 555.5 (M+1).

EXAMPLE 35



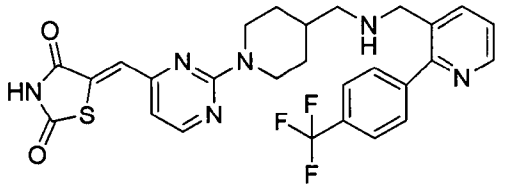
(Z)-5-((2-(4-((((2-(2-(trifluoromethyl)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-(2-(trifluoromethyl)phenyl)nicotinaldehyde (24.5 mg, 26.6 mg theoretical, 92%). LC-MS m/z 555.5 (M+1).

EXAMPLE 36



(Z)-5-((2-(4-((((2-(3-(trifluoromethyl)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-(3-(trifluoromethyl)phenyl)nicotinaldehyde (25.1 mg, 26.6 mg theoretical, 94%). LC-MS m/z 555.5 (M+1).

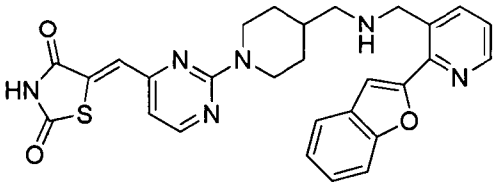
EXAMPLE 37



(Z)-5-((2-(4-((((2-(4-(trifluoromethyl)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-(4-

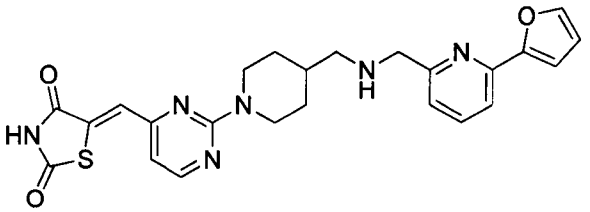
(trifluoromethyl)phenyl)nicotinaldehyde (9.1 mg, 26.6 mg theoretical, 34.2%). LC-MS m/z 555.5 (M+1).

EXAMPLE 38



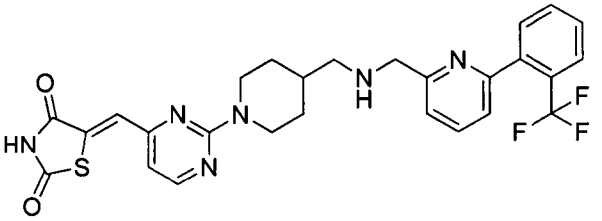
(Z)-5-((2-(4-((((2-(benzofuran-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-(benzofuran-2-yl)nicotinaldehyde (8.9 mg, 25.3 mg theoretical, 35.2%). LC-MS m/z 527.6 (M+1).

EXAMPLE 39



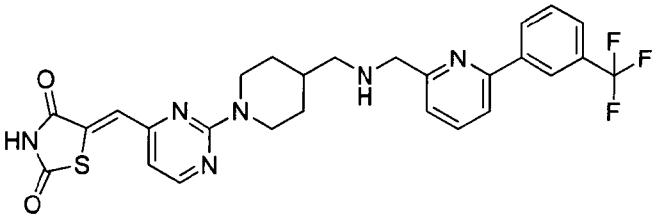
(Z)-5-((2-(4-((((6-(furan-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 6-(furan-2-yl)picolinaldehyde (13.9 mg, 22.8 mg theoretical, 60.8%). LC-MS m/z 477.5 (M+1).

EXAMPLE 40



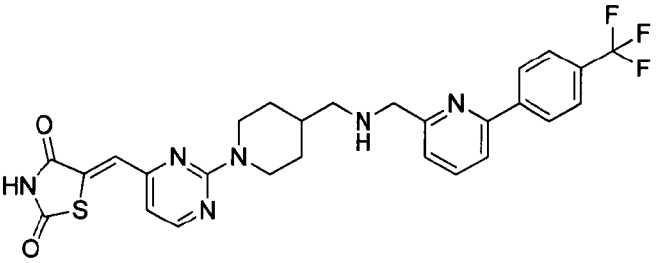
(Z)-5-((2-(4-((((6-(2-(trifluoromethyl)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 6-(2-(trifluoromethyl)phenyl)picolinaldehyde (14 mg, 26.6 mg theoretical, 52.6%). LC-MS m/z 555.5 (M+1).

EXAMPLE 41



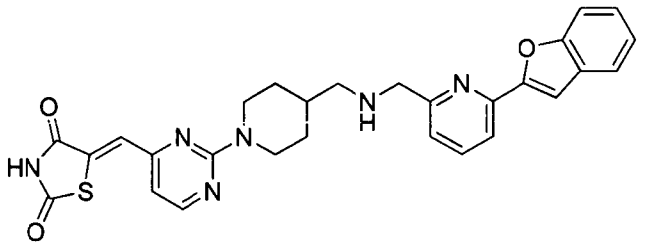
(Z)-5-((2-(4-((((6-(3-(trifluoromethyl)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 6-(3-(trifluoromethyl)phenyl)picolinaldehyde (21.0 mg, 26.6 mg theoretical, 79%). LC-MS m/z 555.5 (M+1).

EXAMPLE 42



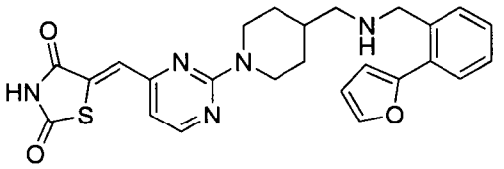
(Z)-5-((2-(4-((((6-(4-(trifluoromethyl)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 6-(4-(trifluoromethyl)phenyl)picolinaldehyde (13.8 mg, 26.6 mg theoretical, 51.8%). LC-MS m/z 555.5 (M+1).

EXAMPLE 43



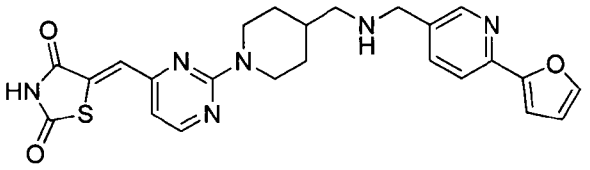
(Z)-5-((2-(4-((((6-(benzofuran-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 6-(benzofuran-2-yl)picolinaldehyde (13.3 mg, 25.3 mg theoretical, 52.6%). LC-MS m/z 527.6 (M+1).

EXAMPLE 44



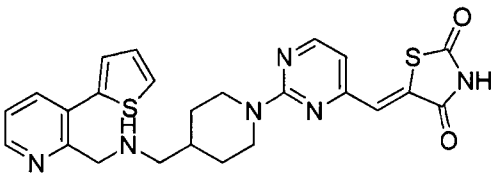
(Z)-5-((2-(4-(((2-(furan-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-(furan-2-yl)benzaldehyde (10.2 mg, 22.8 mg theoretical, 44.7%). LC-MS m/z 476.5 (M+1).

EXAMPLE 45



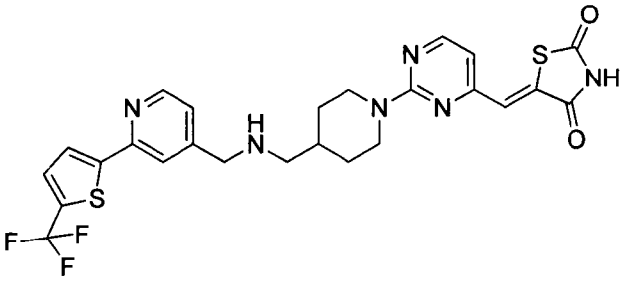
(Z)-5-((2-(4-((((6-(furan-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 6-(furan-2-yl)nicotinaldehyde (18.0 mg, 22.8 mg theoretical, 79%). LC-MS m/z 477.5 (M+1).

EXAMPLE 46



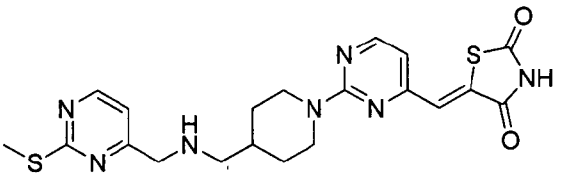
(Z)-5-((2-(4-((((3-(thiophen-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 3-(thiophen-2-yl)picolinaldehyde (10.9 mg, 23.6 mg theoretical, 46%). LC-MS m/z 493 (M+1).

EXAMPLE 47



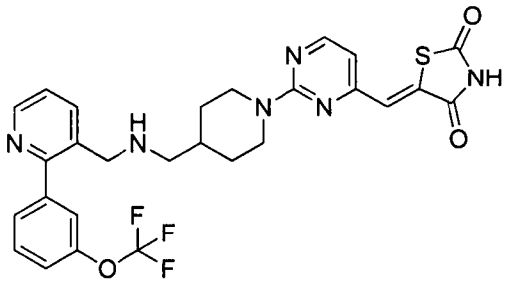
(Z)-5-((2-(4-((((2-(5-(trifluoromethyl)thiophen-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-(5-(trifluoromethyl)thiophen-2-yl)isonicotinaldehyde (3.0 mg, 26.9 mg theoretical, 11%). LC-MS m/z 561 (M+1).

EXAMPLE 48



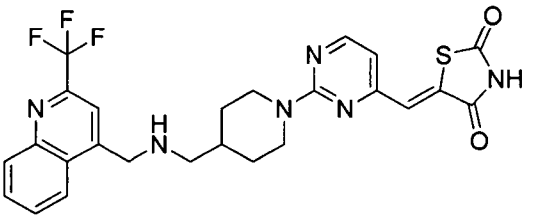
(Z)-5-((2-(4-((((2-(methylthio)pyrimidin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-(methylthio)pyrimidine-4-carbaldehyde (12.6 mg, 62.6 mg theoretical, 20.1%). LC-MS m/z 458 (M+1).

EXAMPLE 49



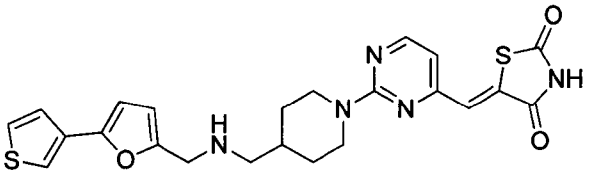
(Z)-5-((2-(4-((((2-(3-(trifluoromethoxy)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-(3-(trifluoromethoxy)phenyl)nicotinaldehyde (11.6 mg, 27.4 mg theoretical, 42%). LC-MS m/z 571 (M+1).

EXAMPLE 50



(Z)-5-((2-(4-((((2-(trifluoromethyl)quinolin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-(trifluoromethyl)quinoline-4-carbaldehyde (5.3 mg, 25.4 mg theoretical, 21%). LC-MS m/z 529 (M+1).

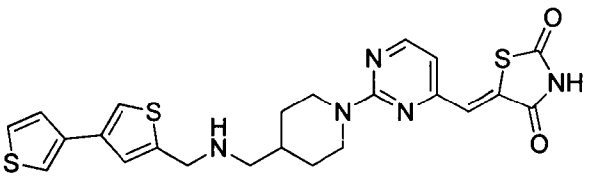
EXAMPLE 51



(Z)-5-((2-(4-((((5-(thiophen-3-yl)furan-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general

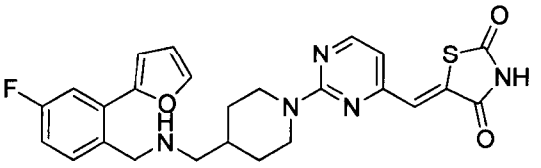
reductive amination procedure and 5-(thiophen-3-yl)furan-2-carbaldehyde (12.0 mg, 23.1 mg theoretical, 52%). LC-MS m/z 482 (M+1).

EXAMPLE 52



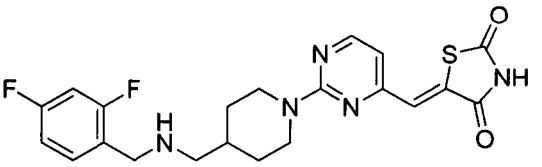
(Z)-5-((2-(4-((([3,3'-bithiophen]-5-ylmethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 3,3'-bithiophene]-5-carbaldehyde (3.5 mg, 23.8 mg theoretical, 14%). LC-MS m/z 498 (M+1).

EXAMPLE 53



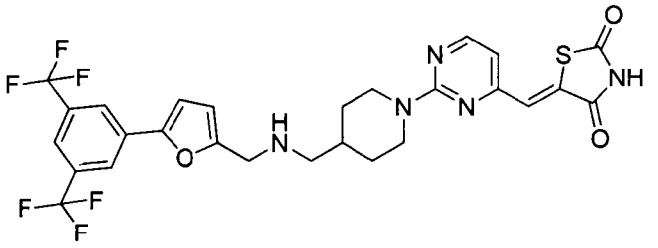
(Z)-5-((2-(4-(((4-fluoro-2-(furan-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 4-fluoro-2-(furan-2-yl)benzaldehyde (9.6 mg, 23.6 mg theoretical, 40%). LC-MS m/z 494 (M+1).

EXAMPLE 54



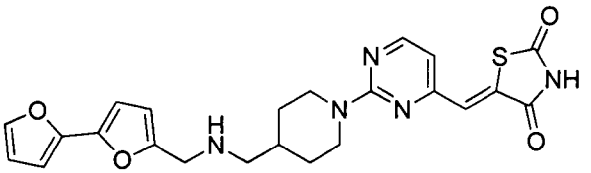
(Z)-5-((2-(4-(((2,4-difluorobenzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2,4-difluorobenzaldehyde (4.2 mg, 21.3 mg theoretical, 20%). LC-MS m/z 446 (M+1).

EXAMPLE 55



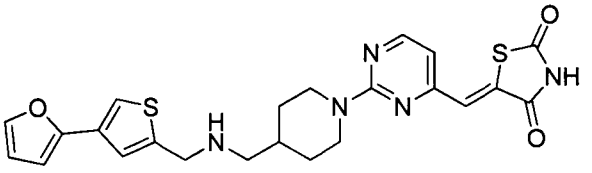
(Z)-5-((2-(4-((((5-(3,5-bis(trifluoromethyl)phenyl)furan-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 5-(3,5-bis(trifluoromethyl)phenyl)furan-2-carbaldehyde (10.9 mg, 29.4 mg theoretical, 37%). LC-MS m/z 612 (M+1).

EXAMPLE 56



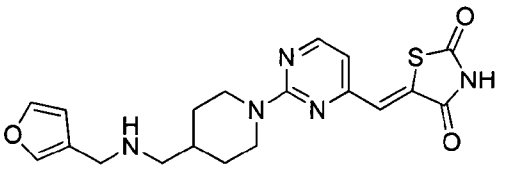
(Z)-5-((2-(4-((([2,2'-bifuran]-5-ylmethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2,2'-bifuran-5-carbaldehyde (6.0 mg, 22.3 mg theoretical, 27%). LC-MS m/z 466 (M+1).

EXAMPLE 57



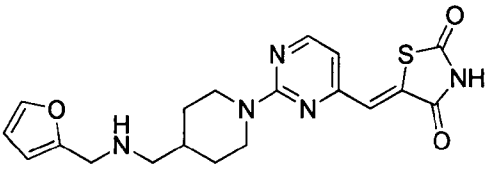
(Z)-5-((2-(4-((((4-(furan-2-yl)thiophen-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 4-(furan-2-yl)thiophene-2-carbaldehyde (3.0 mg, 23.1 mg theoretical, 13%). LC-MS m/z 482 (M+1).

EXAMPLE 58



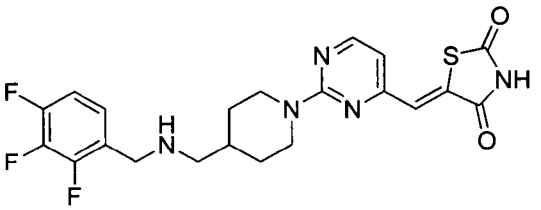
(Z)-5-((2-(4-(((furan-3-ylmethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and furan-3-carbaldehyde (2.0 mg, 19.1 mg theoretical, 10%). LC-MS m/z 400 (M+1).

EXAMPLE 59



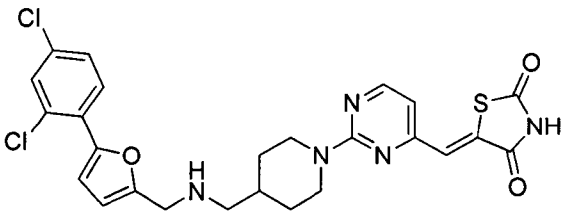
(Z)-5-((2-(4-(((furan-2-ylmethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and furan-2-carbaldehyde (7.4 mg, 19.1 mg theoretical, 38%). LC-MS m/z 400 (M+1).

EXAMPLE 60



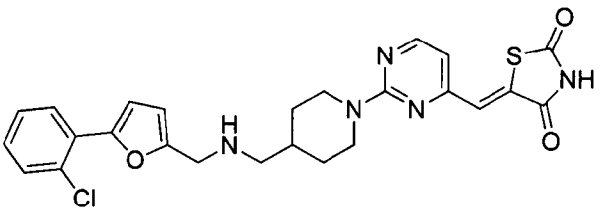
(Z)-5-((2-(4-(((2,3,4-trifluorobenzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2,3,4-trifluorobenzaldehyde (6.6 mg, 22.2 mg theoretical, 30%). LC-MS m/z 464 (M+1).

EXAMPLE 61



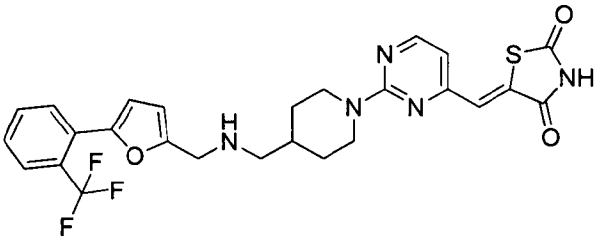
(Z)-5-((2-(4-((((5-(2,4-dichlorophenyl)furan-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general displacement procedure and 5-(2,4-dichlorophenyl)furan-2-carbaldehyde (19 mg, 39 mg theoretical, 48%). LC-MS m/z 545.5 (M+1).

EXAMPLE 62



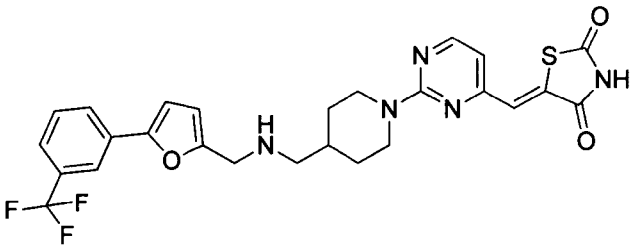
(Z)-5-((2-(4-((((5-(2-chlorophenyl)furan-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 5-(2-chlorophenyl)furan-2-carbaldehyde (17.2 mg, 36.7 mg theoretical, 46.8%). LC-MS m/z 511.5 (M+1).

EXAMPLE 63



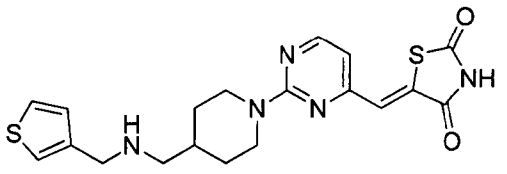
(Z)-5-((2-(4-((((5-(2-(trifluoromethyl)phenyl)furan-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 5-(2-(trifluoromethyl)phenyl)furan-2-carbaldehyde (23.9 mg, 39.1 mg theoretical, 66%). LC-MS m/z 544.5 (M+1).

EXAMPLE 64



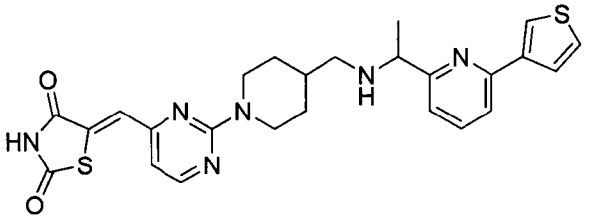
(Z)-5-((2-(4-((((5-(3-(trifluoromethyl)phenyl)furan-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 5-(3-(trifluoromethyl)phenyl)furan-2-carbaldehyde (20.5 mg, 39.1 mg theoretical, 52.4%). LC-MS m/z 544 (M+1).

EXAMPLE 65



(Z)-5-((2-(4-(((thiophen-3-ylmethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and thiophene-3-carbaldehyde (9.7 mg, 19.5 mg theoretical, 47%). LC-MS m/z 416 (M+1).

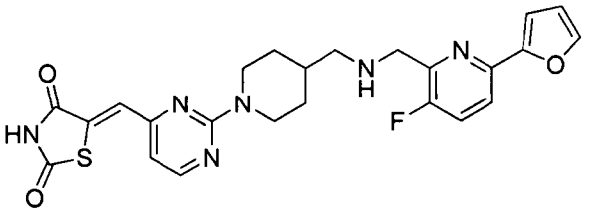
EXAMPLE 66



(Z)-5-((2-(4-(((1-(6-(thiophen-3-yl)pyridin-2-yl)ethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general

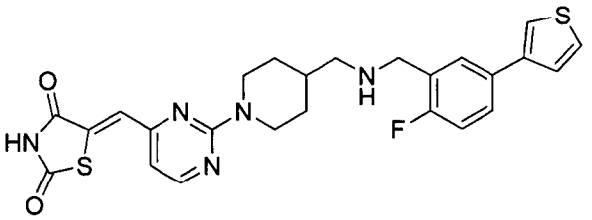
reductive amination procedure and 1-(6-(thiophen-3-yl)pyridin-2-yl)ethanone (3 mg, 37.4 mg theoretical, 8.6%). LC-MS m/z 507 (M+1).

EXAMPLE 67



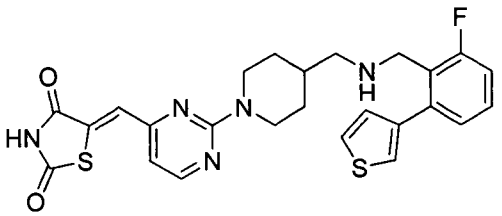
(Z)-5-((2-(4-((((3-fluoro-6-(furan-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 3-fluoro-6-(furan-2-yl)picolinaldehyde (13.6 mg, 23.7 mg theoretical, 57%). LC-MS m/z 495 (M+1).

EXAMPLE 68



(Z)-5-((2-(4-(((2-fluoro-5-(thiophen-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-fluoro-5-(thiophen-3-yl)benzaldehyde (7.6 mg, 24.4 mg theoretical, 31%). LC-MS m/z 510 (M+1).

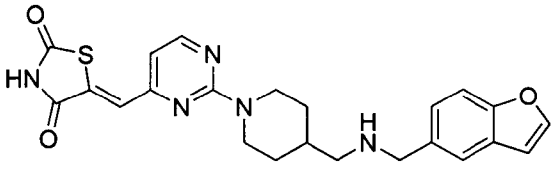
EXAMPLE 69



(Z)-5-((2-(4-(((2-fluoro-6-(thiophen-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general

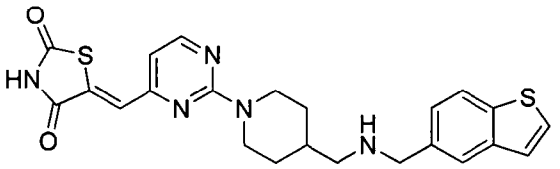
reductive amination procedure and 2-fluoro-6-(thiophen-3-yl)benzaldehyde (8.9 mg, 24.4 mg theoretical, 36%). LC-MS m/z 510 (M+1).

EXAMPLE 70



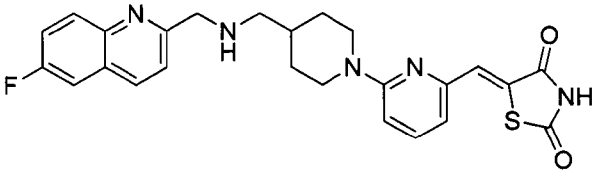
(Z)-5-((2-(4-(((benzofuran-5-ylmethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and benzofuran-5-carbaldehyde (5.5 mg, 21.5 mg theoretical, 26%). LC-MS m/z 450 (M+1).

EXAMPLE 71



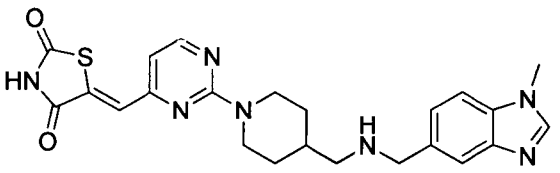
(Z)-5-((2-(4-(((benzo[b]thiophen-5-ylmethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and benzo[b]thiophene-5-carbaldehyde (14.3 g, 22.3 mg theoretical, 64%). LC-MS m/z 466 (M+1).

EXAMPLE 72



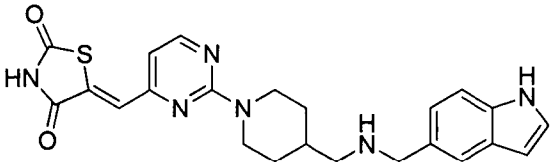
(Z)-5-((6-(4-((((6-fluoroquinolin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyridin-2-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 6-fluoroquinoline-2-carbaldehyde (6 mg, 18.9 mg theoretical, 31.7%). LC-MS m/z 478 (M+1).

EXAMPLE 73



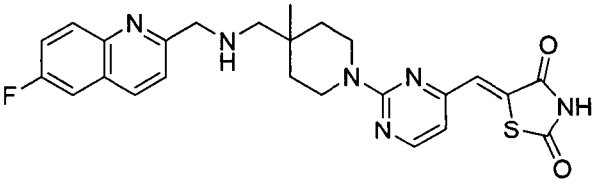
(Z)-5-((2-(4-((((1-methyl-1H-benzo[d]imidazol-5-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 1-methyl-1H-benzo[d]imidazole-5-carbaldehyde (5.6 mg, 22.5 mg theoretical, 25%). LC-MS m/z 464 (M+1).

EXAMPLE 74



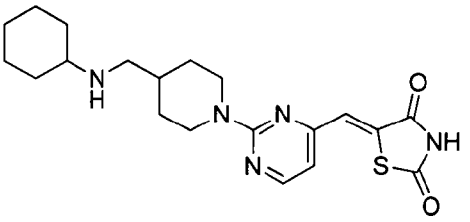
(Z)-5-((2-(4-((((1H-indol-5-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 1H-indole-5-carbaldehyde (5.2 mg, 24.5 mg theoretical, 24%). LC-MS m/z 449 (M+1).

EXAMPLE 75



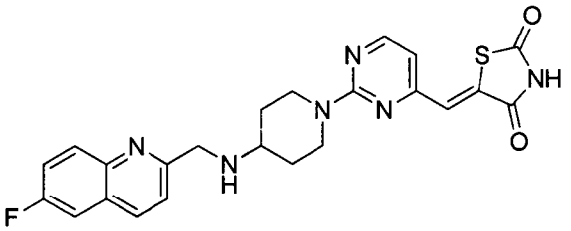
(Z)-5-((2-(4-((((6-fluoroquinolin-2-yl)methyl)amino)methyl)-4-methylpiperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 6-fluoroquinoline-2-carbaldehyde (25.3 mg, 64.2 mg theoretical, 18%). LC-MS m/z 334 (M+1).

EXAMPLE 76



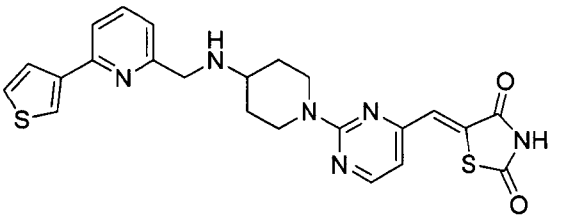
(Z)-5-((2-(4-((((2-(2-(trifluoromethyl)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and cyclohexanone (18 mg, 28.9 mg theoretical, 63%). LC-MS m/z 402.5 (M+1).

