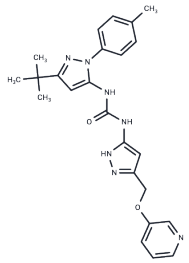
Data Sheet (Cat.No.T22397)

PF-4618433

Chemical Properties



CAS No. : 1166393-85-6

Formula: C24H27N7O2

Molecular Weight: 445.52

Storage: Store at low temperature
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-4618433 is a selective PYK2 inhibitor with osteogenic activity.
Targets(IC50)	PYK2
In vitro	PF-4618433 is a PYK2 inhibitor with an IC50 of 637 nM. PF-4618433 promotes bone formation in human mesenchymal stem cell (hMSC) cultures. [1] PF-4618433 (0-0.3 μM, 24h) significantly increased the proliferative activity of osteoblasts and promoted the differentiation from immature mineralized osteoblasts to mature osteoblasts. [2]

Solubility Information

Solubility	DMSO: 80 mg/mL (179.57 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: 3.3 mg/mL (7.41 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	2.2446 mL	11.2228 mL	22.4457 mL
5 mM	0.4489 mL	2.2446 mL	4.4891 mL
10 mM	0.2245 mL	1.1223 mL	2.2446 mL
50 mM	0.0449 mL	0.2245 mL	0.4489 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

Han S, et al. Structural characterization of proline-rich tyrosine kinase 2 (PYK2) reveals a unique (DFG-out) conformation and enables inhibitor design. J Biol Chem. 2009 May 8;284(19):13193-201.
Posritong S, et al. A Pyk2 inhibitor incorporated into a PEGDA-gelatin hydrogel promotes osteoblast activity and mineral deposition. Biomed Mater. 2019 Feb 27;14(2):025015.
Liu Y, et al. Selective Pyk2 inhibition enhances bone restoration through SCARA5-mediated bone marrow remodeling in ovariectomized mice. Cell Commun Signal. 2024 Nov 22;22(1):561.