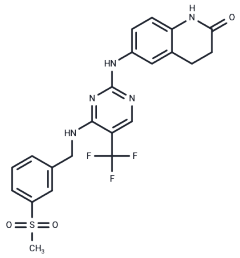
Data Sheet (Cat.No.T2001)

TargetMol

PF-573228

Chemical Properties



CAS No. : 869288-64-2

Formula: C22H20F3N5O3S

Molecular Weight: 491.49

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	PF-573228 is an ATP-competitive FAK inhibitor. In a cell-free assay, the IC50 of FAK is 4 nM.
Targets(IC50)	Apoptosis,FAK
In vivo	PF 573228 (IC50=30-500 nM) inhibited FAK Tyr397 phosphorylation in REF52 cells, PC3 cells, SKOV-3 cells, and L3.6p1 and F-G, MDCK cells.PF 573228 (1 μM) inhibited FAK phosphorylation but did not inhibit cell growth or induce apoptosis.
Kinase Assay	Affinity determination: Purified activated FAK kinase domain (amino acids 410-689) is reacted with 50 μM ATP, and 10 μg/well of a random peptide polymer of Glu and Tyr (molar ratio of 4:1), poly(Glu/Tyr) in kinase buffer (50 mM HEPES, pH 7.5, 125 mM NaCl, 48 mM MgCl2) for 15 min. Phosphorylation of poly(Glu/Tyr) is challenged with serially diluted compounds at 1/2-Log concentrations starting at a top concentration of 1 μM. Each concentration is run in triplicate. Phosphorylation of poly(Glu/Tyr) is detected with a general anti-phospho-tyrosine (PY20) antibody, followed by horseradish peroxidase-conjugated goat anti-mouse IgG antibody. The standard horseradish peroxidase substrate 3, 3', 5, 5'-tetramethylbenzidine is added, and Optical Density readings at 450 nm are obtained following the addition of stop solution (2 M H2SO4). The IC50 values are determined using the Hill slope model.
Cell Research	Growth assays are performed by seeding 1 × 104 REF52 or PC3 cells/well of a 24-well plate in triplicate 24 h prior to daily treatment with the indicated concentrations of each inhibitor for 3 days. Subsequently, the cells are harvested and counted.(Only for Reference)

Solubility Information

Solubility	DMSO: < 1 mg/mL (insoluble),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.07 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0346 mL	10.1731 mL	20.3463 mL
5 mM	0.4069 mL	2.0346 mL	4.0693 mL
10 mM	0.2035 mL	1.0173 mL	2.0346 mL
50 mM	0.0407 mL	0.2035 mL	0.4069 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

Slack-Davis JK, et al. J Biol Chem, 2007, 282(20), 14845-14852.
Wang W, Shen Z, Tang Y, et al. Astragaloside IV Promotes the Angiogenic Capacity of Adipose-derived Mesenchymal Stem Cells in a Hindlimb Ischemia Model by FAK Phosphorylation via CXCR2. Phytomedicine. 2021: 153908.
Wang W, Zhang D, Jiang Z, et al.A Nanodrug-Enabled chemosensitization of cancer stem cells against tumor progression and metastasis.Chemical Engineering Journal.2023, 477: 147121.