EXAMPLE 77



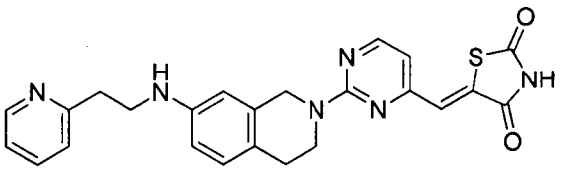
(Z)-5-((2-(4-(((6-fluoroquinolin-2-yl)methyl)amino)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure 6-fluoroquinoline-2-carbaldehyde (5.7 mg, 34.4 mg theoretical, 16.5%). LC-MS m/z 465.5 (M+1).

EXAMPLE 78



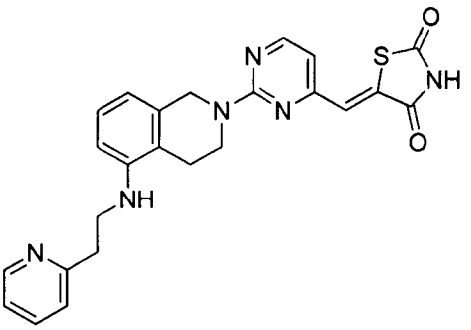
(Z)-5-((2-(4-(((6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 6-(thiophen-3-yl)picolinaldehyde (13.6 mg, 35.4 mg theoretical, 38.4%). LC-MS m/z 479.5 (M+1).

EXAMPLE 79



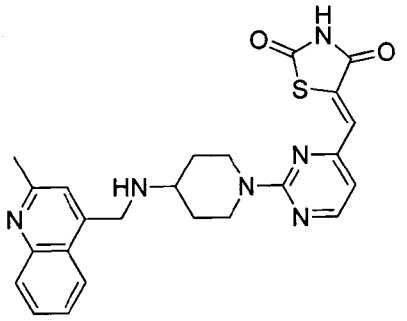
(Z)-5-((2-(7-((2-(pyridin-2-yl)ethyl)amino)-3,4-dihydroisoquinolin-2(1H)-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-(pyridin-2-yl)acetaldehyde (18.6 mg, 32.4 mg theoretical, 57.3%). LC-MS m/z 459.5 (M+1).

EXAMPLE 80



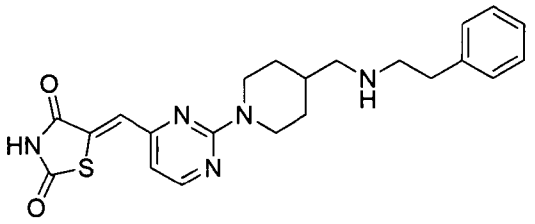
(Z)-5-((2-(5-((2-(pyridin-2-yl)ethyl)amino)-3,4-dihydroisoquinolin-2(1H)-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-(pyridin-2-yl)acetaldehyde (9.3 mg, 32.4 mg theoretical, 28.7%). LC-MS m/z 459.5 (M+1).

EXAMPLE 81



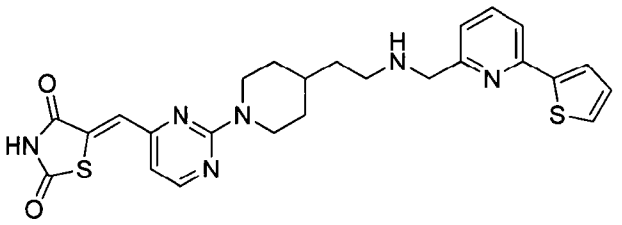
(Z)-5-((2-(4-(((2-methylquinolin-4-yl)methyl)amino)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-methylquinoline-4-carbaldehyde (5.1 mg, 34.1 mg theoretical, 15%). LC-MS m/z 461.5 (M+1).

EXAMPLE 82



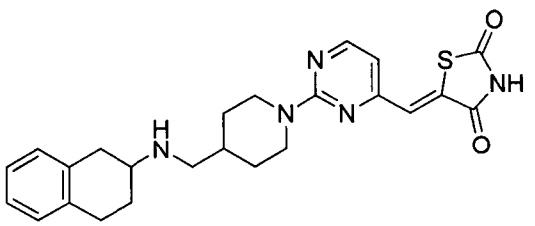
(Z)-5-((2-(4-((phenethylamino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 2-phenylacetaldehyde (9.6 mg, 30.5 mg theoretical, 31.5%). LC-MS m/z 424.5 (M+1).

EXAMPLE 83



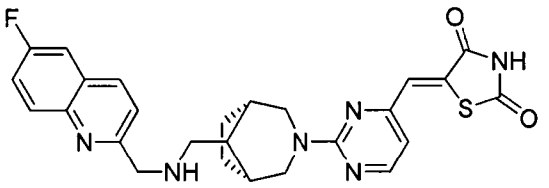
(Z)-5-((2-(4-(2-(((6-(thiophen-2-yl)pyridin-2-yl)methyl)amino)ethyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 6-(thiophen-2-yl)picolinaldehyde (2.6 mg, 35 mg theoretical, 7.4%). LC-MS m/z 507 (M+1).

EXAMPLE 84



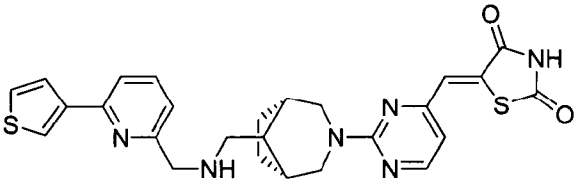
(Z)-5-((2-(4-(((1,2,3,4-tetrahydronaphthalen-2-yl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 3,4-dihydronaphthalen-2(1H)-one (2.0 mg, 32.4 mg theoretical, 6%). LC-MS m/z 450 (M+1).

EXAMPLE 85



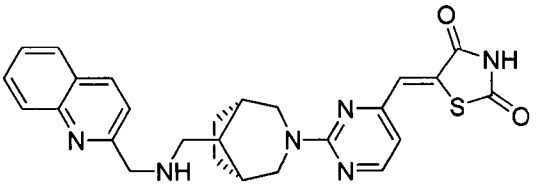
(Z)-5-((2-((1R,5S)-8-((((6-fluoroquinolin-2-yl)methyl)amino)methyl)-3-azabicyclo[3.2.1]octan-3-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 6-fluoroquinoline-2-carbaldehyde (4.7 mg, 33.8 mg theoretical, 13.9%). LC-MS m/z 505.5 (M+1).

EXAMPLE 86



(Z)-5-((2-((1R,5S)-8-((((6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)-3-azabicyclo[3.2.1]octan-3-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 6-(thiophen-2-yl)picolinaldehyde (2.3 mg, 34.7 mg theoretical, 6.6%). LC-MS m/z 519.5 (M+1).

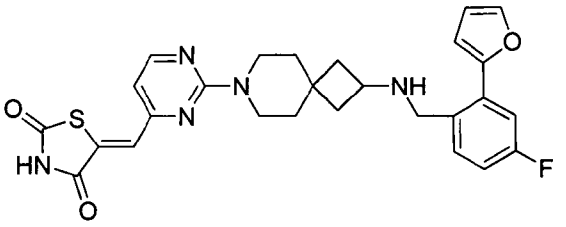
EXAMPLE 87



(Z)-5-((2-((1R,5S)-8-(((quinolin-2-ylmethyl)amino)methyl)-3-azabicyclo[3.2.1]octan-3-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general

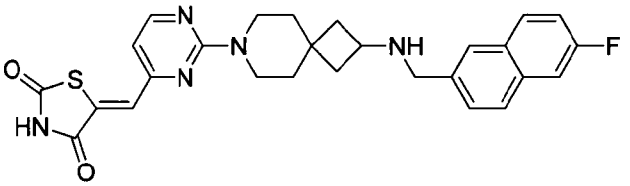
reductive amination procedure and quinoline-2-carbaldehyde (1.4 mg, 32.6 mg theoretical, 4.3%). LC-MS m/z 487.5 (M+1).

EXAMPLE 88



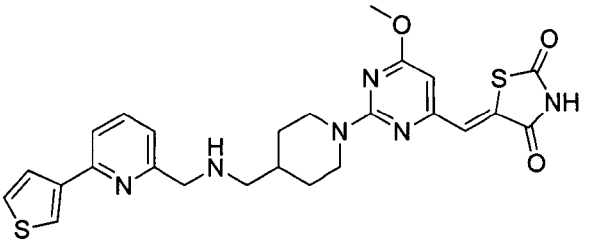
(Z)-5-((2-(2-((4-fluoro-2-(furan-2-yl)benzyl)amino)-7-azaspiro[3.5]nonan-7-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 4-fluoro-2-(furan-2-yl)benzaldehyde (9.1 mg, 34.8 mg theoretical, 26.1%). LC-MS m/z 520.5 (M+1).

EXAMPLE 89



(Z)-5-((2-(2-(((6-fluoronaphthalen-2-yl)methyl)amino)-7-azaspiro[3.5]nonan-7-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and 6-fluoro-2-naphthaldehyde (16.9 mg, 33.7 mg theoretical, 50.1%). LC-MS m/z 504.5 (M+1).

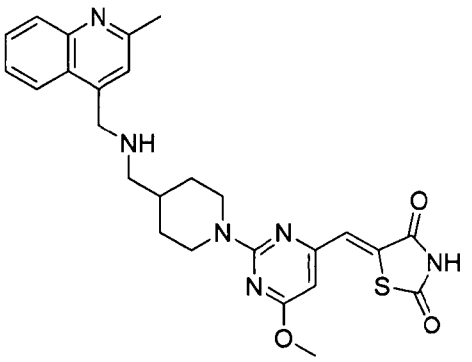
EXAMPLE 90



(Z)-5-((6-methoxy-2-(4-((((6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-

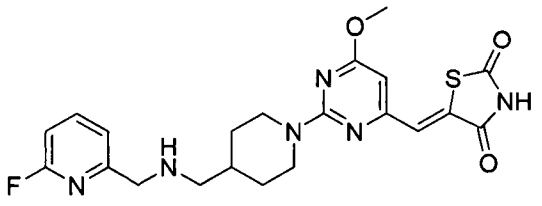
dione was prepared using (Z)-5-((2-(4-(aminomethyl)piperidin-1-yl)-6-methoxypyrimidin-4-yl)methylene)thiazolidine-2,4-dione (Example 153), the general reductive amination procedure and 6-(thiophen-3-yl)picolinaldehyde (34.3 mg, 65 mg theoretical, 52.8%). LC-MS m/z 523 (M+1).

EXAMPLE 91



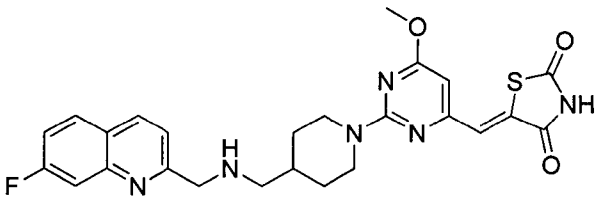
(Z)-5-((6-methoxy-2-(4-((((2-methylquinolin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using (Z)-5-((2-(4-(aminomethyl)piperidin-1-yl)-6-methoxypyrimidin-4-yl)methylene)thiazolidine-2,4-dione (Example 153), the general reductive amination procedure and 2-methylquinoline-4-carbaldehyde (45.8 mg, 63 mg theoretical, 72.2%). LC-MS m/z 505 (M+1).

EXAMPLE 92



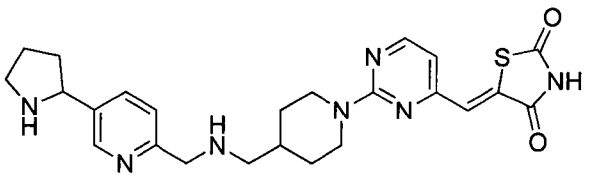
(Z)-5-((2-(4-((((6-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)-6-methoxypyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using (Z)-5-((2-(4-(aminomethyl)piperidin-1-yl)-6-methoxypyrimidin-4-yl)methylene)thiazolidine-2,4-dione (Example 153), the general reductive amination procedure and 6-fluoropicolinaldehyde (26.1 mg, 59 mg theoretical, 43.9%). LC-MS m/z 459 (M+1).

EXAMPLE 93



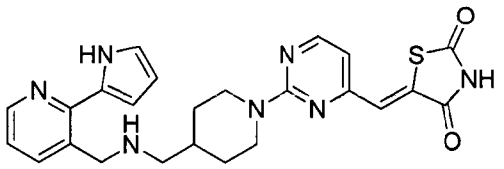
(Z)-5-((6-methoxy-2-(4-(((((6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using (Z)-5-((2-(4-(aminomethyl)piperidin-1-yl)-6-methoxypyrimidin-4-yl)methylene)thiazolidine-2,4-dione (Example 153), the general reductive amination procedure and 7-fluoroquinoline-2-carbaldehyde (15.1 mg, 64 mg theoretical, 23.7%). LC-MS m/z 509 (M+1).

EXAMPLE 94



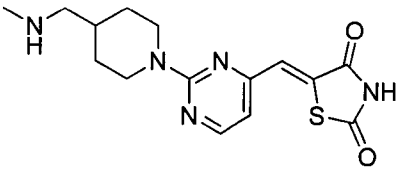
(Z)-5-((2-(4-((((5-(pyrrolidin-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and tert-butyl 2-(6-formylpyridin-3-yl)pyrrolidine-1-carboxylate followed by the general de-protection procedure (29.3 mg, 39.8 mg theoretical, 73.6%). LC-MS m/z 480.6 (M+1).

EXAMPLE 95



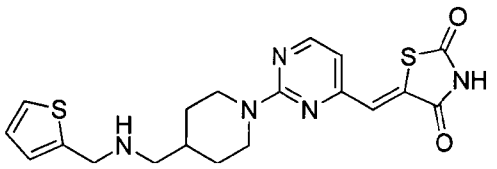
(Z)-5-((2-(4-((((2-(1H-pyrrol-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and tert-butyl 2-(3-formylpyridin-2-yl)-1H-pyrrole-1-carboxylate followed by the general de-protection procedure (16.5 mg, 17.1 mg theoretical, 96%). LC-MS m/z 476.6 (M+1).

EXAMPLE 96



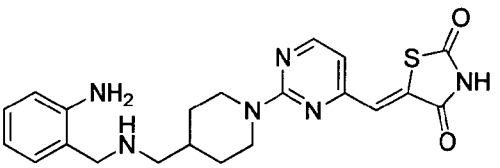
(Z)-5-((2-(4-((methylamino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general displacement procedure and tert-butyl methyl(piperidin-4-ylmethyl)carbamate followed by the general de-protection procedure (28.3 mg, 28.5 mg theoretical, 99%). LC-MS m/z 334.4 (M+1).

EXAMPLE 97



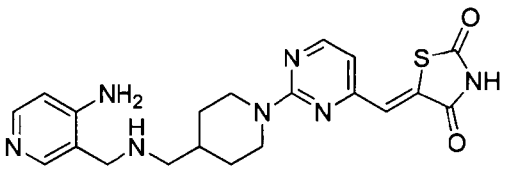
(Z)-5-((2-(4-(((thiophen-2-ylmethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and thiophene-2-carbaldehyde followed by the general de-protection procedure (7.6 mg, 19.9 mg theoretical, 38%). LC-MS m/z 416 (M+1).

EXAMPLE 98



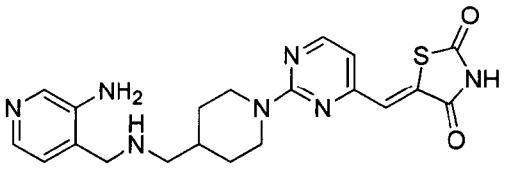
(Z)-5-((2-(4-(((2-aminobenzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and tert-butyl (2-formylphenyl)carbamate followed by the general de-protection procedure (17.4 mg, 18.7 mg theoretical, 93%). LC-MS m/z 425.5 (M+1).

EXAMPLE 99



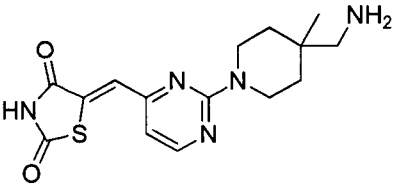
(Z)-5-((2-(4-((((4-aminopyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and tert-butyl (3-formylpyridin-4-yl)carbamate followed by the general de-protection procedure (4.3 mg, 7.3 mg theoretical, 59%). LC-MS m/z 426.5 (M+1).

EXAMPLE 100



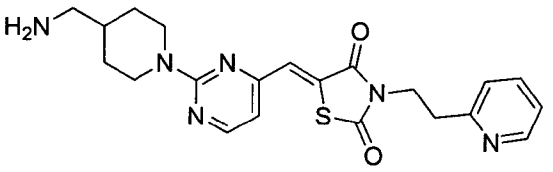
(Z)-5-((2-(4-((((3-aminopyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and tert-butyl (4-formylpyridin-3-yl)carbamate followed by the general de-protection procedure (11.5 mg, 15.3 mg theoretical, 75%). LC-MS m/z 426.5 (M+1).

EXAMPLE 101



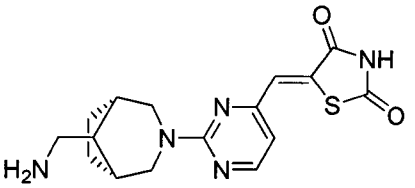
(Z)-5-((2-(4-(aminomethyl)-4-methylpiperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and tert-butyl ((4-methylpiperidin-4-yl)methyl)carbamate followed by the general de-protection procedure (29.9 mg, 168 mg theoretical, 17.8%). LC-MS m/z 334 (M+1).

EXAMPLE 102



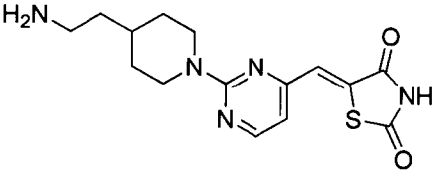
(Z)-5-((6-(4-(aminomethyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure, (Z)-5-((2-(methylsulfonyl)pyrimidin-4-yl)methylene)-3-(2-(pyridin-2-yl)ethyl)thiazolidine-2,4-dione, and tert-butyl (piperidin-4-ylmethyl)carbamate followed by the general de-protection procedure (16 mg, 30.6 mg theoretical, 52.3%). LC-MS m/z 425.5 (M+1).

EXAMPLE 103



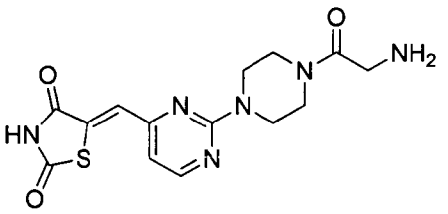
(Z)-5-((2-((1R,5S)-8-(aminomethyl)-3-azabicyclo[3.2.1]octan-3-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and tert-butyl ((1R,5S)-3-azabicyclo[3.2.1]octan-8-ylmethyl)carbamate followed by the general de-protection procedure (15.1 mg, 17.1 mg theoretical, 89%). LC-MS m/z 346 (M+1).

EXAMPLE 104



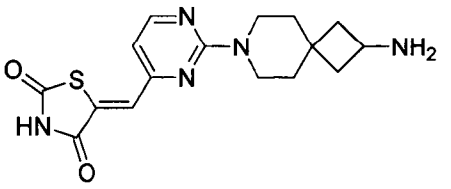
(Z)-5-((2-(4-(2-aminoethyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and tert-butyl (2-(piperidin-4-yl)ethyl)carbamate followed by the general de-protection procedure (6.8 mg, 23.1 mg theoretical, 29.5%). LC-MS m/z 334 (M+1).

EXAMPLE 105



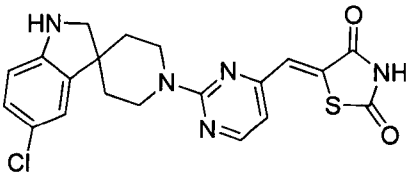
(Z)-5-((2-(4-(2-aminoacetyl)piperazin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and tert-butyl (2-oxo-2-(piperazin-1-yl)ethyl)carbamate followed by the general de-protection procedure (3.9 mg, 26.5 mg theoretical, 15%). LC-MS m/z 348 (M+1).

EXAMPLE 106



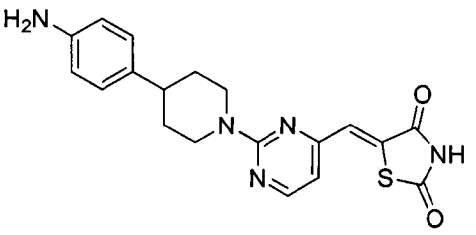
(Z)-5-((2-(2-amino-7-azaspiro[3.5]nonan-7-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general reductive amination procedure and tert-butyl 7-azaspiro[3.5]nonan-2-ylcarbamate followed by the general de-protection procedure (17.2 mg, 11.6 mg theoretical, 148%). LC-MS m/z 346 (M+1).

EXAMPLE 107



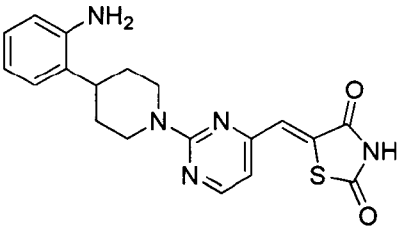
(Z)-5-((2-(5-chlorospiro[indoline-3,4'-piperidin]-1'-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general displacement procedure and 5-chlorospiro[indoline-3,4'-piperidine] (9.1 mg, 27.1 mg theoretical, 33.6%). LC-MS m/z 428 (M+1).

EXAMPLE 108



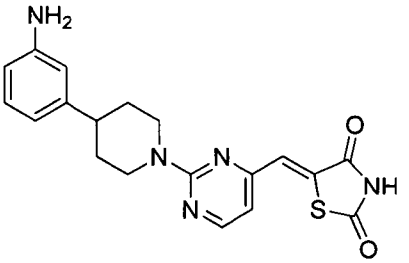
(Z)-5-((2-(4-(4-aminophenyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general displacement procedure and 4-(piperidin-4-yl)aniline (10.2 mg, 40.1 mg theoretical, 25.4%). LC-MS m/z 382 (M+1).

EXAMPLE 109



(Z)-5-((2-(4-(2-aminophenyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general displacement procedure and 2-(piperidin-4-yl)aniline (24 mg, 40.1 mg theoretical, 59.8%). LC-MS m/z 382 (M+1).

EXAMPLE 110



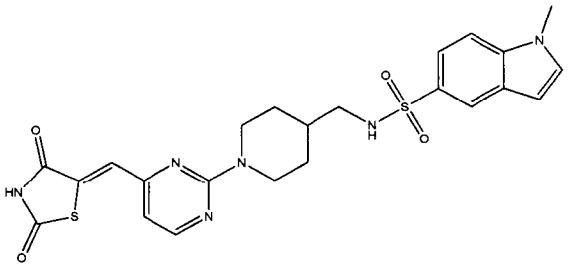
(Z)-5-((2-(4-(2-aminophenyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the general displacement procedure and 3-(piperidin-4-yl)aniline (19.7 mg, 40.1 mg theoretical, 49.1%). LC-MS m/z 382 (M+1).

EXAMPLE 111

Synthesized Sulfonamide Analogs

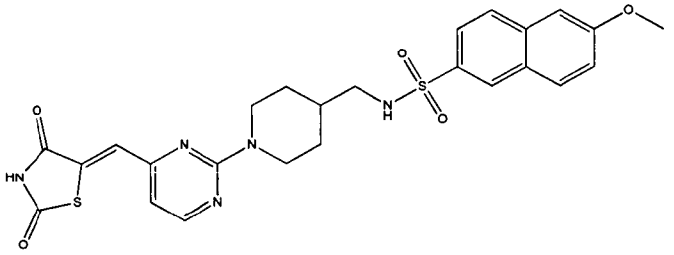
General Procedure for the Preparation of Sulfonamides/Amides A 2-dram round-bottomed vial was charged with the appropriate sulfonyl chloride (0.072 mmol, 1 equiv.) in 0.5 mL of DMF, and then treated carefully with a solution of (Z)-5-((2-(4-(aminomethyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione, prepared using the general displacement procedure followed by the general de-protection procedure, (0.072 mmol, 1 equiv.), DIPEA (0.288 mmol, 4 equiv.), and 1 mL of DMF. The reaction mixture was then shaken at room temperature overnight. The reaction mixture was partitioned between 2 mL DCE and 1 mL sat. $NaHCO_3$ and the aqueous layer was extracted with DCE (2 x 2 mL). The combined organic layer was the concentrated under reduced pressure (Genevac HT-4) and the crude residue was purified using reverse phase HPLC (MS-triggered fraction collection) with an acetonitrile/water or methanol/water gradient and trifluoroacetic acid as the modifier. The pure fractions were then concentrated under reduced pressure (Genevac HT-4) to afford the sulfonamide analogs.

EXAMPLE 112



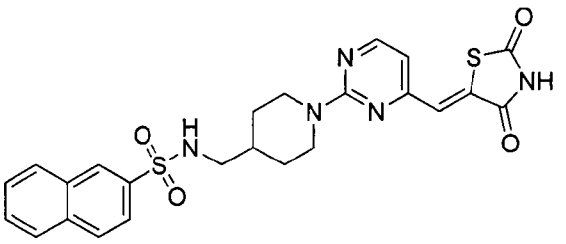
(Z)-N-((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)-1-methyl-1H-indole-5-sulfonamide was prepared using General Procedure for the Preparation of Sulfonamides and 1-methyl-1H-indole-5-sulfonyl chloride (13.2 mg, 36.9 mg theoretical, 35.8%). LC-MS m/z 513.6 (M+1).

EXAMPLE 113



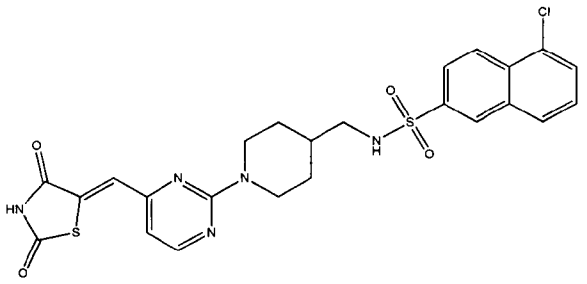
(Z)-N-((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)-6-methoxynaphthalene-2-sulfonamide was prepared using General Procedure for the Preparation of Sulfonamides and 6-methoxynaphthalene-2-sulfonyl chloride (15.2 mg, 38.9 mg theoretical, 39.1%). LC-MS m/z 540.6 (M+1).

EXAMPLE 114



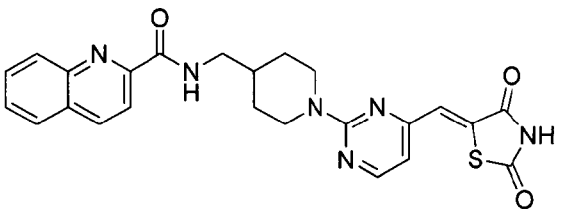
(Z)-N-((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)naphthalene-2-sulfonamide was prepared using General Procedure for the Preparation of Sulfonamides naphthalene-2-sulfonyl chloride (7.7 mg, 36.7 mg theoretical, 20.9%). LC-MS m/z 510.6 (M+1).

EXAMPLE 115



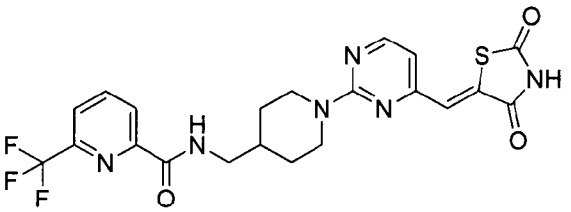
(Z)-5-chloro-N-((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)naphthalene-2-sulfonamide was prepared using General Procedure for the Preparation of Sulfonamides and 5-chloronaphthalene-2-sulfonyl chloride (9.2 mg, 39.2 mg theoretical, 23.4%). LC-MS m/z 545.0 (M+1).

EXAMPLE 116



(Z)-N-((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)quinoline-2-carboxamide was prepared using General Procedure for the Preparation of Sulfonamides/Amides and quinoline-2-carbonyl chloride (8.9 mg, 34.2 mg theoretical, 26%). LC-MS m/z 475 (M+1).

