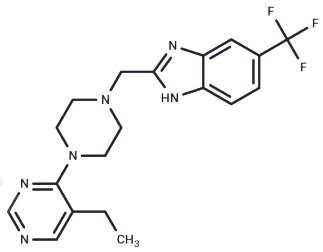
Data Sheet (Cat.No.T2002)

PF-4708671

Chemical Properties



CAS No. : 1255517-76-0

Formula: C19H21F3N6

Molecular Weight: 390.41

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-4708671 is a cell-permeable inhibitor of p70 ribosomal S6 kinase (S6K1 isoform) .In cell-free assays, PF-4708671(PF4708671) is potent for S6K1(Ki50=20 nM, IC50=160 nM).
Targets(IC50)	Autophagy,S6 Kinase
In vivo	PF-4708671 inhibits the phosphorylation of S6 protein mediated by S6K1 in response to IGF-1 (Insulin-like Growth Factor 1) and can also induce the phosphorylation of the T-loop and hydrophobic motif of S6K1 through mTORC1 (mTOR complex 1).
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.

Solubility Information

Solubility	DMSO: 19.5 mg/mL (49.95 mM),Sonication is recommended. Ethanol: 19.5 mg/mL (49.95 mM),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 (5.12 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	2.5614 mL	12.807 mL	25.6141 mL
5 mM	0.5123 mL	2.5614 mL	5.1228 mL
10 mM	0.2561 mL	1.2807 mL	2.5614 mL
50 mM	0.0512 mL	0.2561 mL	0.5123 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

Pearce LR, et al. Biochem J, 2010, 431(2), 245-255.