

CAY10784

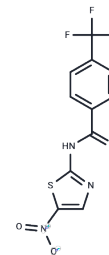
Chemical Properties

CAS No. : 1245814-52-1

Formula: C₁₁H₆F₃N₃O₃S

Molecular Weight: 317.24

Storage: Store at low temperature, Keep away from moisture
 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	CAY10784 (STAT3-IN-17) is a STAT3 inhibitor with antiproliferative and antitumor activities. CAY10784 showed antibacterial activity against Clostridium difficile.
Targets(IC50)	Antibacterial, STAT
In vitro	CAY10784 is a STAT3 inhibitor (IC ₅₀ = 0.74 μM) and a derivative of WP1066. [2] CAY10784 inhibits proliferation of HeLa (IC ₅₀ s = 1.8 μM), Caco-2 (IC ₅₀ s = 1.8 μM), A549 (IC ₅₀ s = 3 μM), A375 (IC ₅₀ s = 2.8 μM), U87MG (IC ₅₀ s = 2.3 μM), and HL-60 (IC ₅₀ s = 1.2 μM) cancer cells but not PC3 or HT-29 cancer cells (IC ₅₀ s = >10 μM for both). CAY10784 is also active against H. pylori (MICs = 1.6 μM) and C. jejuni (MICs = 4.7 μM). [1]

Solubility Information

Solubility	DMF:PBS (pH 7.2) (1:2): 0.33 mg/mL (1.04 mM), Sonication is recommended. H ₂ O: < 1 mg/mL (insoluble or slightly soluble.) DMSO: 5 mg/mL (15.76 mM), Sonication is recommended. Ethanol: 1 mg/mL (3.15 mM), Sonication is recommended. DMF: 20 mg/mL (63.04 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	3.1522 mL	15.7609 mL	31.5219 mL
5 mM	0.6304 mL	3.1522 mL	6.3044 mL
10 mM	0.3152 mL	1.5761 mL	3.1522 mL
50 mM	0.063 mL	0.3152 mL	0.6304 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

Ballard TE, et al. Synthesis and antimicrobial evaluation of nitazoxanide-based analogues: identification of selective and broad spectrum activity. ChemMedChem. 2011 Feb 7;6(2):362-77.

Lü Z, et al. Structure-Activity Study of Nitazoxanide Derivatives as Novel STAT3 Pathway Inhibitors. ACS Med Chem Lett. 2021 Apr 1;12(5):696-703.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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