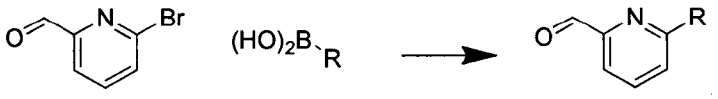
EXAMPLE 117



(Z)-N-((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)-6-(trifluoromethyl)picolinamide was prepared using General Procedure for the Preparation of Sulfonamides/Amides and 6-(trifluoromethyl)picolinoyl chloride (15.7 mg, 35.5 mg theoretical, 44.3%). LC-MS m/z 493 (M+1).

EXAMPLE 118

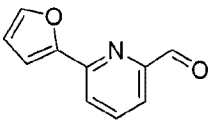
General Boronic Acid Coupling Procedures



A 2-dram round-bottomed vial was charged with 6-bromopicolinaldehyde (100 mg, 0.538 mmol) and the boronic acid (0.538 mmol, 1 equiv.) were added in THF (2 mL). Then 2 M Na_2CO_3 (0.403 mL, 0.806 mmol, 1.5 equiv.) and $Pd(Ph_3P)_4$ (31.0 mg, 0.027 mmol, 0.05 equiv.) were added and shaken at 85°C overnight. The solvent was removed in the Genevac and the residue was washed with saturated $NaHCO_3$ (1 mL). The aqueous layer was extracted with EtOAc (3 x 1 mL). The combined organic layers were dried on the Genevac and the crude was purified using flash purification with a gradient of 5-40%

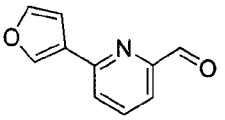
EtOAc in hexane.

EXAMPLE 119



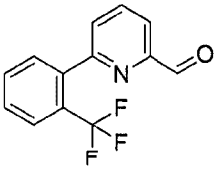
6-(furan-2-yl)picolinaldehyde was prepared using the general boronic acid coupling procedure for 6-bromopicolinaldehyde and furan-2-ylboronic acid (60 mg, 93.2 mg theoretical, 64.4%). LC-MS m/z 174.2 (M+1).

EXAMPLE 120



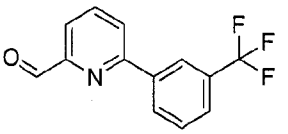
6-(furan-3-yl)picolinaldehyde was prepared using the general boronic acid coupling procedure for 6-bromopicolinaldehyde and furan-3-ylboronic acid (65 mg, 93.2 mg theoretical, 69.8%). LC-MS m/z 174.2 (M+1).

EXAMPLE 121



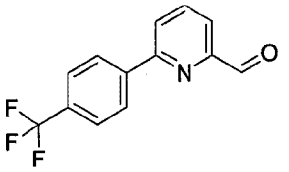
6-(2-(trifluoromethyl)phenyl)picolinaldehyde was prepared using the general boronic acid coupling procedure for 6-bromopicolinaldehyde and (2-(trifluoromethyl)phenyl)boronic acid (43.5 mg, 135.1 mg theoretical, 32.2%). LC-MS m/z 252.2 (M+1).

EXAMPLE 122



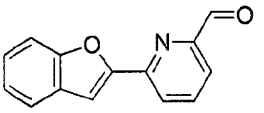
6-(3-(trifluoromethyl)phenyl)picolinaldehyde was prepared using the general boronic acid coupling procedure for 6-bromopicolinaldehyde and (3-(trifluoromethyl)phenyl)boronic acid (115 mg, 135.1 mg theoretical, 85.1%). LC-MS m/z 252.2 (M+1).

EXAMPLE 123



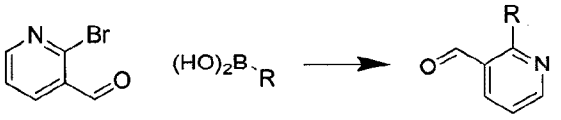
6-(4-(trifluoromethyl)phenyl)picolinaldehyde was prepared using the general boronic acid coupling procedure for 6-bromopicolinaldehyde and (4-(trifluoromethyl)phenyl)boronic acid (79 mg, 135.1 mg theoretical, 58.5%). LC-MS m/z 252.2 (M+1).

EXAMPLE 124



6-(benzofuran-2-yl)picolinaldehyde was prepared using the general boronic acid coupling procedure for 6-bromopicolinaldehyde and benzofuran-2-ylboronic acid (41 mg, 120.1 mg theoretical, 34.1%). LC-MS m/z 224.2 (M+1).

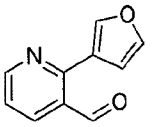
EXAMPLE 125



A 2-dram round-bottomed vial was charged with 2-bromonicotinaldehyde (100 mg, 0.538 mmol) and the boronic acid (0.538 mmol, 1 equiv.) were added in THF (2 mL). Then 2M Na_2CO_3 (0.403 mL, 0.806 mmol, 1.5 equiv.) and $Pd(Ph_3P)_4$ (31.0 mg, 0.027 mmol, 0.05 equiv.) were added and shaken at 85°C overnight. The solvent was removed in the Genevac and the residue was washed with saturated $NaHCO_3$ (1 mL). The aqueous layer was extracted with EtOAc (3 x 1 mL). The combined organic layers were dried on the

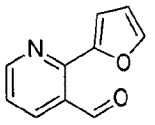
Genevac and the crude was purified using flash purification with a gradient of 5-40% EtOAc in hexane.

EXAMPLE 126



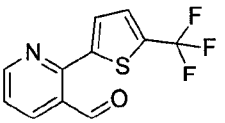
2-(furan-3-yl)nicotinaldehyde was prepared using the general boronic acid coupling procedure for 2-bromonicotinaldehyde and furan-3-ylboronic acid (40 mg, 93.2 mg theoretical, 42.9%). LC-MS m/z 174.2 (M+1).

EXAMPLE 127



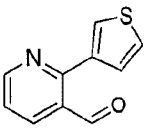
2-(furan-2-yl)nicotinaldehyde was prepared using the general boronic acid coupling procedure for 2-bromonicotinaldehyde and furan-2-ylboronic acid (38 mg, 93.2 mg theoretical, 40.8%). LC-MS m/z 174.2 (M+1).

EXAMPLE 128



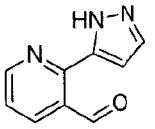
2-(5-(trifluoromethyl)thiophen-2-yl)nicotinaldehyde was prepared using the general boronic acid coupling procedure for 2-bromonicotinaldehyde and (5-(trifluoromethyl)thiophen-2-yl)boronic acid (47.7 mg, 62.3 mg theoretical, 76.6%). LC-MS m/z 258.2 (M+1).

EXAMPLE 129



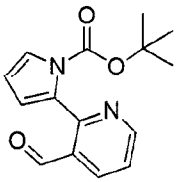
2-(thiophen-3-yl)nicotinaldehyde was prepared using the general boronic acid coupling procedure for 2-bromonicotinaldehyde and thiophen-3-ylboronic acid (60 mg, 101.8 mg theoretical, 58.9%). LC-MS m/z 190.2 (M+1).

EXAMPLE 130



2-(1H-pyrazol-5-yl)nicotinaldehyde was prepared using the general boronic acid coupling procedure for 2-bromonicotinaldehyde and (1H-pyrazol-5-yl)boronic acid (60 mg, 93.2 mg theoretical, 64.4%). LC-MS m/z 174.2 (M+1).

EXAMPLE 131

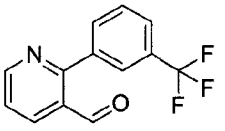


tert-butyl 2-(3-formylpyridin-2-yl)-1H-pyrrole-1-carboxylate was prepared using the general boronic acid coupling procedure for 2-bromonicotinaldehyde and (1-(tert-butoxycarbonyl)-1H-pyrrol-2-yl)boronic acid (66 mg, 146.5 mg theoretical, 45.1%). LC-MS m/z 273.3 (M+1).

EXAMPLE 132

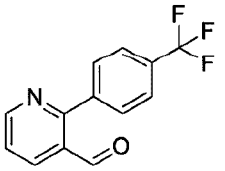
2-(2-(trifluoromethyl)phenyl)nicotinaldehyde was prepared using the general boronic acid coupling procedure for 2-bromonicotinaldehyde and (2-(trifluoromethyl)phenyl)boronic acid (40 mg, 93.2 mg theoretical, 42.9%). LC-MS m/z 252.2 (M+1).

EXAMPLE 133



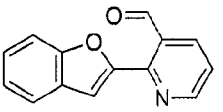
2-(3-(trifluoromethyl)phenyl)nicotinaldehyde was prepared using the general boronic acid coupling procedure for 2-bromonicotinaldehyde and (3-(trifluoromethyl)phenyl)boronic acid (100 mg, 135.1 mg theoretical, 74%). LC-MS m/z 252.2 (M+1).

EXAMPLE 134



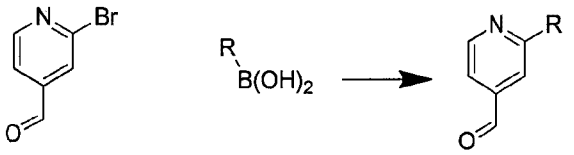
2-(4-(trifluoromethyl)phenyl)nicotinaldehyde was prepared using the general boronic acid coupling procedure for 2-bromonicotinaldehyde and (4-(trifluoromethyl)phenyl)boronic acid (93.8 mg, 135.1 mg theoretical, 69.4%). LC-MS m/z 252.2 (M+1).

EXAMPLE 135



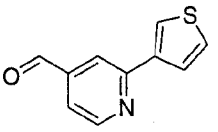
2-(benzofuran-2-yl)nicotinaldehyde was prepared using the general boronic acid coupling procedure for 2-bromonicotinaldehyde and benzofuran-2-ylboronic acid (72 mg, 120.1 mg theoretical, 60%). LC-MS m/z 224.2 (M+1).

EXAMPLE 136



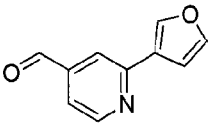
A 2-dram round-bottomed vial was charged with 2-bromoisonicotinaldehyde (100 mg, 0.538 mmol) and the boronic acid (0.538 mmol, 1 equiv.) were added in THF (2 mL). Then 2M Na_2CO_3 (0.403 mL, 0.806 mmol, 1.5equiv.) and $Pd(Ph_3P)_4$ (31.0 mg, 0.027 mmol, 0.05 equiv.) were added and shaken at 85°C overnight. The solvent was removed in the Genevac and the residue was washed with saturated $NaHCO_3$ (1 mL). The aqueous layer was extracted with EtOAc (3 x 1 mL). The combined organic layers were dried on the Genevac and the crude was purified using flash purification with a gradient of 5-40% EtOAc in hexane.

EXAMPLE 137



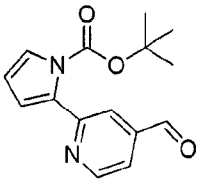
2-(thiophen-3-yl)isonicotinaldehyde was prepared using the general boronic acid coupling procedure for 2-bromoisonicotinaldehyde and thiophen-3-ylboronic acid (89 mg, 101.8 mg theoretical, 87.4%). LC-MS m/z 190.2 (M+1).

EXAMPLE 138



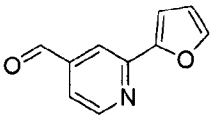
2-(furan-3-yl)isonicotinaldehyde was prepared using the general boronic acid coupling procedure for 2-bromoisonicotinaldehyde and furan-3-ylboronic acid (67 mg, 93.2 mg theoretical, 61.2%). LC-MS m/z 174.2 (M+1).

EXAMPLE 139



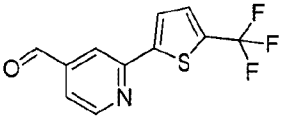
tert-butyl 2-(4-formylpyridin-2-yl)-1H-pyrrole-1-carboxylate was prepared using the general boronic acid coupling procedure for 2-bromoisonicotinaldehyde and (1-(tert-butoxycarbonyl)-1H-pyrrol-2-yl)boronic acid (56 mg, 146.5 mg theoretical, 38.2%). LC-MS m/z 273.3 (M+1).

EXAMPLE 140



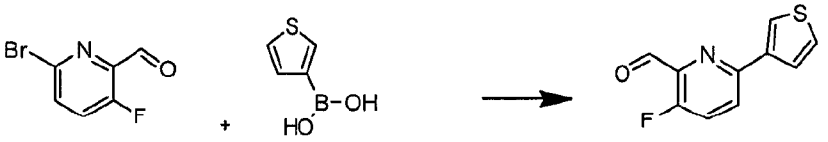
2-(furan-2-yl)isonicotinaldehyde was prepared using the general boronic acid coupling procedure for 2-bromoisonicotinaldehyde and furan-2-ylboronic acid (39.6 mg, 93.2 mg theoretical, 42.5%). LC-MS m/z 174.2 (M+1).

EXAMPLE 141



2-(5-(trifluoromethyl)thiophen-2-yl)isonicotinaldehyde was prepared using the general boronic acid coupling procedure for 2-bromoisonicotinaldehyde and (5-(trifluoromethyl)thiophen-2-yl)boronic acid (29.4 mg, 62.3 mg theoretical, 47.2%). LC-MS m/z 258.2 (M+1).

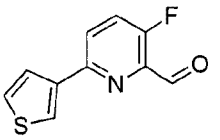
EXAMPLE 142



A 2-dram round-bottomed vial was charged with 6-bromo-3-fluoropicolinaldehyde (100 mg, 0.490 mmol) and thiophen-3-ylboronic acid (62.7 mg, 0.490 mmol, 1 equiv.) were added in THF (2 mL). Then 2 M Na_2CO_3 (0.368 mL, 0.735 mmol, 1.5 equiv.) and $Pd(Ph_3P)_4$ (28.3 mg, 0.025 mmol, 0.05 equiv.) were added and shaken at 85°C overnight. The solvent was removed in the Genevac and the residue was washed with saturated $NaHCO_3$ (1 mL). The aqueous layer was extracted with EtOAc (3 x 1 mL). The combined organic layers were dried on the Genevac and the crude was purified using flash

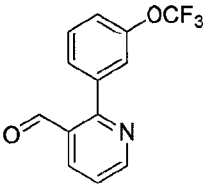
purification with a gradient of 5-40% EtOAc in hexane.

EXAMPLE 143



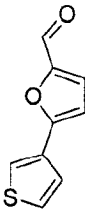
3-fluoro-6-(thiophen-3-yl)picolinaldehyde was prepared using the general boronic acid coupling procedure for 6-bromo-3-fluoropicolinaldehyde and thiophen-3-ylboronic acid (80.5 mg, 101.5 mg theoretical, 79.3%). LC-MS m/z 208.2 (M+1).

EXAMPLE 144



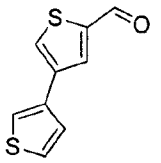
2-(3-(trifluoromethoxy)phenyl)nicotinaldehyde was prepared using the general boronic acid coupling procedure with 2-bromonicotinaldehyde and (3-(trifluoromethoxy)phenyl)boronic acid (101 mg, 144 mg theoretical, 70.1%). LC-MS m/z 268 (M+1).

EXAMPLE 145



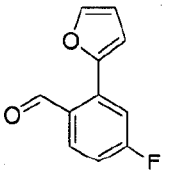
2-(3-(trifluoromethoxy)phenyl)nicotinaldehyde was prepared using the general boronic acid coupling procedure with 5-bromofuran-2-carbaldehyde and thiophen-3-ylboronic acid (68 mg, 102 mg theoretical, 66.7%). LC-MS m/z 179 (M+1).

EXAMPLE 146



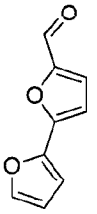
[3,3'-bithiophene]-5-carbaldehyde was prepared using the general boronic acid coupling procedure with 4-bromothiophene-2-carbaldehyde and thiophen-3-ylboronic acid (56 mg, 102 mg theoretical, 54.9%). LC-MS m/z 195 (M+1).

EXAMPLE 147



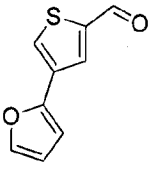
4-fluoro-2-(furan-2-yl)benzaldehyde was prepared using the general boronic acid coupling procedure with 2-bromo-4-fluorobenzaldehyde and furan-2-ylboronic acid (20 mg, 94 mg theoretical, 21.3%). LC-MS m/z 191 (M+1).

EXAMPLE 148



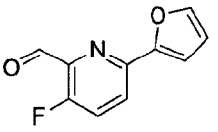
[2,2'-bifuran]-5-carbaldehyde was prepared using the general boronic acid coupling procedure with 5-bromofuran-2-carbaldehyde and furan-2-ylboronic acid (24 mg, 93 mg theoretical, 25.8%). LC-MS m/z 163 (M+1).

EXAMPLE 149



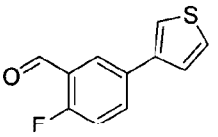
4-(furan-2-yl)thiophene-2-carbaldehyde was prepared using the general boronic acid coupling procedure with 4-bromothiophene-2-carbaldehyde and furan-2-ylboronic acid (26 mg, 93 mg theoretical, 28.0%). LC-MS m/z 179 (M+1).

EXAMPLE 150



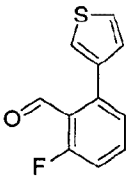
3-fluoro-6-(furan-2-yl)picolinaldehyde was prepared using the general boronic acid coupling procedure with 6-bromo-3-fluoropicolinaldehyde and furan-2-ylboronic acid (41 mg, 94 mg theoretical, 43.6%). LC-MS m/z 192 (M+1).

EXAMPLE 151



2-fluoro-5-(thiophen-3-yl)benzaldehyde was prepared using the general boronic acid coupling procedure with 5-bromo-2-fluorobenzaldehyde and thiophen-3-ylboronic acid (27 mg, 102 mg theoretical, 26.5%). LC-MS m/z 207 (M+1).

EXAMPLE 152

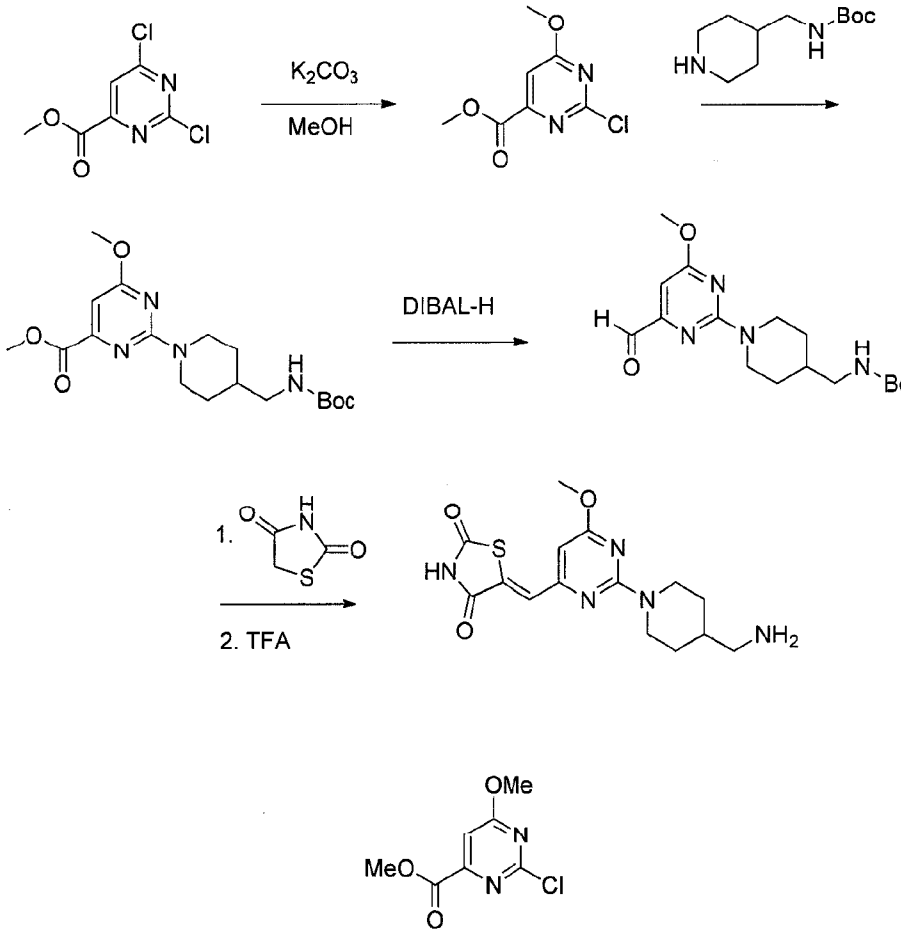


2-fluoro-6-(thiophen-3-yl)benzaldehyde was prepared using the boronic acid coupling procedure with 2-bromo-6-fluorobenzaldehyde and thiophen-3-ylboronic acid (66 mg, 102 mg theoretical, 64.7%). LC-MS m/z 207 (M+1).

EXAMPLE 153

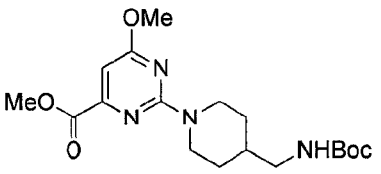
Preparation of Methoxyaminopyrimidine Intermediate

(Z)-5-((2-(4-(aminomethyl)piperidin-1-yl)-6-methoxypyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared as follows.



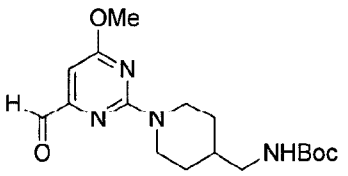
Methyl 2-chloro-6-methoxypyrimidine-4-carboxylate

A 30 mL round-bottomed vial was charged with methyl 2,6-dichloropyrimidine-4-carboxylate (0.6 g, 2.9 mmol, 1 equiv.), methanol (6 mL, 0.97 M), K_2CO_3 (0.401 g, 2.9 mmol, 1 equiv.), and the reaction mixture was shaken at 65°C for 1.5 h. The solvent was concentrated under reduced pressure and the residue was partitioned between EtOAc (25 mL) and H_2O (25 mL) and the water layer was extracted with EtOAc (2 x 20 mL). The combined organic layer was dried over Na_2SO_4 and concentrated under reduced pressure to provide the crude chloropyrimidine (441 mg, 588 mg theoretical, 75%), which was used in the next step without further purification.



Methyl 2-(4-(((tert-butoxycarbonyl)amino)methyl)piperidin-1-yl)-6-methoxypyrimidine-4-carboxylate

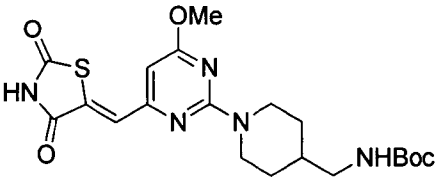
An 8 mL round-bottomed vial was charged with the 2-chloropyrimidine (150 mg, 0.74 mmol, 1.5 equiv.), methanol (1.5 mL, 0.49 M), tert-Butyl (piperidin-4-ylmethyl)carbamate (159 mg, 0.49 mmol, 1 equiv.), DIPEA (258 μL, 0.99 mmol, 2 equiv.), and the reaction mixture was shaken at 65°C for 3 h. The solvent was concentrated under reduced pressure and the residue was partitioned between EtOAc (25 mL) and saturated $NaHCO_3$ (10 mL). The organic layer was dried over Na_2SO_4 and dried under reduced pressure to provide the crude product. Purification using the Biotage (SiO_2, 10 g cartridge, Hexanes/EtOAc 95:5 to 40:60) afforded the desired pyrimidine intermediate as a white solid (219 mg, 281 mg theoretical, 78%).



tert-Butyl ((1-(4-formyl-6-methoxypyrimidin-2-yl)piperidin-4-yl)methyl)carbamate

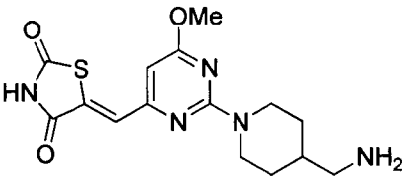
A 50 mL 2-neck round-bottomed flask was charged with the methyl ester intermediate (150 mg, 0.39 mmol, 1 equiv.), CH_2Cl_2 (2 mL, 0.195 M), and then DIBAL-H 1 M in CH_2Cl_2 (0.59 mL, 0.59 mmol, 1.5 equiv.) was added over a 4 minute period at -78°C. The reaction was then stirred for 1.5 h at -78°C and for 1.5 h between -78°C and RT. LC-MS showed mostly starting material so the reaction mixture was re-cooled to -78°C and DIBAL-H (0.8 mL, 0.8 mmol, 2 equiv.) was added. LC-MS showed mostly starting material. The reaction mixture was stored at -20°C for 3 d. The reaction mixture was cooled to -78°C and treated with 1 M DIBAL-H in hexanes (0.59 mL, 0.59 mmol, 1 equiv.) over a 5 min. period, which produced a white precipitate. After 2.5 h, another equivalent of DiBAL-H (1 M in Hexanes, 0.59 mL) was added over a 15 min. period at -78°C. The reaction was quenched at -78°C after 35 min. with methanol (1 mL). The solvent were

concentrated under reduced pressure and the residue was partitioned between CH_2Cl_2 (20 mL) and saturated $NaHCO_3$ (20 mL). The organic layer was dried over Na_2SO_4 and the solvent was concentrated under reduced pressure to provide the crude product, which was used in the next step without further purification.



(Z)-tert-Butyl ((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)-6-methoxypyrimidin-2-yl)piperidin-4-yl)methyl)carbamate

An 8 mL round-bottomed vial was charged with the crude aldehyde (0.2 mmol, estimated), ethanol (2 mL), thiazolidine-2,4-dione (23 mg, 0.2 mmol, 1 equiv.), triethylamine (56 μL, 0.4 mmol, 2 equiv.), purged with Ar, and the reaction mixture was shaken at 80°C for 24 h. The crude mixture was purified using the Biotage (SiO_2, 10 g cartridge, CH_2Cl_2/MeOH 99:1 to 94:6) afforded 113 mg of the partially purified product. The sample was re-purified using reverse phase HPLC (methanol/water 10-90%, 0.4% TFA, 3 equal injections) provided the pure product as a TFA salt (47.3 mg, 225 mg theoretical, 21%). LC-MS m/z 450 (M+1).

