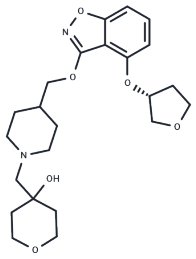
Data Sheet (Cat.No.T16481)

PF-04995274

Chemical Properties



CAS No. : 1331782-27-4

Formula: C23H32N2O6

Molecular Weight: 432.51

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-04995274 is an effective, high-affinity, and partial serotonin 4 receptor (5-HT4R) agonist. PF-04995274 is brain penetrant and can be used for cognitive disorders associated with Alzheimer's disease. PF-04995274 has an EC50 range of 0.26-0.47 nM for human 5-HT4A/4B/4D/4E (Ki range of 0.15-0.46 nM). It also has an EC50 range of 0.59-0.65 nM for rat 5-HT4S/4L/4E (Ki of 0.30 nM for rat 5-HT4S).
Targets(IC50)	5-HT Receptor
In vitro	PF-04995274 shows Ki values of 0.36 nM, 0.46 nM, 0.15 nM, 0.32 nM and 0.3nM for human 5-HT4A/4B/4D/4E and rat 5-HT4S, respectively. PF-04995274 displays EC50 values of 0.47 nM, 0.36 nM, 0.37 nM, 0.26 nM, 0.59 nM, 0.65 nM and 0.62 nM for human 5-HT4A/4B/4D/4E and rat 5-HT4S/4L/4E, respectively [3].
In vivo	PF-04995274 (3-10 mg/kg; intravenous injection; for 17 days; male 129S6/SvEv mice) treatment demonstrates prophylactic efficacy by reducing learned fear and decreasing stress-induced depressive-like behavior[1].

Solubility Information

Solubility	DMSO: 100 mg/mL (231.21 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: 4 mg/mL (9.25 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	2.3121 mL	11.5604 mL	23.1209 mL
5 mM	0.4624 mL	2.3121 mL	4.6242 mL
10 mM	0.2312 mL	1.156 mL	2.3121 mL
50 mM	0.0462 mL	0.2312 mL	0.4624 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

Chen BK, et al. Prophylactic efficacy of 5-HT4R agonists against stress. Neuropsychopharmacology. 2019 Oct 10.
Grimwood S, et al. Translational receptor occupancy for the 5-HT4 partial agonist PF-04995274 in rats, non-human primates and healthy volunteers. Alzheimer's Dement: J Alzheimer's Assoc. 2011;7:S653.
Timothy Nicholas1, et al. Systems pharmacology modeling in neuroscience: Prediction and outcome of PF-04995274, a 5-HT4 partial agonist, in a clinical scopolamine impairment trial. Advances in Alzheimer's Disease. Vol.2 No.3(2013).