Data Sheet (Cat.No.T39211)

TargetMol

PD 144418 oxalate

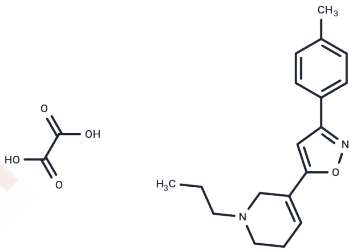
Chemical Properties

CAS No. : 1794760-28-3

Formula: C20H24N2O5

Molecular Weight: 372.42

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	PD 144418 oxalate is a highly potent and selective sigma 1 (σ1) receptor ligand with a Ki value of 0.08 nM for σ1 and 1377 nM for σ2, exhibiting negligible affinity for other receptors, ion channels, and enzymes, and demonstrating potential antipsychotic activity.
Targets(IC50)	Sigma receptor
In vitro	In vitro, PD 144418 counteracts the increase in cyclic GMP (cGMP) triggered by N-methyl-D-aspartate (NMDA) in rat cerebellar slices, without altering basal levels. This implies a significant role for σ1 sites in controlling actions induced by glutamine. Furthermore, PD 144418 enhances the reduction of 5-hydroxytryptophan induced by Haloperidol within the mesolimbic region, although it does not independently affect 5-HT and dopamine (DA) synthesis [1].
In vivo	Treatment with PD 144418 (10 mg/kg; intraperitoneal injection; male CD-1 mice) effectively antagonized Mescaline-induced scratching without affecting spontaneous motor activity, displaying an ED 50 of 7.0 mg/kg (i.p.). This outcome was observed in a study where male CD-1 mice were administered a single intraperitoneal dose of 10 mg/kg, resulting in the inhibition of scratching behaviors induced by Mescaline.

Solubility Information

Solubility	DMSO: 10 mg/mL (26.85 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6851 mL	13.4257 mL	26.8514 mL
5 mM	0.537 mL	2.6851 mL	5.3703 mL
10 mM	0.2685 mL	1.3426 mL	2.6851 mL
50 mM	0.0537 mL	0.2685 mL	0.537 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

Akunne HC, et al. The pharmacology of the novel and selective sigma ligand, PD 144418. Neuropharmacology. 1997 Jan;36(1):51-62.

Lever JR, et al. Relationship between cerebral sigma-1 receptor occupancy and attenuation of cocaine's motor stimulatory effects in mice by PD144418. J Pharmacol Exp Ther. 2014 Oct;351(1):153-63.