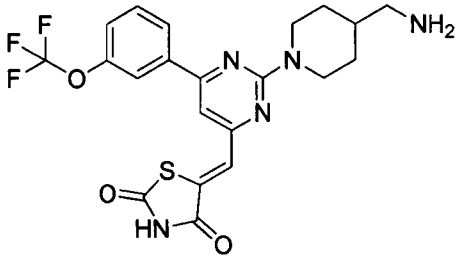


(Z)-5-((2-(4-(aminomethyl)piperidin-1-yl)-6-methoxypyrimidin-4-yl)methylene)thiazolidine-2,4-dione

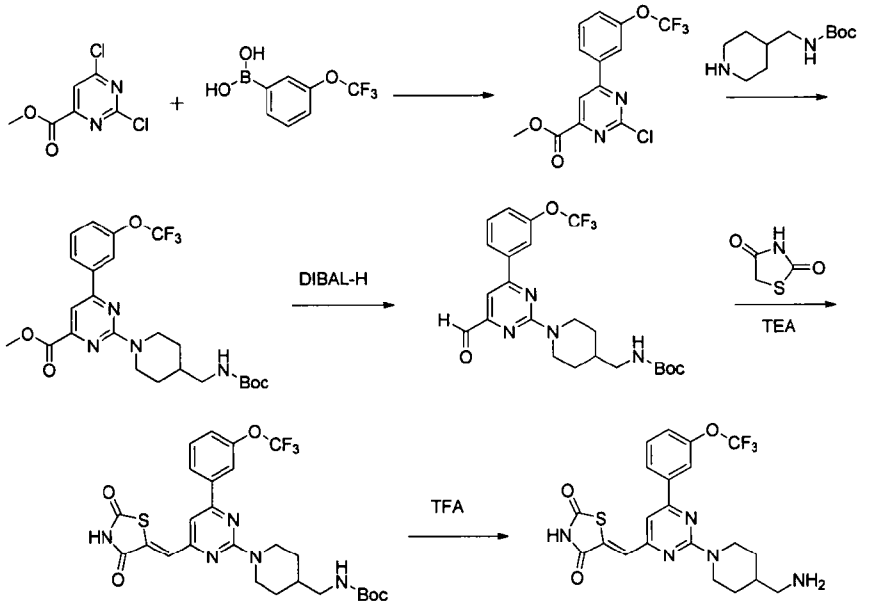
An 8 mL round-bottomed vial was charged with the MeO-pyrimidine boc protected amine (47.3 mg, 105 μmol, 1 equiv.), CH_2Cl_2 (1.3 mL, 0.08 M), TFA (0.5 mL, 6.5 mmol, 62 equiv.), and the reaction mixture was stirred for 1 h at RT. The solvents were concentrated under reduced pressure and the residue was re-dissolved in DMSO (0.9 mL) and purified by reverse phase HPLC (methanol/water with 0.4% TFA, 10-90 % method, 2 injections of 500 μL) to provide (Z)-5-((2-(4-(aminomethyl)piperidin-1-yl)-6-

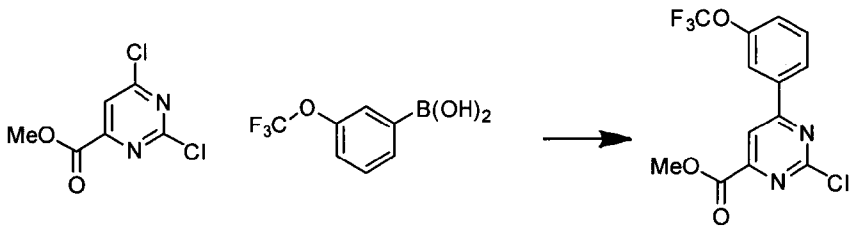
methoxypyrimidin-4-yl)methylene)thiazolidine-2,4-dione as the TFA salt (43.9 mg, 48.8 mg theoretical, 90%). LC-MS m/z 350.1 (M+1).

EXAMPLE 154



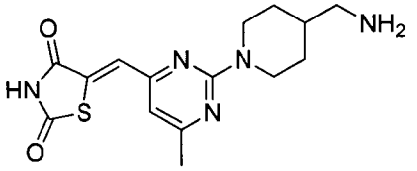
(Z)-5-((6-methoxy-2-(4-((((6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione (4.1 mg, 5.9 mg theoretical, 69%) LC-MS m/z 480 (M+1), was prepared according to the following synthetic scheme using the general boronic acid coupling conditions and other methods similar to those used in the preparation of **(Z)-5-((2-(4-aminomethyl)piperidin-1-yl)-6-methoxypyrimidin-4-yl)methylene)thiazolidine-2,4-dione.**



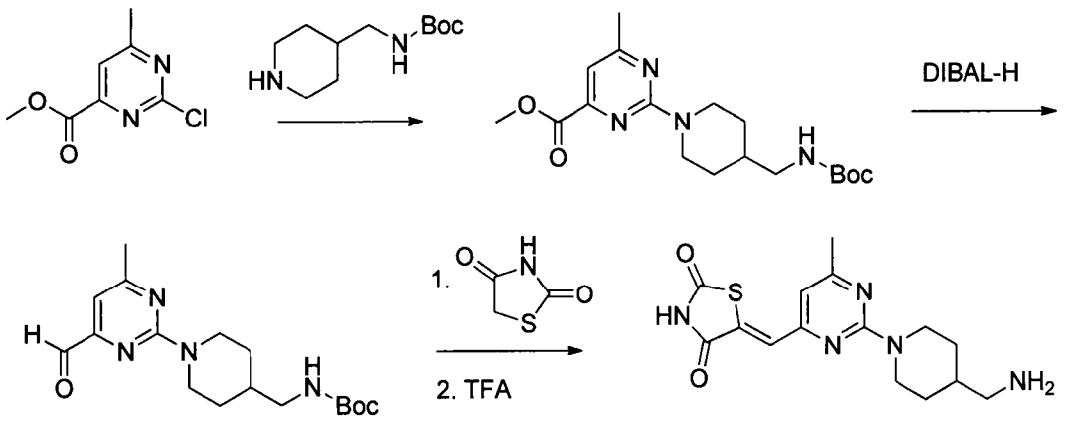


General boronic acid coupling conditions for the first step: A 2-dram round-bottom vial was charged with methyl 2,6-dichloropyrimidine-4-carboxylate (100 mg, 0.483 mmol) and (3-(trifluoromethoxy)phenyl)boronic acid (80 mg, 0.386 mmol, 0.8 equiv) were added in THF (2 mL). Then 2M Na_2CO_3 (0.362 mL, 0.725 mmol, 1.5 equiv) and Pd(tetrakis)Ph_3P (27.9 mg, 0.024 mmol, 0.05 equiv) were added and shaken at 85°C overnight. The solvent was removed in the Genevac and the residue was washed with saturated $NaHCO_3$ (1 mL). The aqueous layer was extracted with EtOAc (3 x 1 mL). The combined organic layers were dried on the Genevac and the crude was purified using flash purification with a gradient of 5-40% EtOAc in hexane to provide methyl 2-chloro-6-(3-(trifluoromethoxy)phenyl)pyrimidine-4-carboxylate.

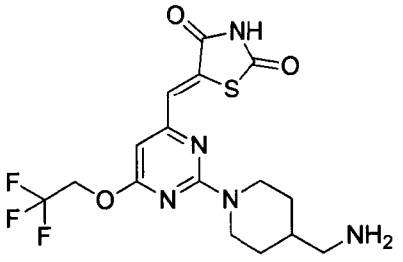
EXAMPLE 155



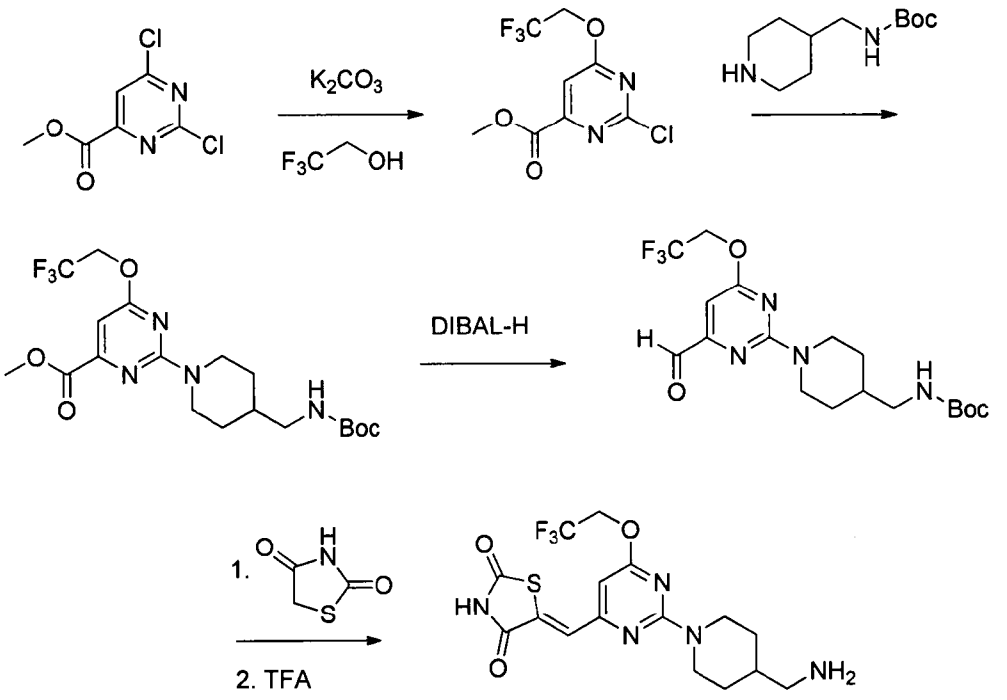
(Z)-5-((6-methoxy-2-(4-((((6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione (292 mg, 360 mg theoretical, 81%) LC-MS m/z 334 (M+1), was prepared according to the following synthetic scheme using methods similar to those used in the preparation of (Z)-5-((2-(4-(aminomethyl)piperidin-1-yl)-6-methoxypyrimidin-4-yl)methylene)thiazolidine-2,4-dione (Example 153):



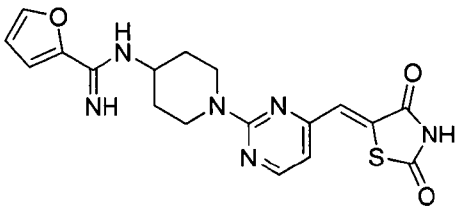
EXAMPLE 156



(Z)-5-((2-(4-(aminomethyl)piperidin-1-yl)-6-(2,2,2-trifluoroethoxy)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione (203 mg, 236 mg theoretical, 86%) LC-MS m/z 418 (M+1), was prepared according to the following synthetic scheme using methods similar to those used in the preparation of (Z)-5-((2-(4-(aminomethyl)piperidin-1-yl)-6-methoxypyrimidin-4-yl)methylene)thiazolidine-2,4-dione (Example 153).

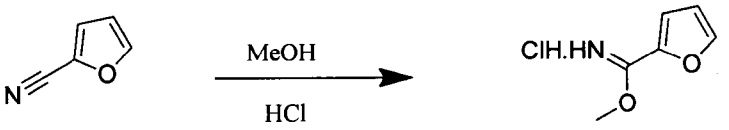


EXAMPLE 157



(Z)-N-(1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)furan-2-carboximidamide was prepared using the following procedure (16.6 mg, 29.5 mg theoretical, 56.3%). LC-MS m/z 399.1 (M+1).

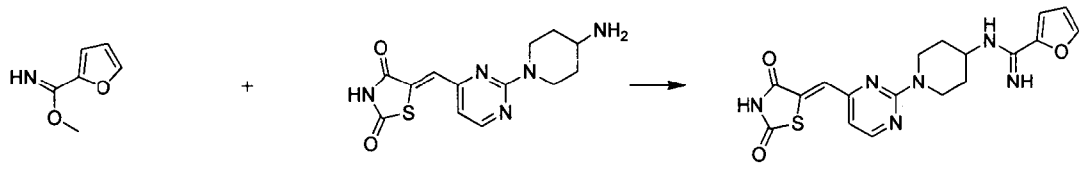
Step 1.



A 30 mL RB-vial was charged with furan-2-carbonitrile (25 mg, 0.269 mmol), methanol (300 µL, 0.269 mmol), and hydrogen chloride (2 mL, 8.00 mmol) in 4 M in dioxane (Volume: 1 mL) to a 2-dram vial and allowed to shake at RT for 24 h. The

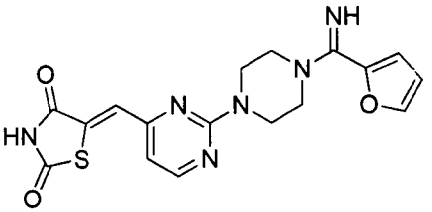
reaction was concentrated under reduced pressure and used directly in the next step without further purification.

Step 2.



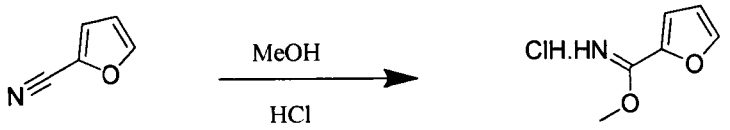
A 2-dram RB-vial was charged with the crude material from step 1, methyl furan-2-carbimidate (37 mg, 296 μmol) and then treated with MeOH (Volume: 1.5 mL), (Z)-5-((2-(4-aminopiperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione (22.6 mg, 74 μmol), and 2 mL of DMSO was added providing a homogeneous solution. After 2 h at RT, DIPEA was added (250 μl). After 24 h at RT, the reaction was purified using RP-HPLC with TFA as the modifier to provide (Z)-N-(1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)furan-2-carboximidamide.

EXAMPLE 158



(Z)-5-((2-(4-(furan-2-yl(imino)methyl)piperazin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared using the following procedure (1.8 mg, 29.1 mg theoretical, 6.2%). LC-MS m/z 385.1 (M+1).

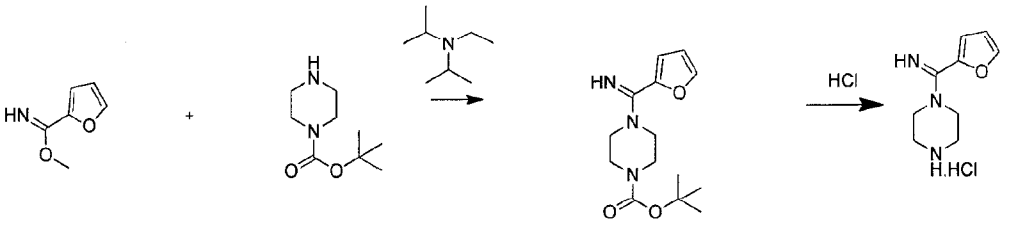
Step 1.



A 30 mL RB-vial was charged with furan-2-carbonitrile (25 mg, 0.269 mmol), methanol (300 μL, 0.269 mmol), and hydrogen chloride (2 mL, 8.00 mmol) in 4 M in

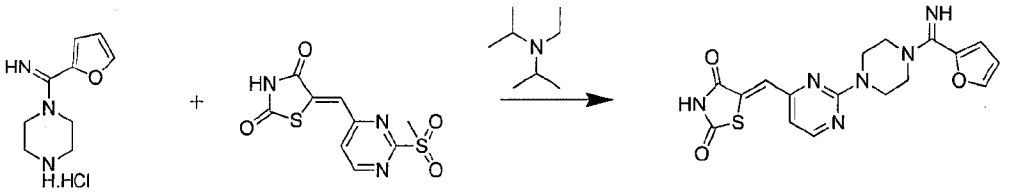
dioxane (Volume: 1 mL) to a 2-dram vial and allowed to shake at RT for 24 h. The reaction was concentrated under reduced pressure and used directly in the next step without further purification.

Step 2.



Crude reaction from Step 1, methyl furan-2-carbimidate (26 mg, 0.208 mmol) was dried down and then diluted in MeOH (Volume: 1 mL) and treated with tert-butyl piperazine-1-carboxylate (122 mg, 0.655 mmol) was added to the solution. N-ethyl-N-isopropylpropan-2-amine (50 mg, 0.387 mmol) was added and the solution shaken at RT for 24 h. The sample was purified by RP-HPLC with TFA as the modifier to provide the Boc-piperazine intermediate. The dry material was then treated with 1 mL MeOH and 1 mL 4.0 M HCl in dioxane. After 30 minutes the final product (M+1 = 180) was the only peak in the chromatogram. The reaction was concentrated under reduced pressure and used directly in the next step without further purification.

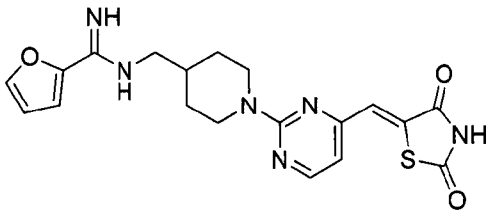
Step 3.



The crude material from Step 2, furan-2-yl(piperazin-1-yl)methanimine hydrochloride (16.3 mg, 0.076 mmol) was diluted in DMSO (Volume: 0.75 mL) and added to (Z)-5-((2-(methylsulfonyl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione (19.4 mg, 0.068 mmol) in a 2-dram vial. The reaction solution was then treated with N-ethyl-N-isopropylpropan-2-amine (50 mg, 0.387 mmol) and then shaken at 100 °C for 16 h. The

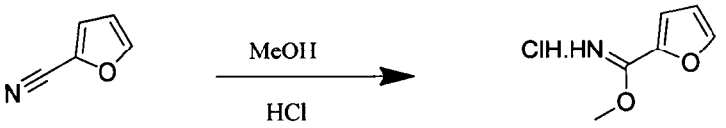
reaction was then purified by RP-HPLC using TFA as the modifier to provide (Z)-5-((2-(4-(furan-2-yl(imino)methyl)piperazin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione.

EXAMPLE 159



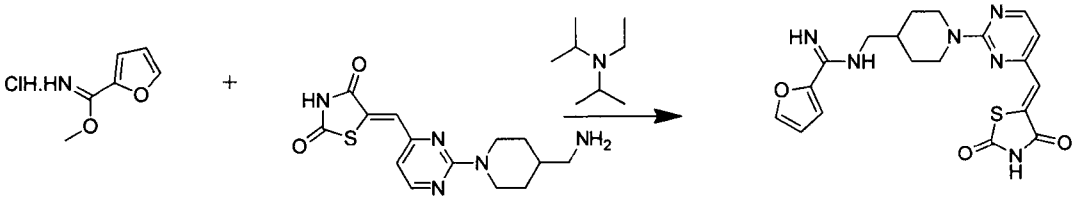
(Z)-N-((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)furan-2-carboximidamide was prepared using the following procedure (4.7 mg, 31.4 mg theoretical, 15%). LC-MS m/z 413.1 (M+1).

Step 1.



A 30 mL RB-vial was charged with furan-2-carbonitrile (25 mg, 0.269 mmol), methanol (300 µL, 0.269 mmol), and hydrogen chloride (2 mL, 8.00 mmol) in 4 M in dioxane (Volume: 1 mL) to a 2-dram vial and allowed to shake at RT for 24 h. The reaction was concentrated under reduced pressure and used directly in the next step without further purification.

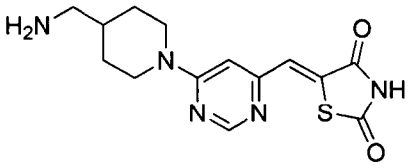
Step 2.



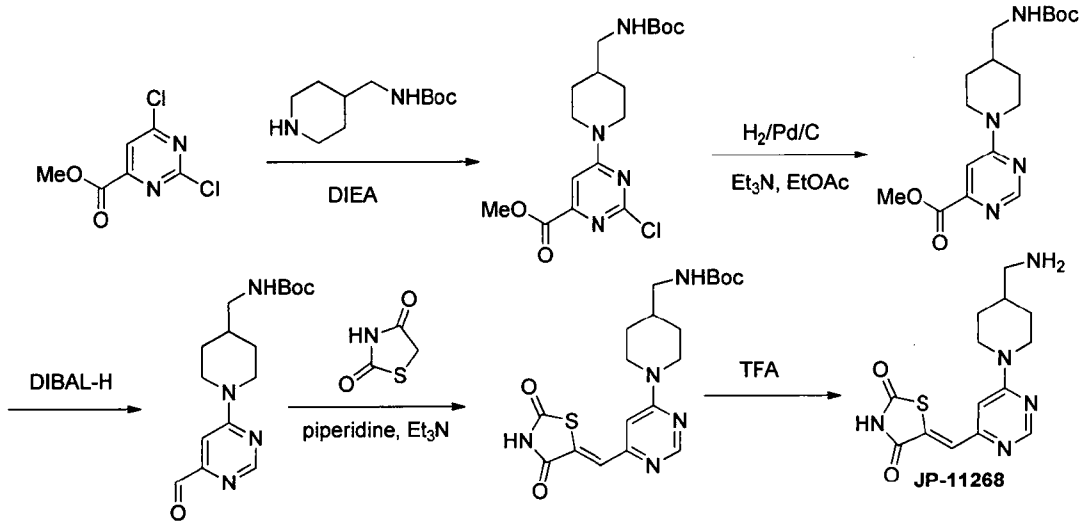
The crude material from Step 1, methyl furan-2-carbimidate hydrochloride (12.3 mg, 0.076 mmol) was diluted in DMSO (Volume: 0.5 mL) and added to (Z)-5-((2-(4-(aminomethyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione (23 mg,

0.072 mmol) in a 2-dram vial. The reaction solution was then treated with N-ethyl-N-isopropylpropan-2-amine (50 mg, 0.387 mmol) and the reaction was shaken at RT for 16 h. The reaction was then purified by RP-HPLC using TFA as the modifier to provide (Z)-N-((1-(4-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-2-yl)piperidin-4-yl)methyl)furan-2-carboximidamide.

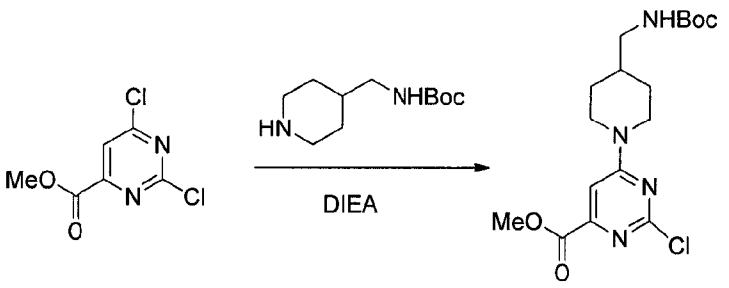
EXAMPLE 160



(Z)-5-((6-(4-(aminomethyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione was prepared as follows (36.0 mg, 104 mg theoretical, 34.6%). LC-MS m/z 320 (M+1).

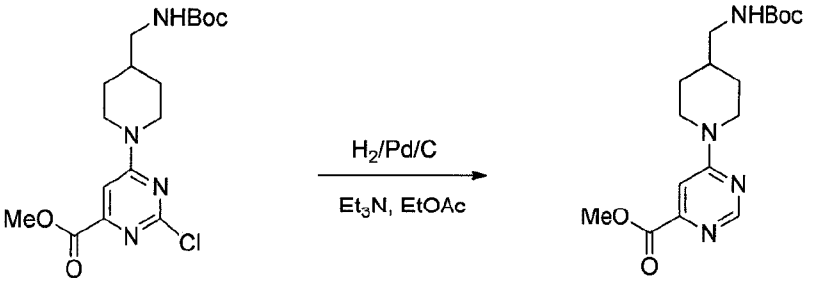


Step 1: Synthesis of methyl 6-(4-(((tert-butoxycarbonyl)amino)methyl) piperidin-1-yl)-2-chloropyrimidine-4-carboxylate.



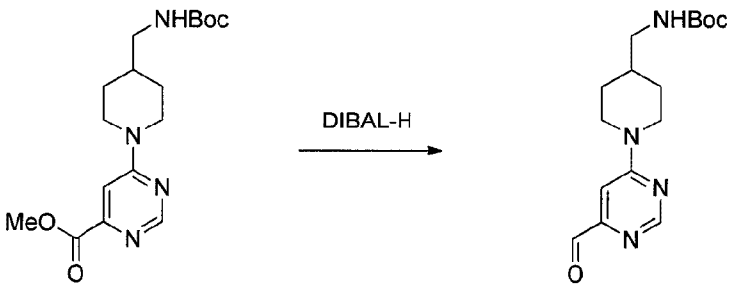
A 30 mL round-bottomed vial methyl 2,6-dichloropyrimidine-4-carboxylate (300 mg, 1 equiv.) was partially dissolved in anhydrous THF (5 mL). DIEA (278 µL, 1.1 equiv.) was added at once at 0°C. tert-Butyl (piperidin-4-ylmethyl)carbamate (311 mg, 1 equiv.) dissolved in THF (5 mL) was added at 0°C in 5 min. The reaction mixture was warmed to RT in 3h15. LC-MS showed mostly the desired product (2.77 min, M+1= 385) and a small amount of the other regioisomer (3.28 min, M+1- isobutene = 329). The solvent was evaporated and the residue was purified by biotage (SiO_2, 10 g, Hex/EtOAc 9:1 to 1:1) to give the desired isomer (386.8 mg, 69.4%) as a white solid. LC-MS m/z 385 (M+1).

Step 2: Synthesis of methyl 6-(4-(((tert-butoxycarbonyl)amino)methyl) piperidin-1-yl)pyrimidine-4-carboxylate.



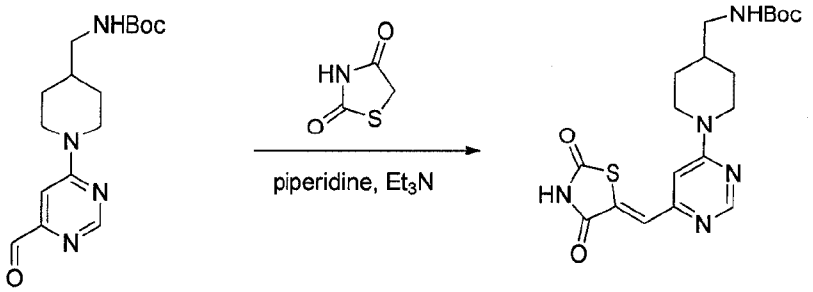
A 50 mL round-bottomed flask was charged with methyl 6-(4-(((tert-butoxycarbonyl)amino)methyl)piperidin-1-yl)-2-chloropyrimidine-4-carboxylate and MeOH (4 mL) and Et_3N (0.4 mL). 10% Pd/C (104 mg, 0.25 equiv.) was added under argon. The reaction mixture was stirred for 6h under 1atm H_2. The catalyst was filtered and the solvent was evaporated to give the crude desired product (150mg, 110% crude yield) which was used directly in the next step. LC-MS m/z 351 (M+1).

Step 3: Synthesis of tert-butyl ((1-(6-formylpyrimidin-4-yl)piperidin-4-yl)methyl)carbamate.



A 25mL round-bottomed flask was charged with methyl 6-(4-(((tert-butoxycarbonyl)amino)methyl) piperidin-1-yl)pyrimidine-4-carboxylate (150 mg, 0.43 mmol, 1 equiv.) and CH_2Cl_2 (2 mL). The reaction mixture was cooled to -78°C. DIBAL-H 1 M in CH_2Cl_2 (0.64 mL, 0.64 mmol, 1.5 equiv.) was added in 3 minutes at -78°C. The reaction was stirred for 4h at -78°C. LC-MS showed some starting material. Another portion of DIBAL-H 1 M in CH_2Cl_2 (0.5 mL, 0.5 mmol, 1.2 equiv.) was added in 1 min at -78°C. LC-MS after 30 min showed the reaction was complete. The reaction was quenched at -78°C after 40 min with methanol (1 mL). The solvents were concentrated *in vacuo*. The residue was partitioned between CH_2Cl_2 (10 mL) and 1 N NaOH (6 mL). The aqueous layer was extracted with CH_2Cl_2 (2 x 10 mL). The organic layer was dried over Na_2SO_4. The solvent was evaporated to give the crude desired aldehyde (77.9 mg, 56.8% crude yield) as an yellowish oil. The crude reaction aldehyde was carried on the next step without any further purification. LC-MS m/z 339 (M+1+H_2O) and 351 (M+1+MeOH).

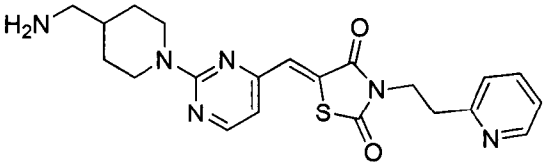
Step 4: (Z)-tert-butyl ((1-(6-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-4-yl)piperidin-4-yl)methyl)carbamate.



An 8 mL round-bottomed vial was charged with tert-butyl ((1-(6-formylpyrimidin-4-yl)piperidin-4-yl)methyl)carbamate (77.9 mg, 0.24 mmol, 1 equiv.), ethanol (1 mL), thiazolidine-2,4-dione (28.5 mg, 0.24 mmol, 1 equiv.) and triethylamine (68 µL, 0.48

mmol, 2 equiv.). Piperidine (1.04 mg, 23 µL of a solution of 52 µL in 0.95 mL ethanol, 0.012 mmol, 5% eq.) was added and Argon was bubbled through the solution. The reaction mixture was shaken at 85°C for 18 h. LC-MS of the crude reaction mixture showed mostly the desired product. The solvent was evaporated. The residue was partitioned between EtOAc (10 mL) and 10% NH_4Cl (5 mL). The organic layer was dried over Na_2SO_4. Evaporation of solvent gave the crude (Z)-tert-butyl ((1-(6-((2,4-dioxothiazolidin-5-ylidene)methyl)pyrimidin-4-yl)piperidin-4-yl)methyl)carbamate (79.8 mg, 78%). LC-MS: M+1=420.

