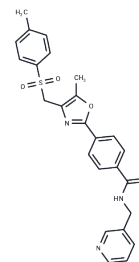


STF-118804

Chemical Properties

CAS No. : 894187-61-2
 Formula: C₂₅H₂₃N₃O₄S
 Molecular Weight: 461.53
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
 Actual storage temperature shall be subject to the COA.



Biological Description

Description	STF-118804, a highly specific NAMPT inhibitor, reduces the viability of most B-ALL cell lines with an IC ₅₀ of less than 10 nM.
Targets(IC ₅₀)	Apoptosis, AMPK, mTOR, NAMPT
In vitro	STF-118804 reduces the viability of B-ALL cell lines containing MLL chromosomal translocations, with IC ₅₀ values in the low nanomolar range. In addition, leukemic samples from ?ve pediatric ALL patients are also sensitive to STF-118804 in the low nanomolar range. STF-118804 induces leukemia MV411 cell apoptosis without antecedent cell cycle arrest. [1]
In vivo	STF-118804 (25 mg/kg twice daily, s.c.) improves survival in an orthotopic xenotransplant model of high-risk acute lymphoblastic leukemia, and effectively depletes leukemia-initiating cells. [1]
Kinase Assay	Enzyme Assays: The enzymatic activities of NAMPT and NMNAT are measured using in vitro kits and using the Two-Step Method per manufacturer's instructions. Compounds, NAMPT and/or NMNAT enzymes, and their substrates are mixed and incubated at 30°C for 1 hour. Reagents for the indicator reaction (Wst-1) are then added, and absorbance is read at 450 nm every 5 min at 30°C on a Tecan Infinite M100 multimode plate reader.
Cell Research	Human cell lines or lineage negative cord blood cells were seeded into 96-well plates (6×10 ⁵ cells per milliliter). Compounds are added in increasing concentrations, and cells are incubated at 37°C/5% CO ₂ for 72 hours. To detect viability, CellTiter-Blue reagent is added at 1:10 dilution, and plates are incubated for 4 hours at 37°C/5% CO ₂ prior to reading on a Flexstation II 384 or a Synergy H1 reader at an excitation of 555 nm and emission detection of 590 nm. Cell viability is also measured by CellTiter-Fluor. The cell-permeable fluorogenic peptide substrate GF-AFC reagent is added at 1:2 dilution, and plates are incubated for 30 min at 37°C/5% CO ₂ prior to reading on a Synergy H1 reader at an excitation of 380 nm and emission detection of 505 nm. Cord blood cells are enumerated on a hemocytometer, and cell viability is assessed with trypan blue exclusion dye. Inhibitory concentration (IC ₅₀) is calculated using Prism software. Primary patient samples are plated in 96-well plates and treated with increasing concentrations of STF-118804 for 48 hours at 37°C in 5% CO ₂ . WST-1 reagent is added to the culture medium (1:10 dilution), and absorbance is measured at 450 nm using a Bio-Rad model 680 microplate reader. All assays are performed in triplicate. IC ₅₀ is calculated using CalcuSyn version 2.0 software. (Only for Reference)

Solubility Information

Solubility	DMSO: 46.2 mg/mL (100.1 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1667 mL	10.8335 mL	21.6671 mL
5 mM	0.4333 mL	2.1667 mL	4.3334 mL
10 mM	0.2167 mL	1.0834 mL	2.1667 mL
50 mM	0.0433 mL	0.2167 mL	0.4333 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Matheny CJ, et al. Chem Biol. 2013, 20(11), 1352-1363.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only· Not for Human or Veterinary or Therapeutic Use

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