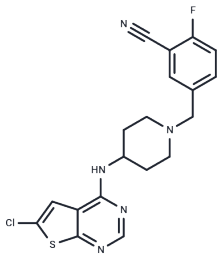
Data Sheet (Cat.No.T16669)

TargetMol

PRX-08066

Chemical Properties



CAS No. : 866206-54-4

Formula: C19H17ClFN5S

Molecular Weight: 401.89

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	PRX-08066, a selective 5-hydroxytryptamine receptor 2B (5-HT2BR, IC50= 3.4 nM) antagonist, induces selective vasodilation of pulmonary arteries.
Targets(IC50)	5-HT Receptor
In vitro	PRX-08066 inhibits TGFβ1, CTGF, and FGF2 transcription and secretion in KRJ-I cells. PRX-08066 decreases the level of transcripts for Ki67 (84%) as well as Ki67 protein (36.8%) associated with an increase in caspase 3 transcript levels in KRJ-I cells. PRX-08066 decreases the level of transcripts of TGFβ1, FGF2, and TPH1 in KRJ-I cells. PRX-08066 significantly increases the number of dead cells (34%) compared with untreated controls in KRJ-I cells. PRX-08066 causes a significant increase in dead/caspase 3 positive cells (76%) and caspase 3 activity (52%) in HEK293 cells. PRX-08066 inhibits cell proliferation with IC50 of 0.46 nM and with a maximum inhibition of 20% and 5-HT secretion with IC50 of 6.9 nM with a maximum inhibition of 30% in the 5-HT(2B) expressing SI-NET cell line, KRJ-I. PRX-08066 inhibits isoproterenol-stimulated 5-HT release with IC50 of 1.25 nM and maximum inhibition of 60% in NCI-H720 cells. PRX-08066 inhibits 5-HT-induced mitogen-activated protein kinase activation (IC50: 12 nM) and markedly reduces thymidine incorporation with IC50 of 3 nM in Chinese hamster ovary cells expressing the human 5-HT2BR, which suggests that PRX-08066 can potentially inhibit the pathologic 5-HT-induced vascular muscularization associated with PAH. PRX-08066 (0.5 nM) significantly inhibits ERK phosphorylation in KRJ-I cells [1][2].
In vivo	PRX-08066 significantly reduces peak pulmonary artery pressure at 50 mg/kg and 100 mg/kg compared with monocrotaline control rats. PRX-08066 also significantly reduces the right ventricle (RV)/body weight and RV/left ventricle + septum, compared with MCT-treated rats. PRX-08066 significantly attenuates the elevation in pulmonary artery pressure and RV hypertrophy and maintains cardiac function. PRX-08066 significantly reduces the hypoxia-dependent increase in right ventricular systolic pressure in both rats and mice without affecting the systemic mean arterial pressure in the animals. PRX-08066 (30 mg/kg) inhibits right ventricular systolic pressure and monocrotaline-induced ERK phosphorylation in whole lung homogenates in rats. PRX-08066 (100 mg/kg) treated groups show less right ventricular hypertrophy and septal flattening than the monocrotaline control group in rats. PRX-08066 (100 mg/kg) significantly inhibits both right ventricular systolic pressure and right ventricular/left ventricular +septum weight elevations in rats [1][3].

Solubility Information

Solubility	DMSO: 7 mg/mL (17.42 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4882 mL	12.4412 mL	24.8824 mL
5 mM	0.4976 mL	2.4882 mL	4.9765 mL
10 mM	0.2488 mL	1.2441 mL	2.4882 mL
50 mM	0.0498 mL	0.2488 mL	0.4976 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

Porvasnik SL, et al. PRX-08066, a novel 5-hydroxytryptamine receptor 2B antagonist, reduces monocrotaline-induced pulmonary arterial hypertension and right ventricular hypertrophy in rats. J Pharmacol Exp Ther. 2010 Aug;334(2):364-72.

Svejda B, et al. The 5-HT(2B) receptor plays a key regulatory role in both neuroendocrine tumor cell proliferation and the modulation of the fibroblast component of the neoplastic microenvironment. Cancer. 2010 Jun 15;116(12): 2902-12.

Warburton R.R., et al. Online University.