EXAMPLE 161



(Z)-5-((2-(4-(aminomethyl)piperidin-1-yl)pyrimidin-4-yl)methylene)-3-(2-(pyridin-2-yl)ethyl)thiazolidine-2,4-dione (Example 102) was also prepared using the general displacement procedure with tert-butyl (piperidin-4-ylmethyl)carbamate, alkylation with 2-(2-bromoethyl)pyridine, followed by the general de-protection procedure (16 mg, 30.6 mg theoretical, 52.3%). LC-MS m/z 525.5 (M+1).

EXAMPLE 162

Cell Proliferation Inhibition

Table 4:

Human cancer	Cell line	Medium	Positive drug	Incubation time
Prostate cancer	LNCaP	RPMI 1640	Cisplatin	72 h
Leukemia	KU812	RPMI 1640		
Pancreas cancer	Panc-1	DMEM		

All cells were cultured in the media supplemented with 10% FBS in the temperature of 37 °C, 5% CO_2 and 95% humidity. All culture media were purchased from GIBCO.

Reagents:

CellTiter 96® Aqueous MTS reagent powder (Cat. No.: G1112, Promega. Store MTS Reagent Powder desiccated at 4 °C protected from light.)

Phenazine methosulfate (PMS) (Product No.: P9625, SIGMA. Store PMS Powder desiccated at 4 °C protected from light.)

Equipment:

Synergy2, Gene Company Limited; CO_2 Water Jacketed Incubator, Thermo (USA). Reverse microscope, Chongguang XDS-1B, Chongqing Guangdian Corp. (Chongqing, P.R.China).

Cytotoxicity and IC_{50} determination:

1. Cells were harvested respectively during the logarithmic growth period and counted with hemocytometer. Cell viability was over 98 % by trypan blue exclusion.
2. Dilute cells with respective medium to achieve 1.11 x 10^5 cells/mL for LNCaP cells, 2.22 x 10^5cells/mL for KU812 cells, 5.56 x 10^4 cells/mL for Panc-1 cells.
3. Add 90 μL cell suspensions to 96-well plate, the final cell densities are 1 × 10^4 cells/well for LNCaP cells, 2 × 10^4 cells/well for KU812 cells, and 4×10^3 cells/well for Panc-1 cells, respectively.
4. The next day, dilute the test article or positive drugs with DMSO or PBS.
5. Dispense 10 μL drug solution in each well (triplicate for each drug concentration).
6. The plates were cultured for another 72 hours, then measured using MTS assay.
7. Prepare MTS/PMS solution immediately prior to use, pipet 20 μL of the mixture into each well of the 96 well assay plate containing 100 μL culture medium. (The final reaction volume is 120 μL).
8. Incubate the plate for 1-4 hours at 37 °C in a humidified, 5% CO_2 atmosphere.
9. Record the absorbance at 490 nm using Synergy2 Microplate Reader.

Data analysis:

The software of GraphPad Prism version 5 was used to calculate IC_{50}. The graphical curve was fitted using a nonlinear regression model with a sigmoidal dose response.

Results:

Results are shown in Table 5.

Table 5: IC_{50} values (μM)

Compound	LNCaP	KU812	Panc-1
10903	4.050	NA	21.20
10904	24.20	NA	9.943e+007
10905	10.76	NA	68.46
10906	6.416	NA	27.57
10907	6.523	NA	8.164
10909	10.70	NA	13.64
10910	6.222	NA	7.441
10913	6.710	NA	10.88
10914	6.574	NA	7.498
10915	10.37	NA	8.998
11086	NA	259.8	153.9
11087	NA	1.776	11.05
11088	NA	2.225	12.16
11089	NA	11.86	8.908
11090	NA	15.26	18.92
11091	NA	6.622	16.80
11092	NA	7.284	56.35
11093	NA	4.041	13.76
11094	NA	41.30	NA
11100	NA	4.300e+007	12.96
11101	NA	13.97	9.555
11102	NA	10.59	162.9
11103	NA	6.538	11.35
11104	NA	22.48	151.24
11105	NA	3.462	7.333
11106	NA	3.383e+012	29.56
11193	NA	>30	11.9
11196	NA	16.2	>30
11198	NA	12	22.2
11204	NA	3.4	>30
11205	NA	14.2	6
11206	NA	15	>30
11207	NA	12.9	>30
11209	NA	15.5	>30
11210	NA	10.1	25.1
11211	NA	6.2	>30
11212	NA	20	>30
11213	NA	>30	>30
11214	NA	6.6	>30
11215	NA	7.7	>30
11216	NA	5.3	>30
11217	NA	>30	>30

Compound	LNCaP	KU812	Panc-1
11220	NA	>30	>30
11221	NA	12	>30
11222	NA	22.8	>30
11223	NA	18.2	>30
11224	NA	>30	>30
11225	NA	>30	>30
11226	NA	>30	>30
11227	NA	28.1	>30
11232	NA	>30	>30
11234	NA	11.5	>30
11235	NA	13.5	>30
11236	NA	18.8	>30
11237	NA	10.8	>30
11240	NA	>30	>30
11241	NA	13.3	>30
11242	NA	>30	>30
11243	NA	10.4	>30
11244	NA	15.4	>30
11246	NA	22.3	>30
11247	NA	11.9	>30
11248	NA	14.7	>30
11249	NA	9.7	>30
11250	NA	9.6	>30
11251	NA	20.7	>30
11263	NA	7.1	>30
11264	NA	26.1	>30
11266	NA	>30	>30
11267	NA	>30	>30
11268	NA	>30	>30
11269	NA	13.2	21.5
11271	NA	NA	NA
11272	NA	NA	NA
11273	NA	NA	NA
11274	NA	NA	NA
11275	NA	NA	NA
11276	NA	NA	NA
11279	NA	NA	NA
11280	NA	NA	NA
11288	NA	NA	NA
11289	NA	NA	NA
11290	NA	NA	NA
11291	NA	NA	NA
11293	NA	NA	NA
11299	NA	NA	NA

Compound	LNCaP	KU812	Panc-1
11300	NA	NA	NA
11301	NA	NA	NA
11303	NA	NA	NA
11304	NA	NA	NA
11306	NA	NA	NA
11307	NA	NA	NA
11308	NA	NA	NA
11352	NA	NA	NA
11355	NA	NA	NA
11666	NA	NA	NA
11667	NA	NA	NA

NA = not available

EXAMPLE 163

Cell Proliferation Inhibition

Table 6:

Human cancer	**Cell line**	**Medium**	**Positive drug**	**Incubation time**
Multiple Myeloma	MV4-11	IMDM	Cisplatin	72 hours
	RPMI-8226	RPMI-1640		
	NCI-H929	RPMI-1640+0.05 mM 2-mercaptoethanol		

All cells were cultured in media supplemented with 10% FBS except for which are marked specially, in the temperature of 37 °C, 5% CO_2 and 95% humidity. All culture media were purchased from GIBCO (USA, IMDM Cat. 12200-036; RPMI Medium 1640 Cat.31800-022; 2-mercaptoethanol Cat. 21985-023).

Reagents:

CellTiter 96® AQueous MTS reagent powder (Cat. No.: G11 12, Promega. Store MTS Reagent Powder desiccated at 4°C protected from light.)

Phenazine methosulfate (PMS) (Product No.: P9625, SIGMA. Store PMS Powder desiccated at 4°C protected from light.)

Preparation of PMS solution:

0.92 mg/mL PMS in DPBS Filter-sterilize through a 0.2 □m filter into a sterile, light-protected container. Store at –20°C.

Preparation of MTS solution:

The following protocol is recommended for the preparation of 21 mL of MTS solution (sufficient for ten 96-well plates).

a. Select a light-protected container or wrap a container with foil.

b. Add 21 mL of DPBS to the container.

c. Weigh out 42 mg of MTS Reagent Powder and add to DPBS.

d. Mix at moderate speed on a magnetic stir plate for 15 minutes or until the MTS is completely dissolved.

e. Measure the pH of the MTS solution. The optimum pH is between pH 6.0 to 6.5. If the solution is above pH 6.5, adjust to pH 6.5 with 1 N HCl.

f. Filter-sterilize the MTS solution through a 0.2 μm filter into a sterile, light protected container.

g. Store the MTS solution at -20°C, protected from light.

Preparation of the mixture of MTS/PMS:

a. In order to prepare reagents sufficient for one 96-well plate containing cells cultured in a 100 μL volume, thaw the MTS solution and the PMS solution. It should take approximately 90 minutes at room temperature or 10 minutes in a 37 °C water bath to completely thaw the 20 mL size of MTS solution. (Note: For convenience, the first time the product is thawed, the entire contents of the 1 mL tube of PMS solution can be transferred to the 20 mL bottle of MTS solution. This mixture should be stored at –20 °C between uses. If storing PMS and MTS solutions at 4°C, do not combine these solutions until immediately before addition to the assay plate.)

b. Remove 2.0 mL of MTS solution from the amber reagent bottle using aseptic technique and transfer to a test tube.

c. Add 100 μL of PMS solution to the 2.0 mL of MTS solution immediately before addition to the culture plate containing cells.

d. Gently swirl the tube to ensure complete mixing of the combined MTS/PMS solution.

Equipment:

SpectraMAX plus microplate spectrophotometer Model 3011, Molecular Devices Corp. (California, USA); CO_2 water jacketed incubator, Therma (USA). Reverse microscope, Chongguang XDS-1B, Chongqing Guangdian Corp. (Chongqing, P.R.China).

Cytotoxicity and IC_{50} determination:

1. The cells were harvested respectively during the logarithmic growth period and counted with hemocytometer. The cell viability was over 98 % by trypan blue exclusion.

2. Cell concentrations were adjusted to 2.22×10^5 or 1.11×10^5 or 5.56×10^4 cells/mL with respective medium.

3. 90 μL cell suspensions were added to 96-well plates (triplicates for each cell concentration), the final cell densities were 2×10^4 or 1×10^4 or 5×10^3 cells/well. The density of 5×10^3 cells/well was used for the first test. The appropriate cell density was determined and adjusted according to the results of the first test.

4. The next day, test article or positive drugs were dissolved with DMSO as stock solution at the concentration of 20 mM.

5. 10 μL drug solution was dispensed in each well (triplicate for each drug concentration).

6. Plates were cultured for another 72 hours, then measured by means of MTS assay.

7. MTS/PMS solution was prepared immediately prior to use. 20 μL of the mixture was introduced into each well of the 96-well assay plate containing 100 μL culture medium. (The final reaction volume was 120 μL).

8. Plate was incubated for 1-4 hours at 37 °C in a humidified 5% CO_2 atmosphere.

9. Absorbance at 490 nm was recorded using SpectraMAX Plus microplate spectrophotometer.

Data analysis:

The software of GraphPad Prism version 5 was used to calculate IC_{50}. The graphical curves were fitted using a nonlinear regression model with a sigmoidal dose.

Results

Results are shown in Table 7.

Table 7: IC_{50} values (μM)

Compound	MV4-11	RPMI 8226	NCI-H929
10903	4.990	NA	12.09
10904	7.176	NA	3.871
10905	4.478	NA	6.975
10906	4.036	NA	14.94
10907	7.452	NA	13.09
10909	8.415	NA	11.83
10910	11.37	NA	9.746
10913	9.954	NA	NA
10914	11.75	NA	41.02
10915	7.072	NA	28.94
11086	NA	1.31e+006	7.131
11087	NA	17.78	2.748
11088	NA	11.70	9.976
11089	NA	9.030	12.67
11090	NA	6.033e+007	12.44
11091	NA	10.46	18.69
11092	NA	16.16	11.75
11093	NA	78.70	5.537
11094	NA	3.229	29.77
11100	NA	58.46	3.508e+010
11101	NA	12.78	15.67
11102	NA	20.23	14.63
11103	NA	28.83	12.84
11104	NA	21.90	21.58
11105	NA	11.71	10.62
11106	NA	18.59	6.319
11193	NA	>30	28.1
11196	NA	19.4	254.
11198	NA	8.2	3.5
11204	NA	7.4	10.1
11205	NA	3.4	3
11206	NA	>30	29
11207	NA	11.8	11.5
11209	NA	23.2	16.9
11210	NA	11.3	11.5
11211	NA	23.3	27.7
11212	NA	7.7	>30
11213	NA	>30	>30
11214	NA	11.1	7.8
11215	NA	12.7	12.7
11216	NA	11.2	8.1

Compound	MV4-11	RPMI 8226	NCI-H929
11217	NA	>30	>30
11220	NA	>30	>30
11221	NA	14	17.5
11222	NA	20.3	11.7
11223	NA	25.3	28.7
11224	NA	>30	14.3
11225	NA	>30	16.1
11226	NA	>30	>30
11227	NA	24.8	12.4
11232	NA	>30	>30
11234	NA	7.9	22.3
11235	NA	11.5	18.6
11236	NA	12.2	>30
11237	NA	8.9	>30
11240	NA	>30	19
11241	NA	5.7	8.7
11242	NA	16	9.1
11243	NA	12.4	6.2
11244	NA	11.4	8.6
11246	NA	21.8	7
11247	NA	11.5	12.3
11248	NA	14.7	9.6
11249	NA	11.1	6
11250	NA	9.9	7.1
11251	NA	15.8	14.9
11263	NA	12.3	4
11264	NA	>30	11.3
11266	NA	>30	17
11267	NA	>30	>30
11268	NA	>30	>30
11269	NA	12.7	>30
11271	7.2	NA	7.5
11272	8.3	NA	9
11273	4.7	NA	7.8
11274	>30	NA	>30
11275	7.5	NA	>30
11276	>30	NA	>30
11279	1.4	NA	10.7
11280	>30	NA	>30
11288	11.7	NA	>30
11289	0.63	NA	2.4
11290	>30	NA	>30
11291	>30	NA	>30
11293	26.7	NA	8.4

Compound	MV4-11	RPMI 8226	NCI-H929
11299	5.4	NA	11.1
11300	1.8	NA	12.1
11301	24.5	NA	>30
11303	>30	NA	>30
11304	>30	NA	>30
11306	13.5	NA	>30
11307	0.43	NA	3.1
11308	6.8	NA	>30
11352	>30	NA	>30
11355	4.7	NA	14.7
11666	NA	NA	NA
11667	NA	NA	NA

NA = not available

EXAMPLE 164

Table 8: Percent Activity of Enzyme When Treated with 100 nM of Compound (ATP Concentration = Km of Enzyme)

Compound	CK1γ2(h)	CK1(y)	CK2(h)	Pim-1(h)	Pim-2(h)	Pim-3(h)
11193	85	91	92	33	31	30
11196	94	108	101	71	72	93
11198	85	45	76	8	13	6
11204	106	97	102	26	73	61
11205	95	107	108	56	55	38
11206	100	102	101	65	104	43
11207	88	105	106	53	66	54
11209	70	98	95	70	73	48
11210	89	109	100	108	106	102
11211	68	72	93	16	56	42
11212	76	89	94	17	35	24

IC_{50} (nM) for compound 11198 (with ATP concentration = Km of enzyme):

Pim-1(h), 25; Pim-2(h), 15; Pim-3(h), 6.

EXAMPLE 165

Table 9: Percent Activity of Enzyme When Treated with 300 nM of Compound (ATP Concentration = Km of Enzyme)

Compound	CK1γ2(h)	CK1(y)	CK2(h)	Pim-1(h)	Pim-2(h)	Pim-3(h)
10903	69	76	79	18	14	17
10904	63	31	92	2	4	3
10905	77	61	55	18	21	10
10906	47	56	73	7	11	12
10907	10	78	63	53	44	100
10909	45	70	50	10	12	5
10910	96	81	54	18	21	5
10913	23	80	81	75	63	96
10914	23	76	76	66	57	91
10915	28	82	78	74	72	96
10917	84	97	109	75	69	63
11019	73	86	14	39	10	10
11020	96	98	12	48	20	11
11021	102	96	11	42	25	11
11022	94	103	8	34	21	9
11086	81	41	62	8	10	4
11087	35	-3	41	7	-1	0
11088	39	39	79	8	10	10
11089	55	61	68	9	11	9
11090	80	81	78	17	24	9
11091	78	88	75	32	21	11
11092	52	58	73	12	12	7
11093	32	12	83	14	44	11
11094	95	95	79	30	29	12
11213	103	112	79	60	66	43
11214	23	34	70	3	16	10
11215	17	46	88	18	16	38
11216	58	18	52	3	1	3
11217	94	100	75	46	35	19
11220	82	111	62	59	58	39
11221	83	113	91	91	75	78
11222	52	62	74	5	19	12
11223	34	69	90	22	30	43
11224	102	89	81	44	51	27
11225	112	88	84	37	47	25
11226	83	82	85	22	31	22
11227	80	84	71	31	38	22
11232	128	102	107	90	109	76
11234	47	67	91	22	32	47

Compound	CK1γ2(h)	CK1(y)	CK2(h)	Pim-1(h)	Pim-2(h)	Pim-3(h)
11235	39	57	86	9	17	28
11236	43	70	86	16	25	38
11237	39	66	94	24	41	52
11240	26	98	77	57	49	40
11241	55	85	88	53	27	86
11242	83	79	64	25	24	7
11243	63	79	80	5	21	10
11244	68	98	80	66	35	69
11246	56	44	67	3	4	4
11247	31	45	83	13	12	37
11248	34	-3	68	3	7	5
11249	72	71	64	17	18	10
11250	32	65	81	11	12	11
11251	92	97	87	4	18	7
11263	75	72	72	30	22	9
11264	33	71	74	24	20	14
11266	75	62	87	21	20	11
11267	58	92	91	8	23	9
11268	95	114	85	115	108	80
11269	105	90	90	105	120	97
11271	102	96	71	51	69	32
11272	67	96	89	83	76	66
11273	60	83	71	52	66	49
11274	108	100	80	95	99	99
11275	106	107	97	116	112	106
11276	90	94	84	98	101	85
11279	73	82	73	94	89	87
11280	107	92	84	87	99	80
11288	94	97	84	39	7	11
11289	85	58	63	6	2	1
11290	-7	99	92	86	90	103
11291	89	86	42	26	15	10
11293	71	92	70	13	17	10
11299	82	67	71	6	27	31
11300	93	93	63	32	20	21
11301	34	106	76	84	89	104
11303	0	89	75	93	91	95
11304	21	104	82	89	71	97
11306	93	94	82	59	30	85
11307	39	73	78	4	3	12
11308	82	105	84	35	14	53
11352	76	77	70	45	48	38
11355	47	67	52	6	5	6
11666	24	42	84	11	4	8

Compound	CK1γ2(h)	CK1(y)	CK2(h)	Pim-1(h)	Pim-2(h)	Pim-3(h)
11667	-1	22	73	17	8	10

EXAMPLE 166

Table 10: IC_{50} (nM) of Compound When ATP Concentration = Km of Enzyme

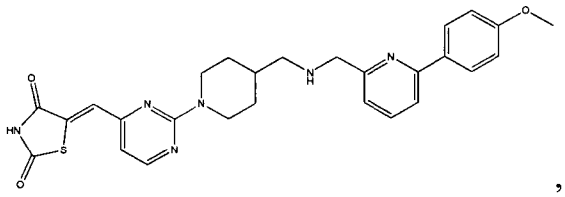
Compound	CK1γ2(h)	CK1(y)	CK2(h)	Pim-1(h)	Pim-2(h)	Pim-3(h)
11214				16	38	27
11216				17	5	4
11243				8	57	36
11248				4	2	3
11249				89	27	16
11250				35	18	80
11251				5	33	6
11267				7	27	48
11289				0.7	0.9	1
11290	1					
11293				83	60	62

EQUIVALENTS

While several embodiments of the present invention have been described and illustrated herein, those of ordinary skill in the art will readily envision a variety of other means and/or structures for performing the functions and/or obtaining the results and/or one or more of the advantages described herein, and each of such variations and/or modifications is deemed to be within the scope of the present invention. More generally, those skilled in the art will readily appreciate that all parameters, dimensions, materials, and configurations described herein are meant to be exemplary and that the actual parameters, dimensions, materials, and/or configurations will depend upon the specific application or applications for which the teachings of the present invention is/are used. Those skilled in the art will recognize, or be able to ascertain using no more than routine experimentation, many equivalents to the specific embodiments of the invention described herein. It is, therefore, to be understood that the foregoing embodiments are presented by way of example only and that the invention may be practiced otherwise than as specifically described. The present invention is directed to each individual feature, system, article, material, kit, and/or method described herein. In addition, any combination of two or more such features, systems, articles, materials, kits, and/or methods, if such features, systems, articles, materials, kits, and/or methods are not mutually inconsistent, is included within the scope of the present invention.

Claims

1. A compound, or a pharmaceutically acceptable salt thereof, selected from the group consisting of: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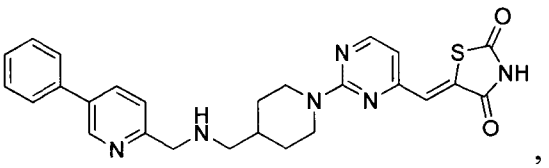
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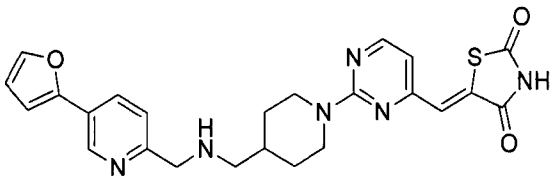
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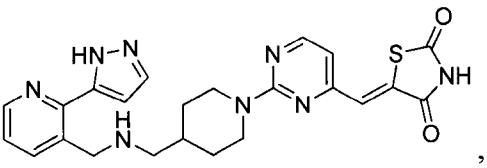
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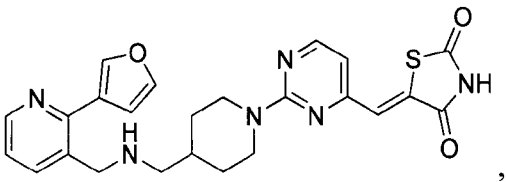
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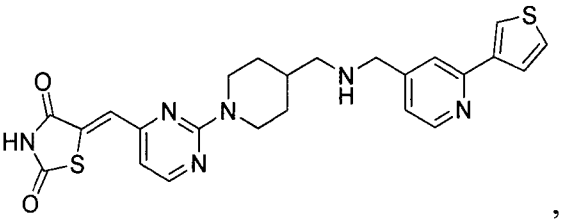
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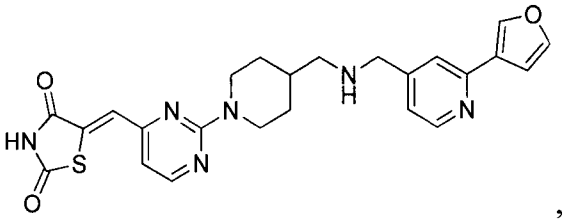
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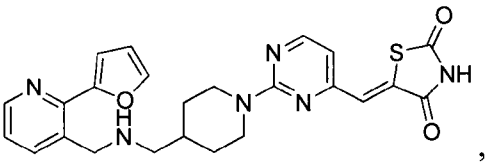
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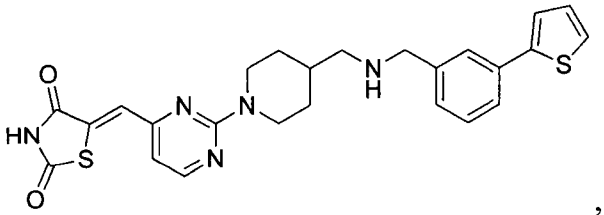
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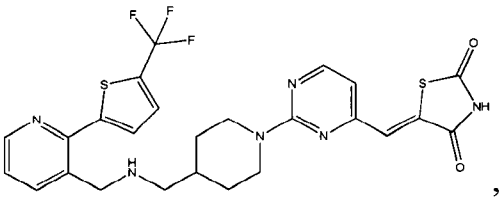
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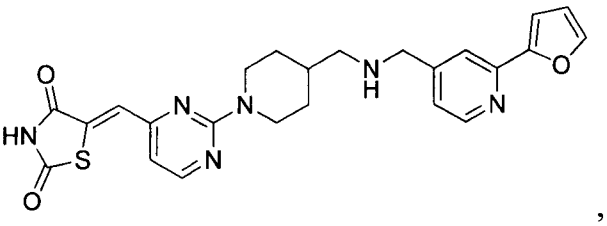
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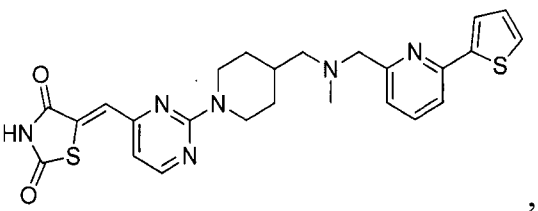
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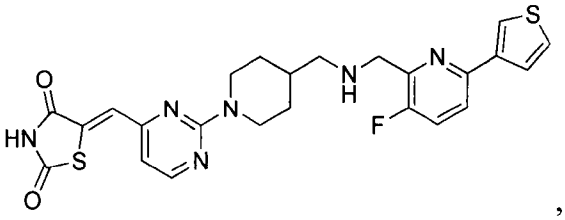
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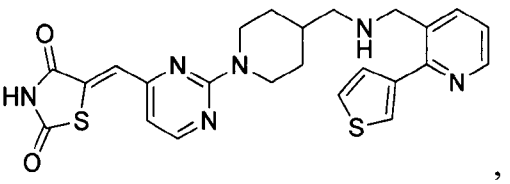
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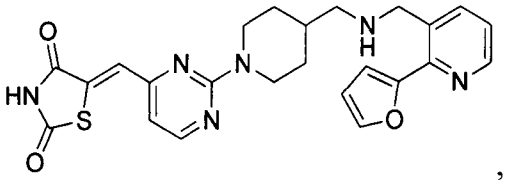
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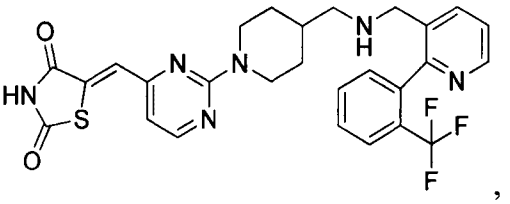
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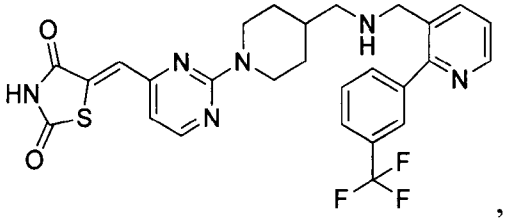
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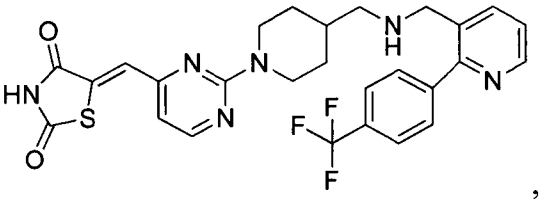
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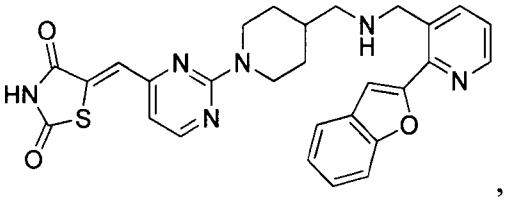
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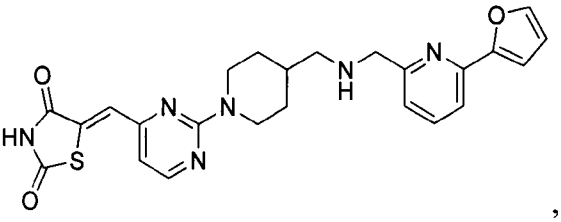
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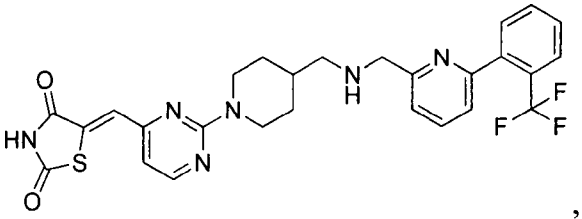
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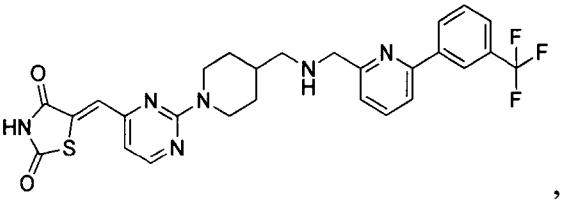
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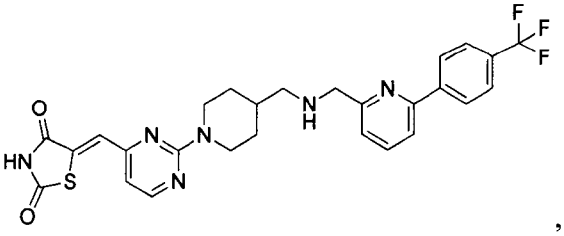
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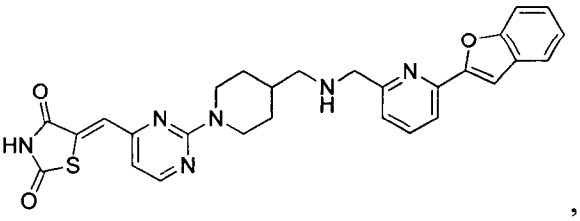
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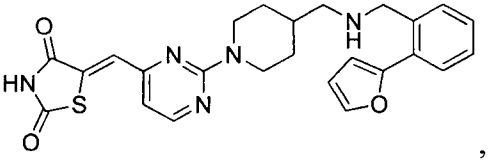
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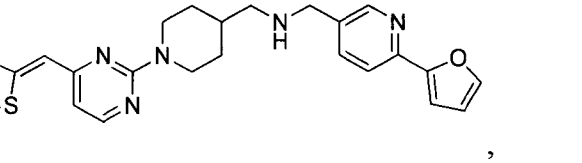
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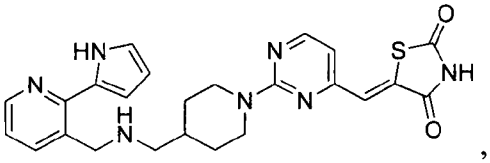
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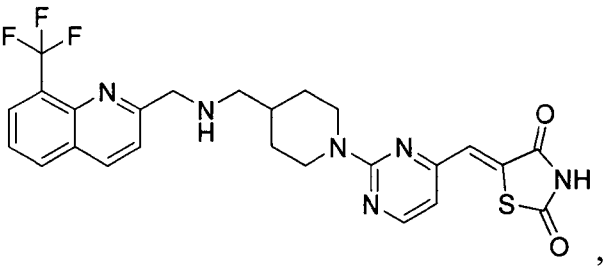
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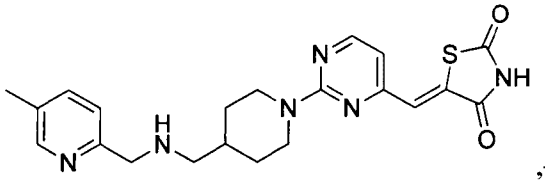
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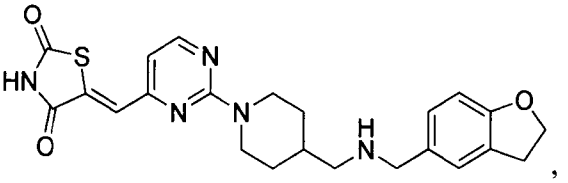
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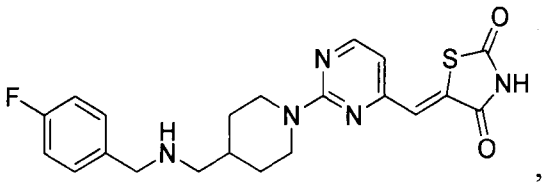
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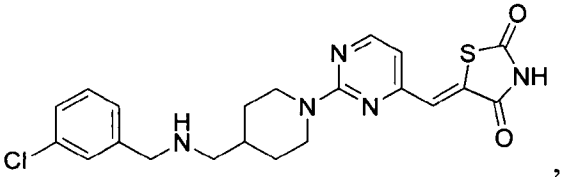
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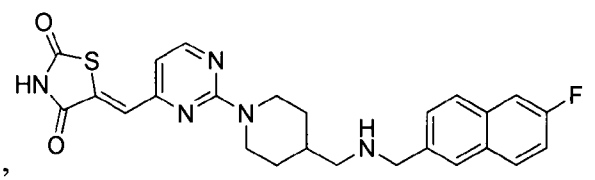
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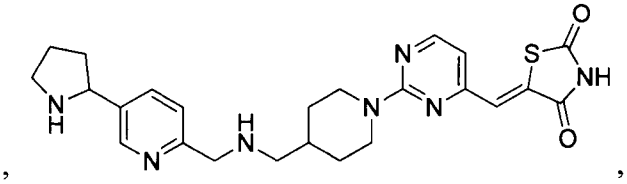
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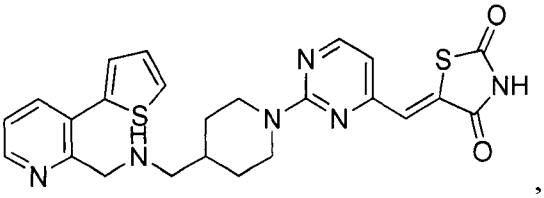
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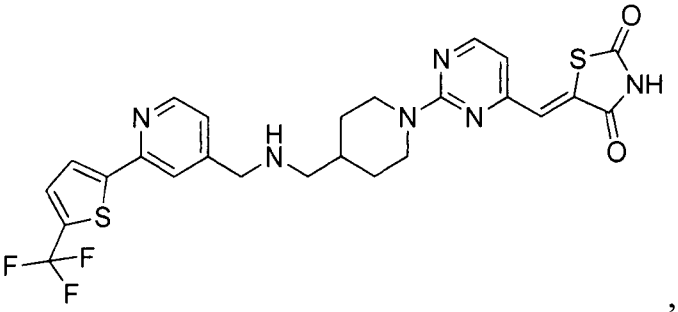
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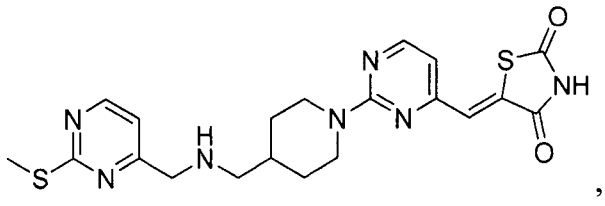

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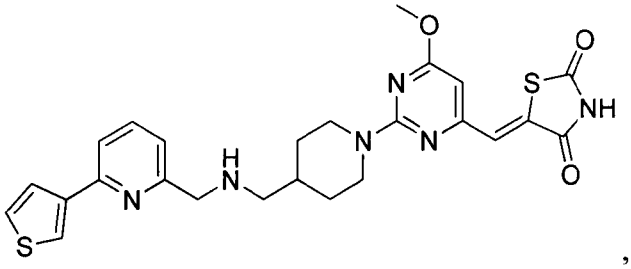

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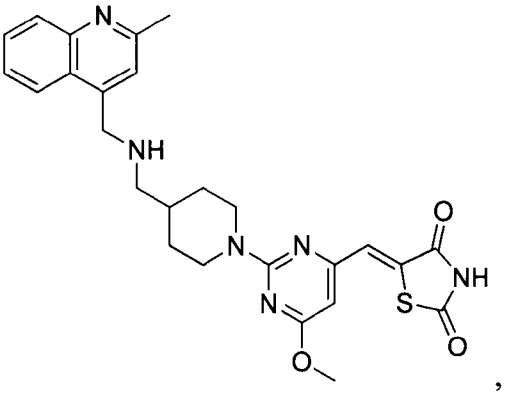

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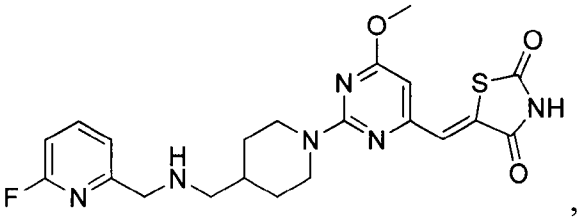

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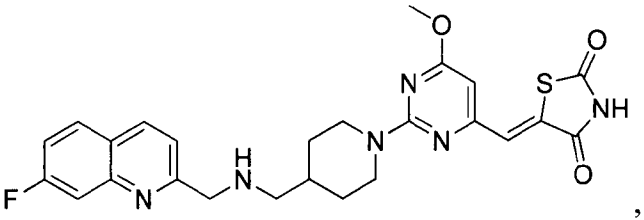

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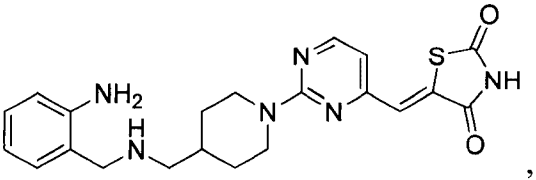

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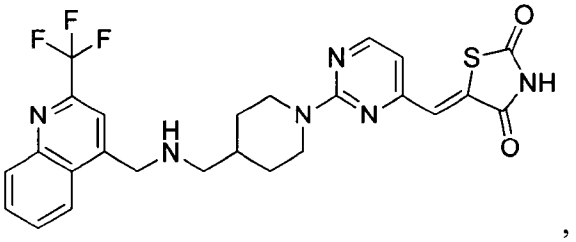

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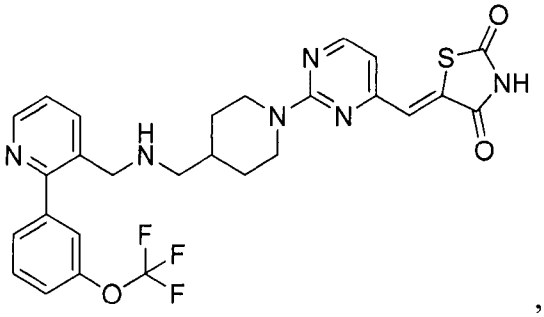

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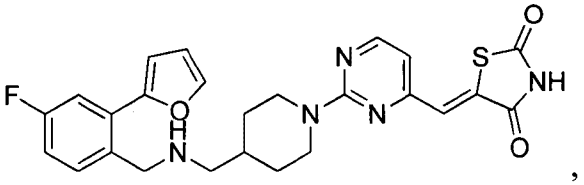

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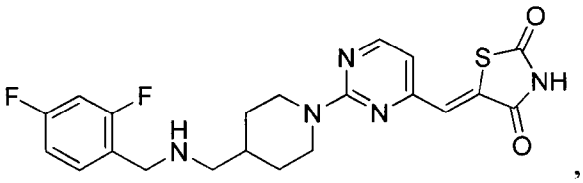
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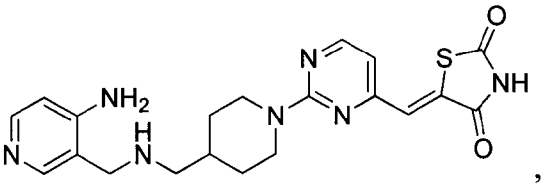
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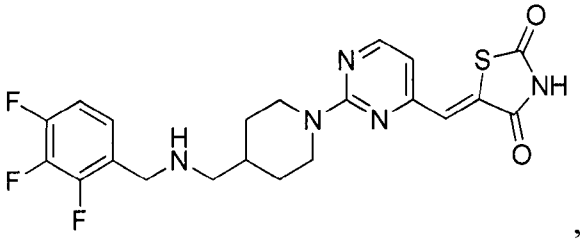
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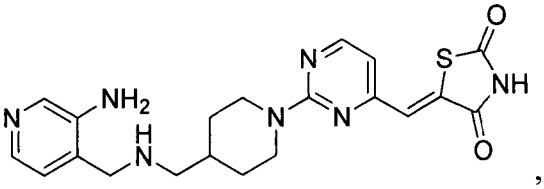
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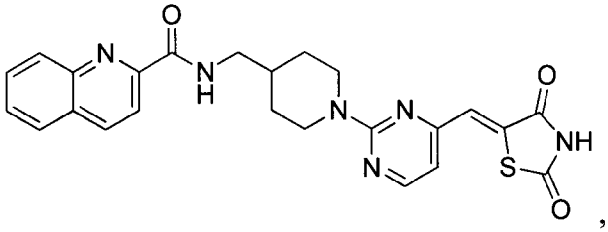
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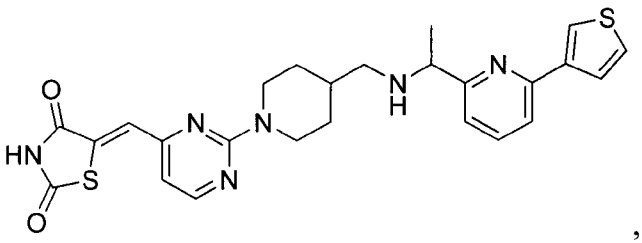
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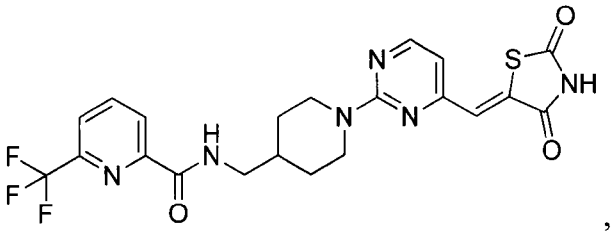
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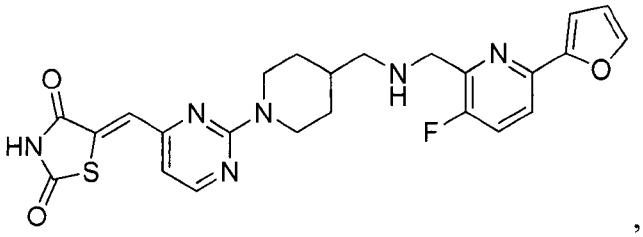
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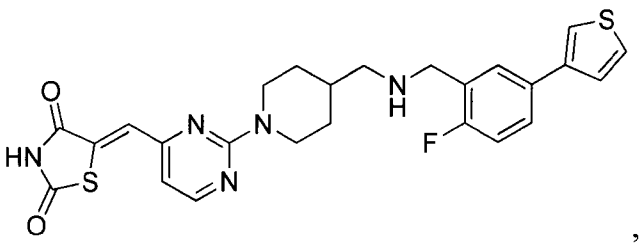
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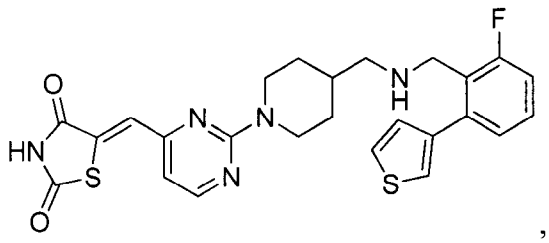
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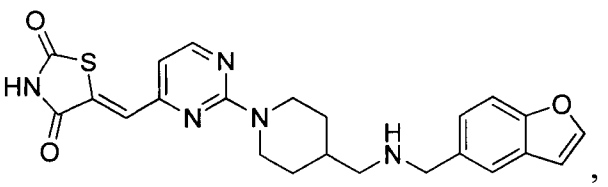
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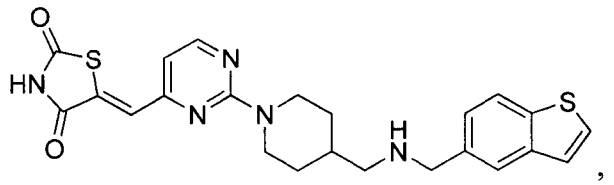
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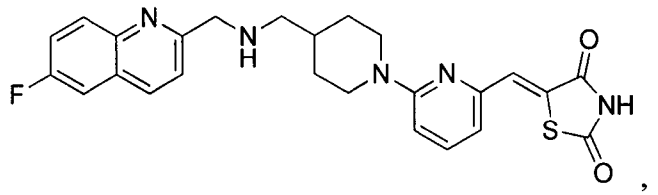
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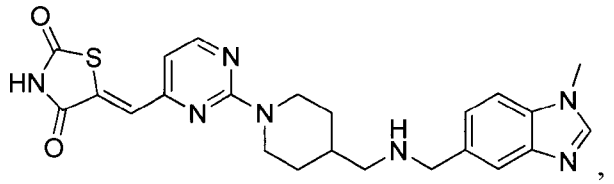
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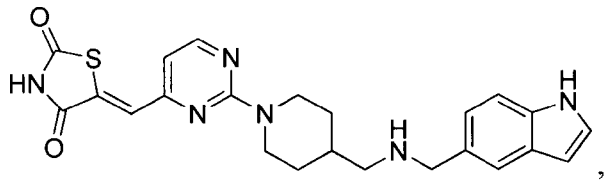
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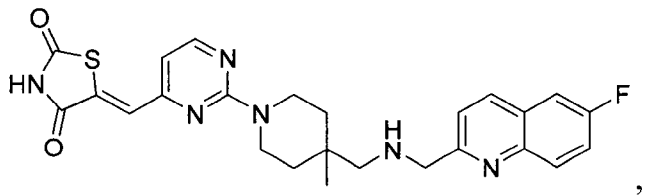
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(Z)-5-((2-(4-((((6-(2,4-bis(trifluoromethyl)phenyl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-bis(trifluoromethyl)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-bis(trifluoromethyl)phenyl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-bis(trifluoromethyl)phenyl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-bis(trifluoromethyl)phenyl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(2,4-bis(trifluoromethyl)phenyl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-bis(trifluoromethyl)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-bis(trifluoromethyl)phenyl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-bis(trifluoromethyl)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-bis(trifluoromethyl)phenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-bis(trifluoromethyl)phenyl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-bis(trifluoromethyl)phenyl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(2,4-bis(trifluoromethyl)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-dimethoxyphenyl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-dimethoxyphenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-dimethoxyphenyl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-dimethoxyphenyl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-dimethoxyphenyl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(2,4-dimethoxyphenyl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-dimethoxyphenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-dimethoxyphenyl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-dimethoxyphenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-dimethoxyphenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-dimethoxyphenyl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-dimethoxyphenyl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(2,4-dimethoxyphenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(2-(trifluoromethoxy)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2-(trifluoromethoxy)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-methyl-6-(2-(trifluoromethoxy)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-methoxy-6-(2-(trifluoromethoxy)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2-(trifluoromethoxy)phenyl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(2-(trifluoromethoxy)phenyl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2-(trifluoromethoxy)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2-(trifluoromethoxy)phenyl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2-(trifluoromethoxy)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2-(trifluoromethoxy)phenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2-(trifluoromethoxy)phenyl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(2-(trifluoromethoxy)phenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(2-(trifluoromethoxy)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[d][1,3]dioxol-5-yl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[d][1,3]dioxol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[d][1,3]dioxol-5-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[d][1,3]dioxol-5-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[d][1,3]dioxol-5-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(benzo[d][1,3]dioxol-5-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[d][1,3]dioxol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[d][1,3]dioxol-5-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[d][1,3]dioxol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[d][1,3]dioxol-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[d][1,3]dioxol-5-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[d][1,3]dioxol-5-yl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(benzo[d][1,3]dioxol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3-(dimethylamino)phenyl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3-(dimethylamino)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3-(dimethylamino)phenyl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3-(dimethylamino)phenyl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3-(dimethylamino)phenyl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(3-(dimethylamino)phenyl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3-(dimethylamino)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3-(dimethylamino)phenyl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3-(dimethylamino)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3-(dimethylamino)phenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3-(dimethylamino)phenyl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3-(dimethylamino)phenyl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(3-(dimethylamino)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(4-phenoxyphenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(4-phenoxyphenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-methyl-6-(4-phenoxyphenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-methoxy-6-(4-phenoxyphenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(4-phenoxyphenyl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(4-phenoxyphenyl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(4-phenoxyphenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(4-phenoxyphenyl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(4-phenoxyphenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(4-phenoxyphenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(4-phenoxyphenyl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(4-phenoxyphenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(4-phenoxyphenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(1H-indol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-indol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-indol-5-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-indol-5-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-indol-5-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(1H-indol-5-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-indol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-indol-5-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-indol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-indol-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-indol-5-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(1H-indol-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(1H-indol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(isoquinolin-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-5-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-5-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-5-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((([3,5'-biisoquinolin]-1-ylmethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(isoquinolin-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(isoquinolin-5-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(isoquinolin-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(isoquinolin-5-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(isoquinolin-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(isoquinolin-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-methyl-6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-methoxy-6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(thiophen-3-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(thiophen-3-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(thiophen-3-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(thiophen-3-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(thiophen-3-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(thiophen-3-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[b]thiophen-3-yl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[b]thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[b]thiophen-3-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[b]thiophen-3-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[b]thiophen-3-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(benzo[b]thiophen-3-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[b]thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[b]thiophen-3-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[b]thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[b]thiophen-3-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[b]thiophen-3-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[b]thiophen-3-yl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(benzo[b]thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(5-acetylthiophen-2-yl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(5-acetylthiophen-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(5-acetylthiophen-2-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(5-acetylthiophen-2-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(5-acetylthiophen-2-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(5-acetylthiophen-2-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(5-acetylthiophen-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(5-acetylthiophen-2-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(5-acetylthiophen-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(5-acetylthiophen-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(5-acetylthiophen-2-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(5-acetylthiophen-2-yl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(5-acetylthiophen-2-yl)-6-aminopyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(furan-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-2-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-2-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-2-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(furan-2-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(furan-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(furan-2-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(furan-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(furan-2-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(furan-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(furan-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzofuran-2-yl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzofuran-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzofuran-2-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzofuran-2-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzofuran-2-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(benzofuran-2-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzofuran-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzofuran-2-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzofuran-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzofuran-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzofuran-2-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzofuran-2-yl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(benzofuran-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(furan-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-3-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-3-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-3-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(furan-3-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(furan-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(furan-3-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(furan-3-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(furan-3-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(furan-3-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(furan-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(1H-pyrrol-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-pyrrol-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-methyl-6-(1H-pyrrol-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-methoxy-6-(1H-pyrrol-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-pyrrol-2-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(1H-pyrrol-2-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrrol-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrrol-2-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-pyrrol-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrrol-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrrol-2-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(1H-pyrrol-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(1H-pyrrol-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(isoquinolin-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-4-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-4-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-4-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((([3,4'-biisoquinolin]-1-ylmethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(isoquinolin-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(isoquinolin-4-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(isoquinolin-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(isoquinolin-4-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(isoquinolin-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(isoquinolin-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(quinolin-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(quinolin-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-methyl-6-(quinolin-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-methoxy-6-(quinolin-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(quinolin-4-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(quinolin-4-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(quinolin-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((([2,4'-biquinolin]-3-ylmethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(quinolin-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(quinolin-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(quinolin-4-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(quinolin-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(quinolin-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3',4-difluoro-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-fluoro-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-fluoro-4-methyl-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-fluoro-5-methoxy-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-fluoro-4-(trifluoromethyl)-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(3-fluoropyridin-4-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-fluoro-[2,4'-bipyridin]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3-fluoropyridin-4-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-fluoro-[2,4'-bipyridin]-5-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-fluoro-[2,4'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-fluoro-6-(trifluoromethyl)-[2,4'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3',5-difluoro-[2,4'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-3'-fluoro-[2,4'-bipyridin]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',4,6'-trifluoro-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',6'-difluoro-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',6'-difluoro-4-methyl-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',6'-difluoro-5-methoxy-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',6'-difluoro-4-(trifluoromethyl)-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(2,6-difluoropyridin-4-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',6'-difluoro-[2,4'-bipyridin]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,6-difluoropyridin-4-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',6'-difluoro-[2,4'-bipyridin]-5-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',6'-difluoro-[2,4'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',6'-difluoro-6-(trifluoromethyl)-[2,4'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',5,6'-trifluoro-[2,4'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2',6'-difluoro-[2,4'-bipyridin]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-4-fluoro-[2,3'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-[2,3'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-4-methyl-[2,3'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-5-methoxy-[2,3'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-4-(trifluoromethyl)-[2,3'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(6-(dimethylamino)pyridin-3-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-[2,3'-bipyridin]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(6-(dimethylamino)pyridin-3-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-[2,3'-bipyridin]-5-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-[2,3'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-6-(trifluoromethyl)-[2,3'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-5-fluoro-[2,3'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-6'-(dimethylamino)-[2,3'-bipyridin]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2-(dimethylamino)pyrimidin-5-yl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2-(dimethylamino)pyrimidin-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2-(dimethylamino)pyrimidin-5-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2-(dimethylamino)pyrimidin-5-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2-(dimethylamino)pyrimidin-5-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(2-(dimethylamino)pyrimidin-5-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2-(dimethylamino)pyrimidin-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2-(dimethylamino)pyrimidin-5-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2-(dimethylamino)pyrimidin-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2-(dimethylamino)pyrimidin-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2-(dimethylamino)pyrimidin-5-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2-(dimethylamino)pyrimidin-5-yl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(2-(dimethylamino)pyrimidin-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3,5-dimethylisoxazol-4-yl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3,5-dimethylisoxazol-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3,5-dimethylisoxazol-4-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3,5-dimethylisoxazol-4-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3,5-dimethylisoxazol-4-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(3,5-dimethylisoxazol-4-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3,5-dimethylisoxazol-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3,5-dimethylisoxazol-4-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3,5-dimethylisoxazol-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3,5-dimethylisoxazol-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3,5-dimethylisoxazol-4-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3,5-dimethylisoxazol-4-yl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(3,5-dimethylisoxazol-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(1H-pyrazol-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-pyrazol-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-methyl-6-(1H-pyrazol-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-methoxy-6-(1H-pyrazol-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-pyrazol-4-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(1H-pyrazol-4-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrazol-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrazol-4-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-pyrazol-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrazol-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrazol-4-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(1H-pyrazol-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(1H-pyrazol-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(1H-pyrazol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-pyrazol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-methyl-6-(1H-pyrazol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-methoxy-6-(1H-pyrazol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-pyrazol-5-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(1H-pyrazol-5-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrazol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrazol-5-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-pyrazol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrazol-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrazol-5-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(1H-pyrazol-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(1H-pyrazol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',4'-bis(trifluoromethyl)-[1,1'-biphenyl]-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',4'-bis(trifluoromethyl)-[1,1'-biphenyl]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',4'-dimethoxy-[1,1'-biphenyl]-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',4'-dimethoxy-[1,1'-biphenyl]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2'-(trifluoromethoxy)-[1,1'-biphenyl]-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2'-(trifluoromethoxy)-[1,1'-biphenyl]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(benzo[d][1,3]dioxol-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(benzo[d][1,3]dioxol-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-(dimethylamino)-[1,1'-biphenyl]-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-(dimethylamino)-[1,1'-biphenyl]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4'-phenoxy-[1,1'-biphenyl]-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4'-phenoxy-[1,1'-biphenyl]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(1H-indol-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(1H-indol-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(isoquinolin-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(isoquinolin-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(thiophen-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(thiophen-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(benzo[b]thiophen-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(benzo[b]thiophen-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(5-acetylthiophen-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(5-acetylthiophen-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(furan-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(furan-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(benzofuran-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(benzofuran-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(furan-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(furan-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(1H-pyrrol-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(1H-pyrrol-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(isoquinolin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(isoquinolin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(quinolin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(quinolin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(3-fluoropyridin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(3-fluoropyridin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(2,6-difluoropyridin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(2,6-difluoropyridin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(6-(dimethylamino)pyridin-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(6-(dimethylamino)pyridin-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(2-(dimethylamino)pyrimidin-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(2-(dimethylamino)pyrimidin-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(3,5-dimethylisoxazol-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(3,5-dimethylisoxazol-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

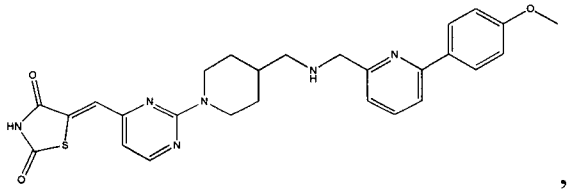
(Z)-5-((2-(4-(((2-(1H-pyrazol-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(1H-pyrazol-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(1H-pyrazol-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione; and

(Z)-5-((2-(4-(((3-(1H-pyrazol-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione.

2. The compound of claim 1, selected from the group consisting of: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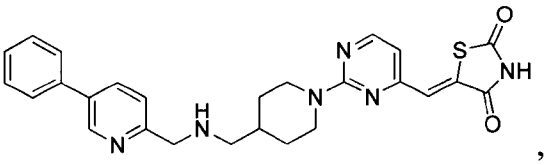
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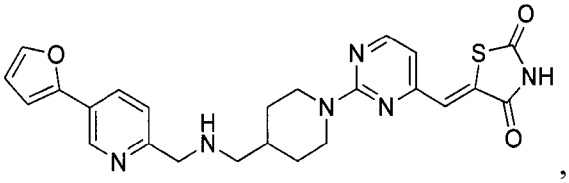
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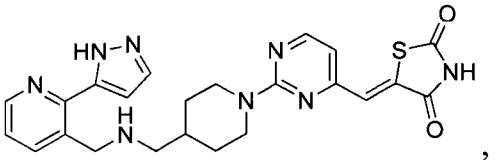
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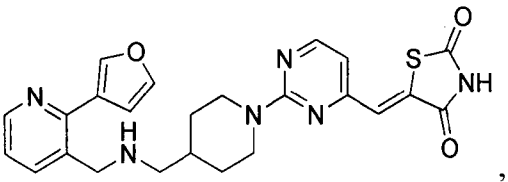
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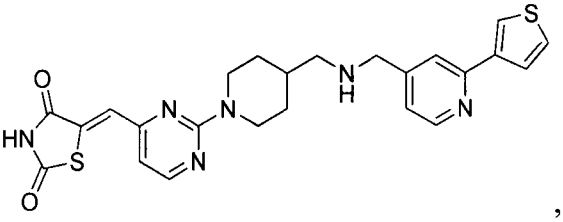
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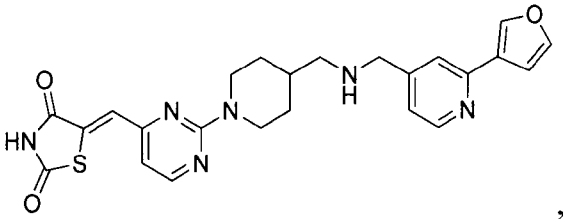
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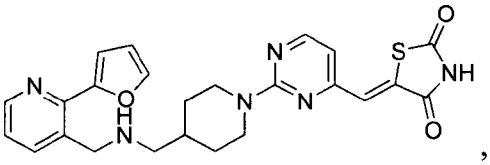
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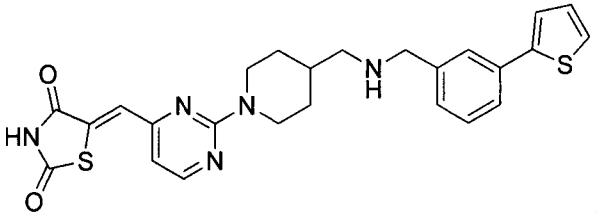
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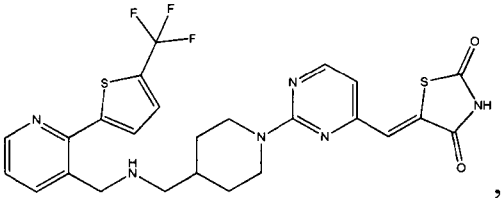
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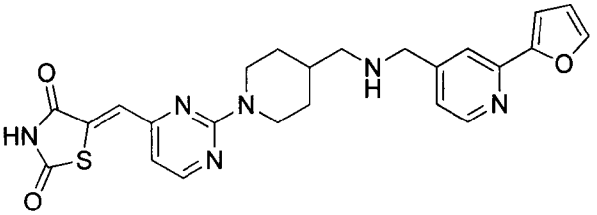
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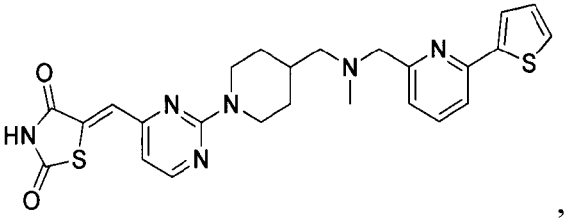
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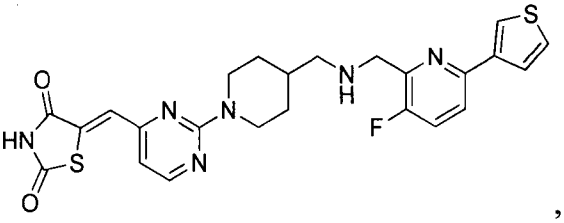
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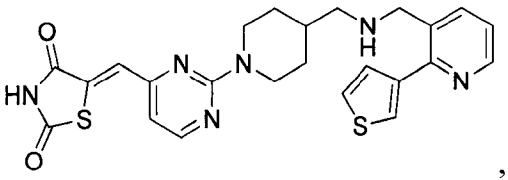
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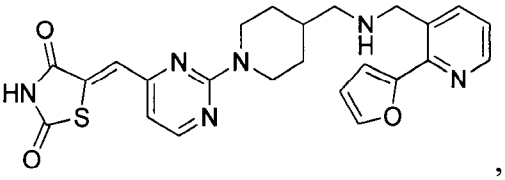
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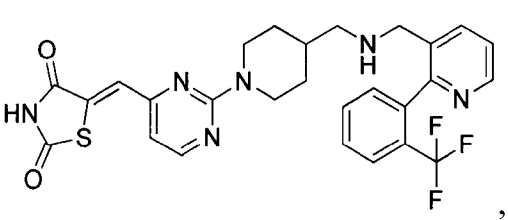
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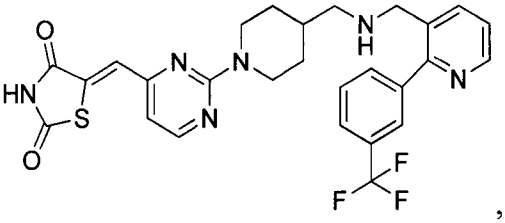
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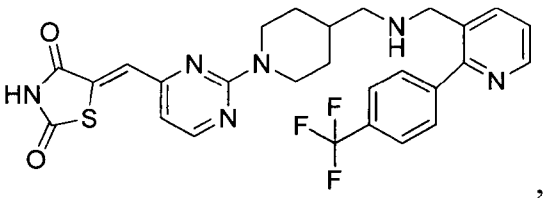
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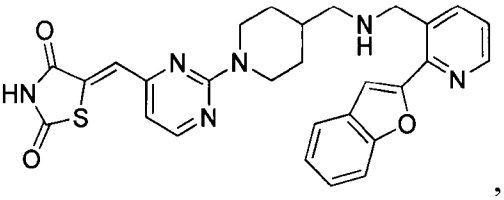
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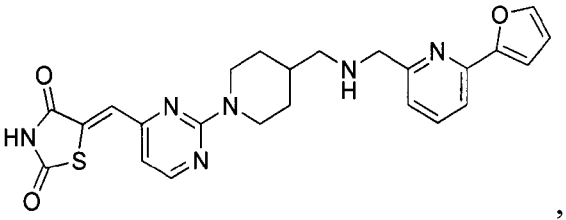
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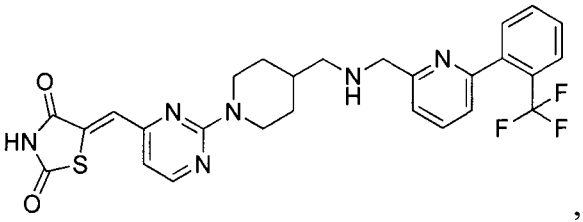
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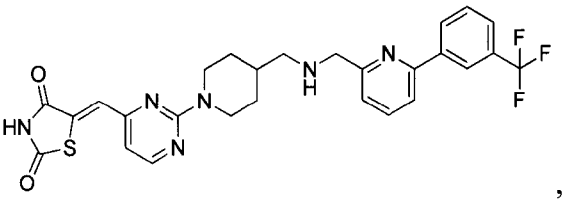
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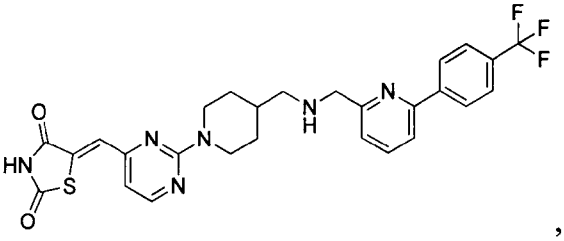
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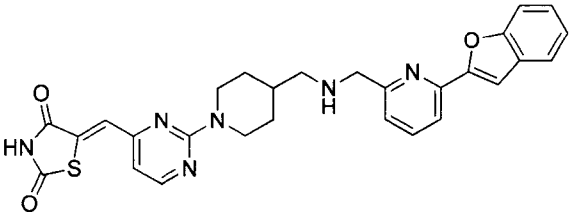
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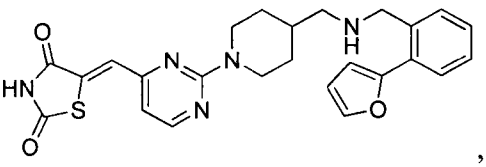
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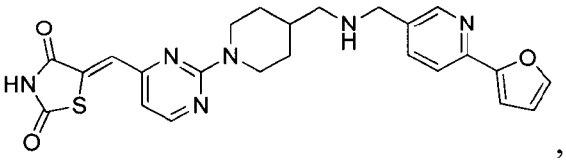
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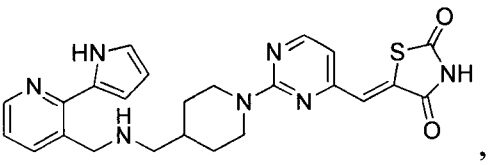
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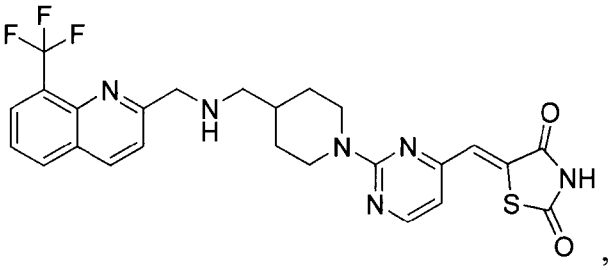
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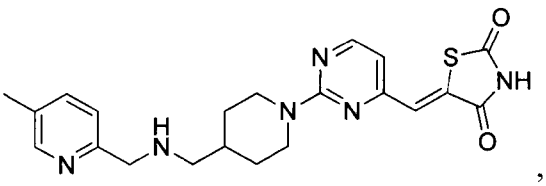
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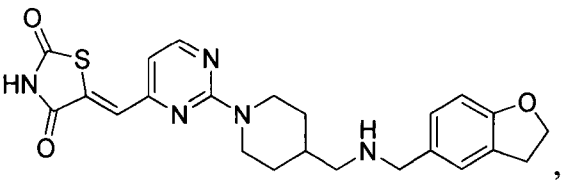
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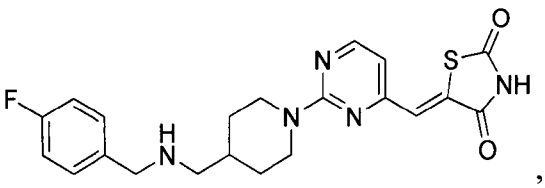
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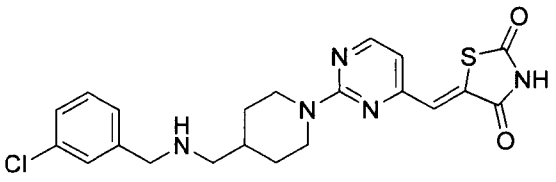
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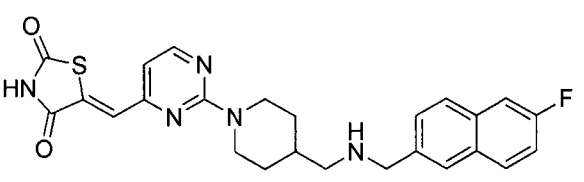
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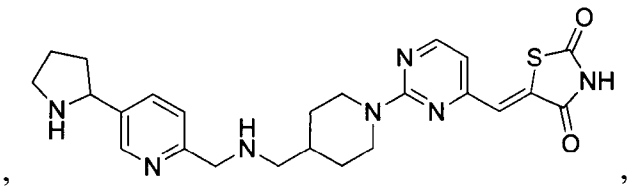
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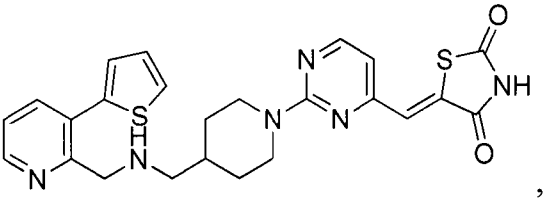
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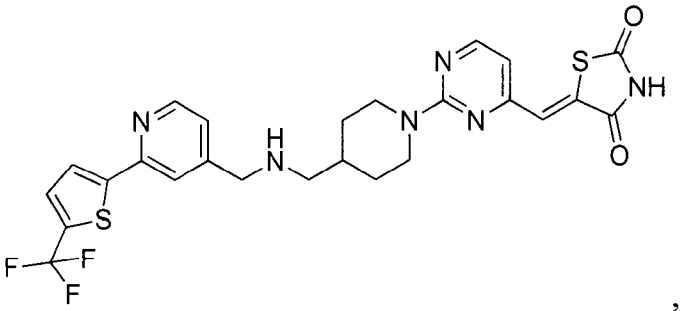
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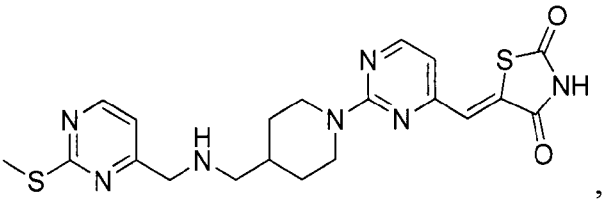
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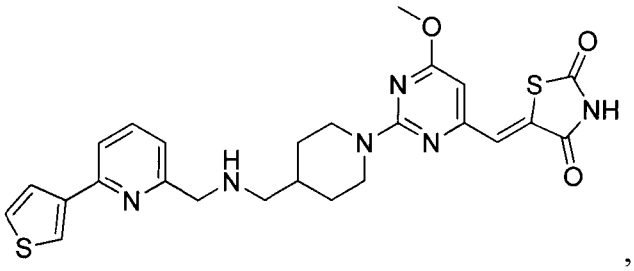

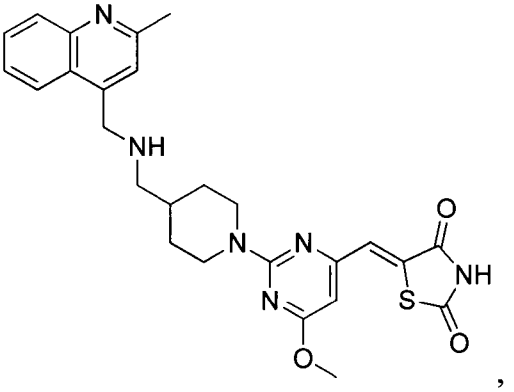

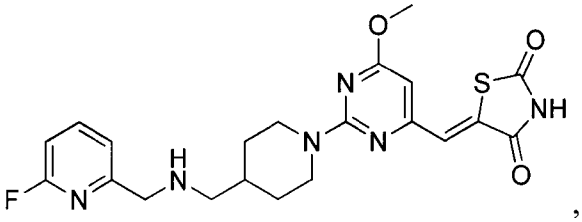

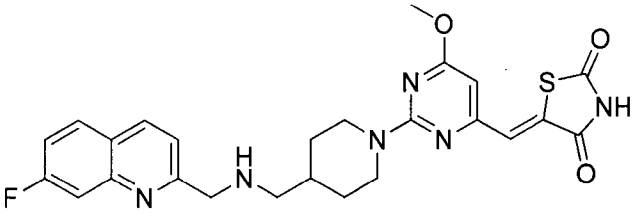

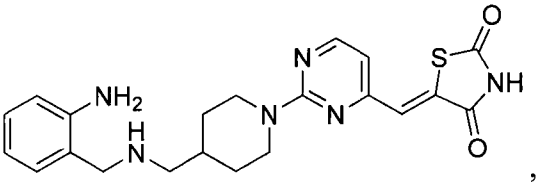

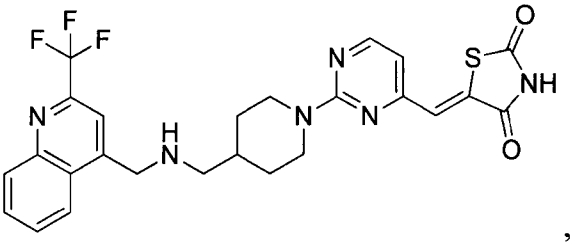

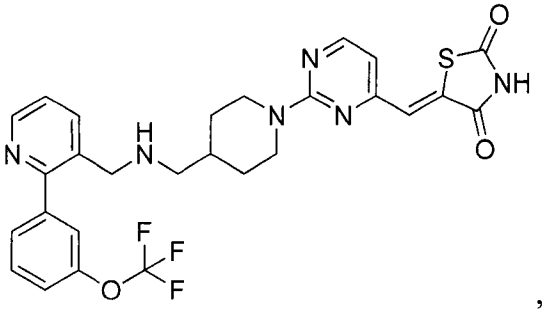

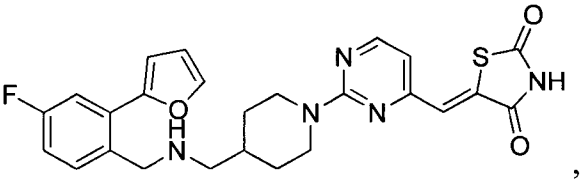

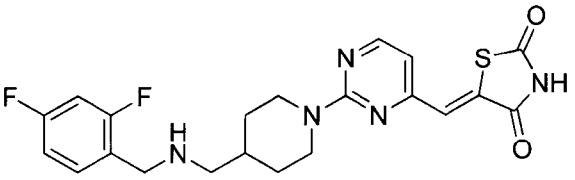

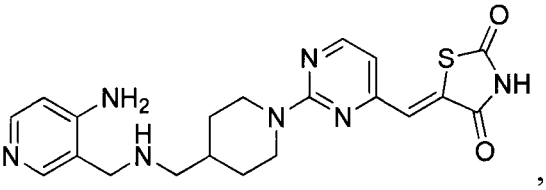

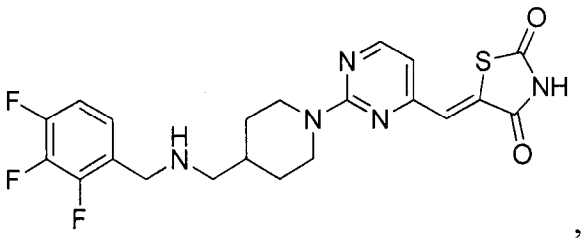
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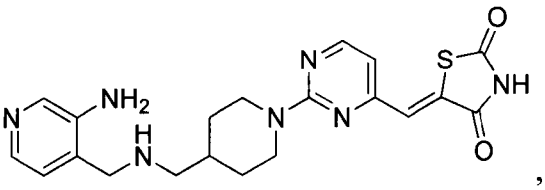
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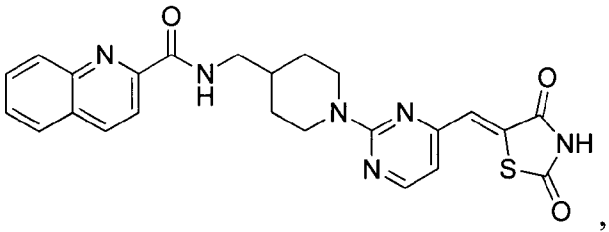
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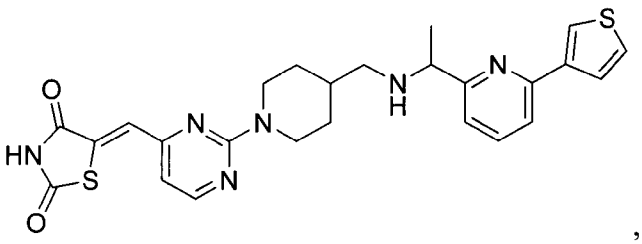
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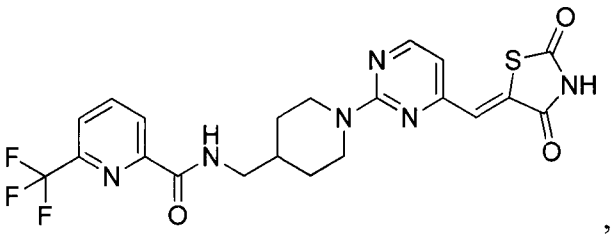
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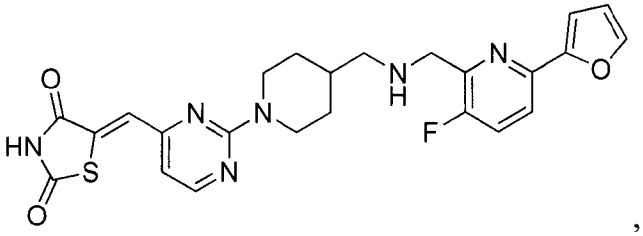
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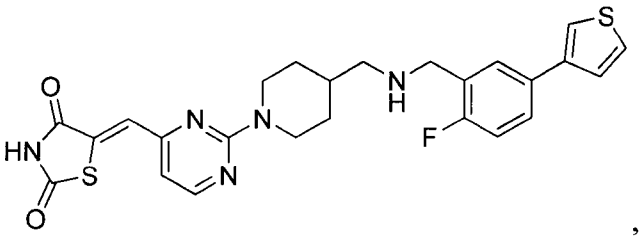
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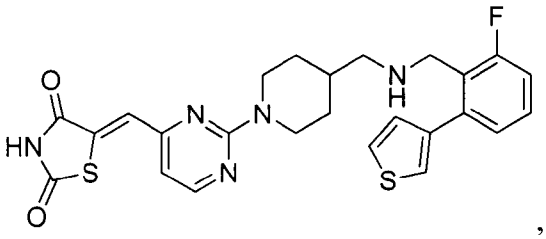
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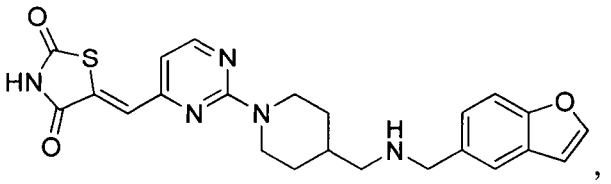
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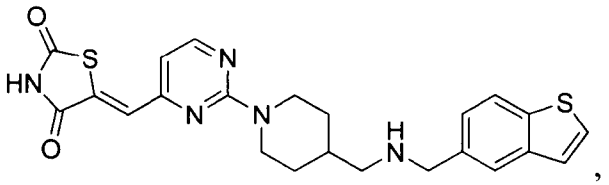
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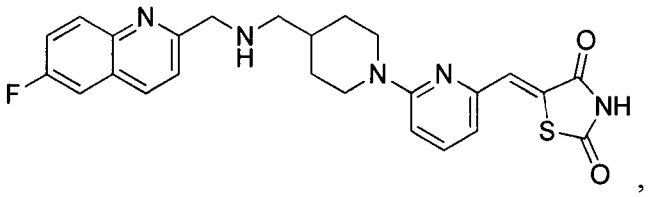
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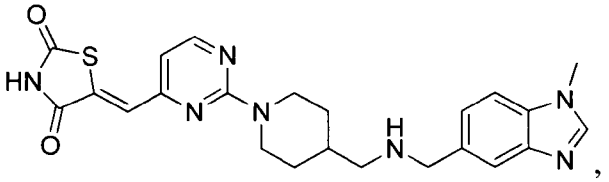
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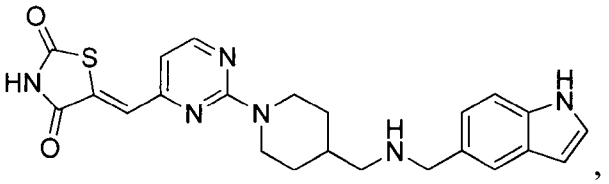
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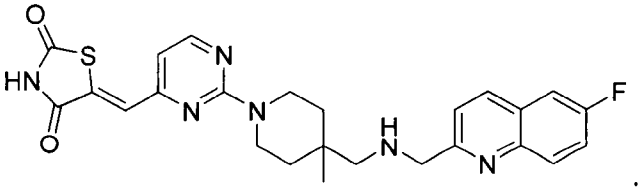
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3. The compound of claim 1, selected from the group consisting of:

(Z)-5-((2-(4-((((6-(2,4-bis(trifluoromethyl)phenyl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-bis(trifluoromethyl)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-bis(trifluoromethyl)phenyl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-bis(trifluoromethyl)phenyl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-bis(trifluoromethyl)phenyl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(2,4-bis(trifluoromethyl)phenyl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-bis(trifluoromethyl)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-bis(trifluoromethyl)phenyl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-bis(trifluoromethyl)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-bis(trifluoromethyl)phenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-bis(trifluoromethyl)phenyl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-bis(trifluoromethyl)phenyl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(2,4-bis(trifluoromethyl)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-dimethoxyphenyl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-dimethoxyphenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-dimethoxyphenyl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-dimethoxyphenyl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-dimethoxyphenyl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(2,4-dimethoxyphenyl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-dimethoxyphenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-dimethoxyphenyl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2,4-dimethoxyphenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-dimethoxyphenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-dimethoxyphenyl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,4-dimethoxyphenyl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(2,4-dimethoxyphenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(2-(trifluoromethoxy)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2-(trifluoromethoxy)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-methyl-6-(2-(trifluoromethoxy)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-methoxy-6-(2-(trifluoromethoxy)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2-(trifluoromethoxy)phenyl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(2-(trifluoromethoxy)phenyl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2-(trifluoromethoxy)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2-(trifluoromethoxy)phenyl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2-(trifluoromethoxy)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2-(trifluoromethoxy)phenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2-(trifluoromethoxy)phenyl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(2-(trifluoromethoxy)phenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(2-(trifluoromethoxy)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[d][1,3]dioxol-5-yl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[d][1,3]dioxol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[d][1,3]dioxol-5-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[d][1,3]dioxol-5-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[d][1,3]dioxol-5-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(benzo[d][1,3]dioxol-5-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[d][1,3]dioxol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[d][1,3]dioxol-5-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[d][1,3]dioxol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[d][1,3]dioxol-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[d][1,3]dioxol-5-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[d][1,3]dioxol-5-yl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(benzo[d][1,3]dioxol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3-(dimethylamino)phenyl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3-(dimethylamino)phenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3-(dimethylamino)phenyl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3-(dimethylamino)phenyl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3-(dimethylamino)phenyl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(3-(dimethylamino)phenyl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3-(dimethylamino)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3-(dimethylamino)phenyl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3-(dimethylamino)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3-(dimethylamino)phenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3-(dimethylamino)phenyl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3-(dimethylamino)phenyl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(3-(dimethylamino)phenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(4-phenoxyphenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(4-phenoxyphenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-methyl-6-(4-phenoxyphenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-methoxy-6-(4-phenoxyphenyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(4-phenoxyphenyl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(4-phenoxyphenyl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(4-phenoxyphenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(4-phenoxyphenyl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(4-phenoxyphenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(4-phenoxyphenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(4-phenoxyphenyl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(4-phenoxyphenyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(4-phenoxyphenyl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(1H-indol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-indol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-indol-5-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-indol-5-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-indol-5-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(1H-indol-5-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-indol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-indol-5-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-indol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-indol-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-indol-5-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(1H-indol-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(1H-indol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(isoquinolin-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-5-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-5-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-5-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((([3,5'-biisoquinolin]-1-ylmethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(isoquinolin-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(isoquinolin-5-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(isoquinolin-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(isoquinolin-5-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(isoquinolin-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(isoquinolin-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-methyl-6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-methoxy-6-(thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(thiophen-3-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(thiophen-3-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(thiophen-3-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(thiophen-3-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(thiophen-3-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(thiophen-3-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[b]thiophen-3-yl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[b]thiophen-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[b]thiophen-3-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[b]thiophen-3-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[b]thiophen-3-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(benzo[b]thiophen-3-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[b]thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[b]thiophen-3-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzo[b]thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[b]thiophen-3-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[b]thiophen-3-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzo[b]thiophen-3-yl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(benzo[b]thiophen-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(5-acetylthiophen-2-yl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(5-acetylthiophen-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(5-acetylthiophen-2-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(5-acetylthiophen-2-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(5-acetylthiophen-2-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(5-acetylthiophen-2-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(5-acetylthiophen-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(5-acetylthiophen-2-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(5-acetylthiophen-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(5-acetylthiophen-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(5-acetylthiophen-2-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(5-acetylthiophen-2-yl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(5-acetylthiophen-2-yl)-6-aminopyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(furan-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-2-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-2-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-2-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(furan-2-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(furan-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(furan-2-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(furan-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(furan-2-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(furan-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(furan-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzofuran-2-yl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzofuran-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzofuran-2-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzofuran-2-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzofuran-2-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(benzofuran-2-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzofuran-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzofuran-2-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(benzofuran-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzofuran-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzofuran-2-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(benzofuran-2-yl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(benzofuran-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(furan-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-3-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-3-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-3-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-3-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(furan-3-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(furan-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(furan-3-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(furan-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(furan-3-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(furan-3-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(furan-3-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(furan-3-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(1H-pyrrol-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-pyrrol-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-methyl-6-(1H-pyrrol-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-methoxy-6-(1H-pyrrol-2-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-pyrrol-2-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(1H-pyrrol-2-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrrol-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrrol-2-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-pyrrol-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrrol-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrrol-2-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(1H-pyrrol-2-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(1H-pyrrol-2-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(isoquinolin-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-4-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-4-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-4-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((([3,4'-biisoquinolin]-1-ylmethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(isoquinolin-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(isoquinolin-4-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(isoquinolin-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(isoquinolin-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(isoquinolin-4-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(isoquinolin-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(isoquinolin-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(quinolin-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(quinolin-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-methyl-6-(quinolin-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-methoxy-6-(quinolin-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(quinolin-4-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(quinolin-4-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(quinolin-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((([2,4'-biquinolin]-3-ylmethyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(quinolin-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(quinolin-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(quinolin-4-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(quinolin-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(quinolin-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3',4-difluoro-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-fluoro-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-fluoro-4-methyl-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-fluoro-5-methoxy-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-fluoro-4-(trifluoromethyl)-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(3-fluoropyridin-4-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-fluoro-[2,4'-bipyridin]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3-fluoropyridin-4-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-fluoro-[2,4'-bipyridin]-5-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-fluoro-[2,4'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-fluoro-6-(trifluoromethyl)-[2,4'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3',5-difluoro-[2,4'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-3'-fluoro-[2,4'-bipyridin]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',4,6'-trifluoro-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',6'-difluoro-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',6'-difluoro-4-methyl-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',6'-difluoro-5-methoxy-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',6'-difluoro-4-(trifluoromethyl)-[2,4'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(2,6-difluoropyridin-4-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',6'-difluoro-[2,4'-bipyridin]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2,6-difluoropyridin-4-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',6'-difluoro-[2,4'-bipyridin]-5-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',6'-difluoro-[2,4'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',6'-difluoro-6-(trifluoromethyl)-[2,4'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',5,6'-trifluoro-[2,4'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2',6'-difluoro-[2,4'-bipyridin]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-4-fluoro-[2,3'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-[2,3'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-4-methyl-[2,3'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-5-methoxy-[2,3'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-4-(trifluoromethyl)-[2,3'-bipyridin]-6-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(6-(dimethylamino)pyridin-3-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-[2,3'-bipyridin]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(6-(dimethylamino)pyridin-3-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-[2,3'-bipyridin]-5-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-[2,3'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-6-(trifluoromethyl)-[2,3'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6'-(dimethylamino)-5-fluoro-[2,3'-bipyridin]-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-6'-(dimethylamino)-[2,3'-bipyridin]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2-(dimethylamino)pyrimidin-5-yl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2-(dimethylamino)pyrimidin-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2-(dimethylamino)pyrimidin-5-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2-(dimethylamino)pyrimidin-5-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2-(dimethylamino)pyrimidin-5-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(2-(dimethylamino)pyrimidin-5-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2-(dimethylamino)pyrimidin-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2-(dimethylamino)pyrimidin-5-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(2-(dimethylamino)pyrimidin-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2-(dimethylamino)pyrimidin-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2-(dimethylamino)pyrimidin-5-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(2-(dimethylamino)pyrimidin-5-yl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(2-(dimethylamino)pyrimidin-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3,5-dimethylisoxazol-4-yl)-4-fluoropyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3,5-dimethylisoxazol-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3,5-dimethylisoxazol-4-yl)-4-methylpyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3,5-dimethylisoxazol-4-yl)-3-methoxypyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3,5-dimethylisoxazol-4-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(3,5-dimethylisoxazol-4-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3,5-dimethylisoxazol-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3,5-dimethylisoxazol-4-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(3,5-dimethylisoxazol-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3,5-dimethylisoxazol-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3,5-dimethylisoxazol-4-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(3,5-dimethylisoxazol-4-yl)-5-fluoropyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(3,5-dimethylisoxazol-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(1H-pyrazol-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-pyrazol-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-methyl-6-(1H-pyrazol-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-methoxy-6-(1H-pyrazol-4-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-pyrazol-4-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(1H-pyrazol-4-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrazol-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrazol-4-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-pyrazol-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrazol-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrazol-4-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(1H-pyrazol-4-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(1H-pyrazol-4-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-fluoro-6-(1H-pyrazol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-pyrazol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4-methyl-6-(1H-pyrazol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-methoxy-6-(1H-pyrazol-5-yl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-pyrazol-5-yl)-4-(trifluoromethyl)pyridin-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3-(1H-pyrazol-5-yl)isoquinolin-1-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrazol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrazol-5-yl)quinolin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-(1H-pyrazol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrazol-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2-(1H-pyrazol-5-yl)-6-(trifluoromethyl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((5-fluoro-2-(1H-pyrazol-5-yl)pyridin-4-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((6-amino-2-(1H-pyrazol-5-yl)pyridin-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',4'-bis(trifluoromethyl)-[1,1'-biphenyl]-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',4'-bis(trifluoromethyl)-[1,1'-biphenyl]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',4'-dimethoxy-[1,1'-biphenyl]-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2',4'-dimethoxy-[1,1'-biphenyl]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2'-(trifluoromethoxy)-[1,1'-biphenyl]-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((2'-(trifluoromethoxy)-[1,1'-biphenyl]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(benzo[d][1,3]dioxol-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(benzo[d][1,3]dioxol-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-(dimethylamino)-[1,1'-biphenyl]-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((3'-(dimethylamino)-[1,1'-biphenyl]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4'-phenoxy-[1,1'-biphenyl]-2-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-((((4'-phenoxy-[1,1'-biphenyl]-3-yl)methyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(1H-indol-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(1H-indol-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(isoquinolin-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(isoquinolin-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(thiophen-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(thiophen-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(benzo[b]thiophen-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(benzo[b]thiophen-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(5-acetylthiophen-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(5-acetylthiophen-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(furan-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(furan-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(benzofuran-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(benzofuran-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(furan-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(furan-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(1H-pyrrol-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(1H-pyrrol-2-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(isoquinolin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(isoquinolin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(quinolin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(quinolin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(3-fluoropyridin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(3-fluoropyridin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(2,6-difluoropyridin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(2,6-difluoropyridin-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(6-(dimethylamino)pyridin-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(6-(dimethylamino)pyridin-3-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(2-(dimethylamino)pyrimidin-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(2-(dimethylamino)pyrimidin-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((2-(3,5-dimethylisoxazol-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(3,5-dimethylisoxazol-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

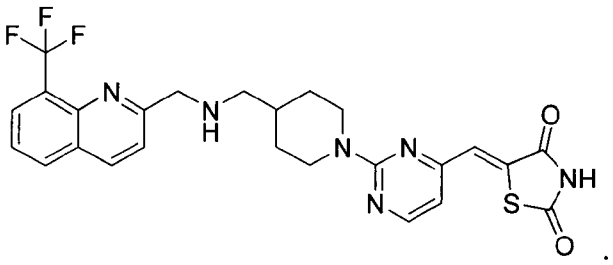
(Z)-5-((2-(4-(((2-(1H-pyrazol-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((2-(4-(((3-(1H-pyrazol-4-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione;

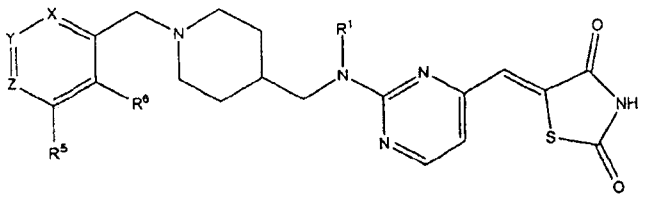
(Z)-5-((2-(4-(((2-(1H-pyrazol-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione; and

(Z)-5-((2-(4-(((3-(1H-pyrazol-5-yl)benzyl)amino)methyl)piperidin-1-yl)pyrimidin-4-yl)methylene)thiazolidine-2,4-dione.

4. The compound of claim 1, represented by the following structure:



5. A compound of formula 2 or a pharmaceutically acceptable salt thereof,



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wherein independently for each occurrence:

X is nitrogen or CR^2;

Y is nitrogen or CR^3;

Z is nitrogen or CR^4;

R^1 is hydrogen or $(C_1\text{-}C_6)$alkyl;

R^2 is selected from the group consisting of hydrogen, $(C_1\text{-}C_6)$alkyl, $(C_2\text{-}C_6)$alkenyl, $(C_2\text{-}C_6)$alkynyl, aryl, perfluoro$(C_1\text{-}C_6)$alkyl, heterocyclyl$(C_1\text{-}C_6)$alkyl, aryl$(C_1\text{-}C_6)$alkyl, heteroaryl, heteroaryl$(C_1\text{-}C_6)$alkyl, halo, hydroxy, $(C_1\text{-}C_6)$alkoxy, trifluoromethoxy, hydroxy$(C_1\text{-}C_6)$alkyl, and $(C_1\text{-}C_6)$alkoxy$(C_1\text{-}C_6)$alkyl;

R^3 and R^4 are each independently selected from the group consisting of hydrogen, $(C_1\text{-}C_6)$alkyl, $(C_2\text{-}C_6)$alkenyl, $(C_2\text{-}C_6)$alkynyl, aryl, perfluoro$(C_1\text{-}C_6)$alkyl, heterocyclyl$(C_1\text{-}C_6)$alkyl, aryl$(C_1\text{-}C_6)$alkyl, heteroaryl, heteroaryl$(C_1\text{-}C_6)$alkyl, halo, hydroxy, $(C_1\text{-}C_6)$alkoxy, trifluoromethoxy, hydroxy$(C_1\text{-}C_6)$alkyl, and $(C_1\text{-}C_6)$alkoxy$(C_1\text{-}C_6)$alkyl; or R^3 and R^4 are joined together to form an optionally substituted heterocyclic, heteroaryl, or aryl ring;

R^5 is selected from the group consisting of hydrogen, $(C_1\text{-}C_6)$alkyl, $(C_2\text{-}C_6)$alkenyl, $(C_2\text{-}C_6)$alkynyl, aryl, perfluoro$(C_1\text{-}C_6)$alkyl, heterocyclyl$(C_1\text{-}C_6)$alkyl, aryl$(C_1\text{-}C_6)$alkyl, heteroaryl, heteroaryl$(C_1\text{-}C_6)$alkyl, halo, hydroxy, $(C_1\text{-}C_6)$alkoxy, trifluoromethoxy, hydroxy$(C_1\text{-}C_6)$alkyl, and $(C_1\text{-}C_6)$alkoxy$(C_1\text{-}C_6)$alkyl;

R^6 is selected from the group consisting of hydrogen, $(C_1\text{-}C_6)$alkyl, $(C_2\text{-}C_6)$alkenyl, $(C_2\text{-}C_6)$alkynyl, aryl, perfluoro$(C_1\text{-}C_6)$alkyl, heterocyclyl$(C_1\text{-}C_6)$alkyl, aryl$(C_1\text{-}C_6)$alkyl, heteroaryl, heteroaryl$(C_1\text{-}C_6)$alkyl, halo, hydroxy, $(C_1\text{-}C_6)$alkoxy, trifluoromethoxy, hydroxy$(C_1\text{-}C_6)$alkyl, and $(C_1\text{-}C_6)$alkoxy$(C_1\text{-}C_6)$alkyl;

wherein any one of the aforementioned (C_1-C_6)alkyl, (C_2-C_6)alkenyl, (C_2-C_6)alkynyl, aryl, heteroaryl, heterocyclyl, aryl(C_1-C_6)alkyl, heteroaryl(C_1-C_6)alkyl, and heterocyclyl(C_1-C_6)alkyl may be optionally substituted by one or more substituents selected from the group consisting of halogen, azide, (C_1-C_6)alkyl, aryl(C_1-C_6)alkyl, (C_2-C_6)alkenyl, (C_2-C_6)alkynyl, (C_3-C_{10})cycloalkyl, hydroxyl, (C_1-C_6)alkoxyl, amino, nitro, sulfhydryl, imino, amido, phosphonate, phosphinate, carbonyl, carboxyl, silyl, ether, (C_1-C_6)alkylthio, sulfonyl, sulfonamido, ketone, aldehyde, ester, heterocyclyl, aryl, heteroaryl, -CF_3, and -CN;

wherein aryl is 5-, 6- and 7- membered single-ring aromatic groups or naphthalene, heteroaryl is 3- to 10- membered ring structure whose ring structure has one to four heteroatoms, and heterocyclyl is a 3- to 10-membered ring structure whose ring structure has one to four heteroatoms.

6. The compound of claim 5, wherein R^1 is hydrogen.

7. The compound of claim 5, wherein R^1 is methyl.

8. The compound of claim 5, wherein R^2 is selected from the group consisting of hydrogen, (C_1-C_6)alkyl, aryl, heterocyclyl(C_1-C_6)alkyl, aryl(C_1-C_6)alkyl, heteroaryl, heteroaryl(C_1-C_6)alkyl, and halo.

9. The compound of claim 5, wherein R^2 is hydrogen.

10. The compound of claim 5, wherein R^2 is methyl.

11. The compound of claim 5, wherein R^2 is fluorine.

12. The compound of claim 5, wherein R^2 is an optionally substituted heteroaryl.

13. The compound of claim 5, wherein R^2 is an optionally substituted aryl.

14. The compound of claim 5, wherein R^3 is selected from the group consisting of hydrogen, (C_1-C_6)alkyl, aryl, heterocyclyl(C_1-C_6)alkyl, aryl(C_1-C_6)alkyl, heteroaryl, heteroaryl(C_1-C_6)alkyl, and halo.

15. The compound of claim 5, wherein R^3 is hydrogen.

16. The compound of claim 5, wherein R^3 is methyl.

17. The compound of claim 5, wherein R^3 is fluorine.

18. The compound of claim 5, wherein R^3 is an optionally substituted heteroaryl.

19. The compound of claim 5, wherein R^3 is an optionally substituted aryl.

20. The compound of claim 5, wherein R^3 is an optionally substituted heterocyclyl(C_1-C_6)alkyl.

21. The compound of claim 5, wherein R^3 and R^4 are joined together to form an optionally substituted aryl.

22. The compound of claim 5, wherein R^3 and R^4 are joined together to form an optionally substituted heterocyclyl.

23. The compound of claim 5, wherein R^3 and R^4 are joined together to form an optionally substituted heteroaryl.

24. The compound of claim 5, wherein R^4 is selected from the group consisting of hydrogen, (C_1-C_6)alkyl, aryl, heterocyclyl(C_1-C_6)alkyl, aryl(C_1-C_6)alkyl, heteroaryl, heteroaryl(C_1-C_6)alkyl, and halo.

25 The compound of claim 5, wherein R^4 is hydrogen.

26. The compound of claim 5, wherein R^4 is methyl.

27. The compound of claim 5, wherein R^4 is fluorine.

28. The compound of claim 5, wherein R^4 is an optionally substituted heteroaryl.

29. The compound of claim 5, wherein R^4 is an optionally substituted aryl.

30. The compound of claim 5, wherein R^4 is an optionally substituted heterocyclyl(C_1-C_6)alkyl.

31. The compound of claim 5, wherein R^5 is selected from the group consisting of hydrogen, (C_1-C_6)alkyl, aryl, heterocyclyl(C_1-C_6)alkyl, aryl(C_1-C_6)alkyl, heteroaryl, heteroaryl(C_1-C_6)alkyl, and halo.

32. The compound of claim 5, wherein R^5 is hydrogen.

33. The compound of claim 5, wherein R^5 is methyl.

34. The compound of claim 5, wherein R^5 is fluorine.

35. The compound of claim 5, wherein R^5 is an optionally substituted heteroaryl.

36. The compound of claim 5, wherein R^5 is an optionally substituted aryl.

37. The compound of claim 5, wherein R^5 is an optionally substituted heterocyclyl(C_1-C_6)alkyl.

38. The compound of claim 5, wherein R^6 is selected from the group consisting of hydrogen, (C_1-C_6)alkyl, aryl, heterocyclyl(C_1-C_6)alkyl, aryl(C_1-C_6)alkyl, heteroaryl, heteroaryl(C_1-C_6)alkyl, and halo.

39. The compound of claim 5, wherein R^6 is hydrogen.

40. The compound of claim 5, wherein R^6 is methyl.

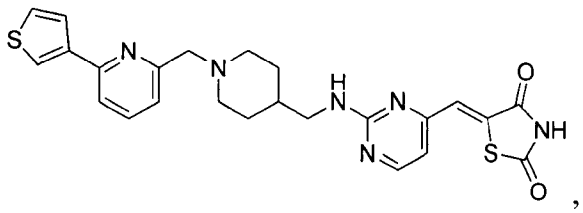
41. The compound of claim 5, wherein R^6 is fluorine.

42. The compound of claim 5, wherein R^6 is an optionally substituted heteroaryl.

43. The compound of claim 5, wherein R^6 is an optionally substituted aryl.

44. The compound of claim 5, wherein R^6 is an optionally substituted heterocyclyl(C_1-C_6)alkyl.

45. The compound of claim 5, or a pharmaceutically acceptable salt thereof, selected from the group consisting of: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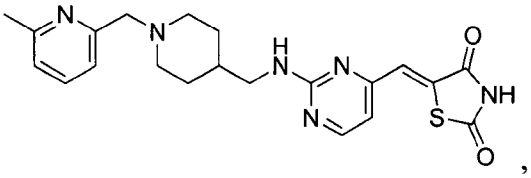
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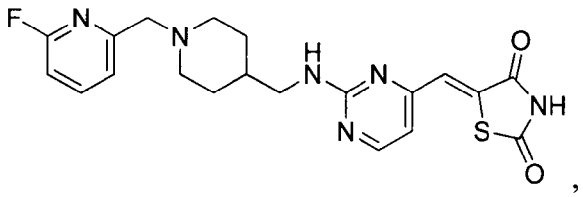
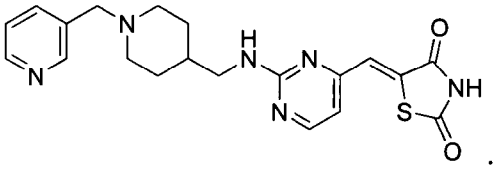

, and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46. A pharmaceutical composition, comprising a compound of any one of claims 1 to 45 and a pharmaceutically acceptable excipient.

47. Use of a compound of any one of claims 1 to 45 or a pharmaceutical composition of claim 46 to treat cancer;

wherein the cancer is selected from the group consisting of:

adrenocortical carcinoma; anal cancer; basal cell carcinoma; bladder cancer; breast cancer; bronchial adenomas/carcinoids; cervical cancer; colon cancer; colorectal cancer; endometrial cancer; esophageal cancer; extrahepatic bile duct cancer; gallbladder cancer; gastric (stomach) cancer; gastrointestinal carcinoid tumor; gestational trophoblastic tumor; head and neck cancer, hepatocellular (liver) cancer; hypopharyngeal cancer; kidney (renal cell) cancer; laryngeal cancer; lip and oral cavity cancer; metastatic squamous neck cancer with occult primary; multiple endocrine neoplasia syndrome; nasal cavity and paranasal sinus cancer; nasopharyngeal cancer; Non-Small Cell Lung cancer; oral cancer; oropharyngeal cancer; pancreatic cancer; parathyroid cancer; penile cancer; pituitary tumor; prostate cancer; rectal cancer; salivary gland cancer; skin carcinoma, Merkel Cell; small cell lung cancer; small intestine cancer; squamous cell carcinoma; thymoma; thymoma and thymic carcinoma; thyroid cancer; transitional cell cancer of the renal pelvis and ureter; urethral cancer; uterine cancer; vaginal cancer; vulvar cancer; Wilms' Tumor;

acute lymphoblastic leukemia; acute myeloid leukemia; AIDS-related lymphoma; Burkitt's lymphoma; chronic lymphocytic leukemia; chronic myelogenous leukemia; chronic myeloproliferative disorders; cutaneous T-cell lymphoma; hairy cell leukemia; hematologic (blood) cancer; Hodgkin's lymphoma; multiple myeloma/plasma cell neoplasm' mycosis fungoides; myelodysplastic syndromes; myelodysplastic/myeloproliferative diseases; multiple myeloma; Non-Hodgkin's lymphoma; primary central nervous system lymphoma; Sezary Syndrome; Waldenstrom's Macroglobulinemia;

Ewing's sarcoma; Kaposi's Sarcoma; osteosarcoma/malignant fibrous histiocytoma of bone; soft tissue sarcoma; uterine sarcoma;

extracranial germ cell tumor; extragonadal germ cell tumor; ovarian cancer; ovarian epithelial cancer; ovarian germ cell tumor; and testicular cancer.

48. The use of claim 47, wherein the cancer is selected from the group consisting of acute lymphoblastic leukemia; acute myeloid leukemia; AIDS-related lymphoma; breast cancer; Burkitt's lymphoma; chronic lymphocytic leukemia; chronic myelogenous leukemia; chronic myeloproliferative disorders; colon cancer; colorectal cancer; cutaneous T-cell lymphoma; Ewing's sarcoma; gastric (stomach) cancer; gastrointestinal carcinoid tumor; hairy cell leukemia; head and neck cancer; hematologic (blood) cancer, hepatocellular (liver) cancer; Hodgkin's lymphoma; lip and oral cavity cancer; metastatic squamous neck cancer with occult primary; multiple myeloma/plasma cell neoplasm' mycosis fungoides; myelodysplastic syndromes; myelodysplastic/myeloproliferative diseases; multiple myeloma; nasal cavity and paranasal sinus cancer; nasopharyngeal cancer; Non-Hodgkin's lymphoma; Non-Small Cell Lung cancer; oral cancer; oropharyngeal cancer; ovarian cancer; ovarian germ cell tumor; pancreatic cancer; primary central nervous system lymphoma; prostate cancer; small intestine cancer; squamous cell carcinoma; and Waldenstrom's Macroglobulinemia.

49. The use of claim 48, wherein the cancer is selected from the group consisting of acute lymphoblastic leukemia; acute myeloid leukemia; breast cancer; chronic lymphocytic leukemia; colon cancer; colorectal cancer; cutaneous T-cell lymphoma; Ewing's sarcoma; gastric (stomach) cancer; head and neck cancer; hepatocellular (liver) cancer; Hodgkin's lymphoma; multiple myeloma; nasopharyngeal cancer; Non-Hodgkin's lymphoma; Non-Small Cell Lung cancer; oral cancer; ovarian cancer; pancreatic cancer; squamous cell carcinoma; and prostate cancer.

50. The use of claim 48, wherein the cancer is selected from the group consisting of breast cancer; colon cancer; colorectal cancer; head and neck cancer; hepatocellular (liver) cancer; multiple myeloma; Non-Small Cell Lung cancer; ovarian cancer; squamous cell carcinoma; and prostate cancer.

51. The use of claim 47, wherein the cancer is selected from the group consisting of adrenocortical carcinoma; anal cancer; basal cell carcinoma; bladder cancer; breast cancer; bronchial adenomas/carcinoids; cervical cancer; colon cancer; colorectal cancer; endometrial cancer; esophageal cancer; extrahepatic bile duct cancer; gallbladder cancer; gastric (stomach) cancer; gastrointestinal carcinoid tumor; gestational trophoblastic tumor; head and neck cancer, hepatocellular (liver) cancer; hypopharyngeal cancer; kidney (renal cell) cancer; laryngeal cancer; lip and oral cavity cancer; metastatic squamous neck cancer with occult primary; multiple endocrine neoplasia syndrome; nasal cavity and paranasal sinus cancer; nasopharyngeal cancer; Non-Small Cell Lung cancer; oral cancer; oropharyngeal cancer; pancreatic cancer; parathyroid cancer; penile cancer; pituitary tumor; prostate cancer; rectal cancer; salivary gland cancer; skin carcinoma, Merkel Cell; small cell lung cancer; small intestine cancer; squamous cell carcinoma; thymoma; thymoma and thymic carcinoma; thyroid cancer; transitional cell cancer of the renal pelvis and ureter; urethral cancer; uterine cancer; vaginal cancer; vulvar cancer; and Wilms' Tumor.

52. The use of claim 51, wherein the cancer is selected from the group consisting of breast cancer; colon cancer; colorectal cancer; gastric (stomach) cancer; head and neck cancer, hepatocellular (liver) cancer; metastatic squamous neck cancer with occult primary; nasopharyngeal cancer; Non-Small Cell lung cancer; oral cancer; pancreatic cancer; prostate cancer; and squamous cell carcinoma.

53. The use of claim 47, wherein the cancer is selected from the group consisting of acute lymphoblastic leukemia; acute myeloid leukemia; AIDS-related lymphoma; Burkitt's lymphoma; chronic lymphocytic leukemia; chronic myelogenous leukemia; chronic myeloproliferative disorders; cutaneous T-cell lymphoma; hairy cell leukemia; hematologic (blood) cancer; Hodgkin's lymphoma; multiple myeloma/plasma cell neoplasm' mycosis fungoides; myelodysplastic syndromes; myelodysplastic/myeloproliferative diseases; multiple myeloma; Non-Hodgkin's lymphoma; primary central nervous system lymphoma; Sezary Syndrome; and Waldenstrom's Macroglobulinemia.

54. The use of claim 53, wherein the cancer is selected from the group consisting of acute lymphoblastic leukemia; acute myeloid leukemia; chronic lymphocytic leukemia; cutaneous T-cell lymphoma; hematologic (blood) cancer; Hodgkin's lymphoma; multiple myeloma; and Non-Hodgkin's lymphoma.

55. The use of claim 47, wherein the cancer is selected from the group consisting of Ewing's sarcoma; Kaposi's Sarcoma; osteosarcoma/malignant fibrous histiocytoma of bone; soft tissue sarcoma; and uterine sarcoma.

56. The use of claim 47, wherein the cancer is selected from the group consisting of extracranial germ cell tumor; extragonadal germ cell tumor; ovarian cancer; ovarian epithelial cancer; ovarian germ cell tumor; and testicular cancer.