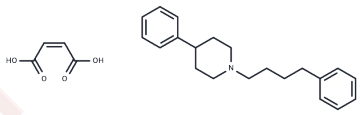
Data Sheet (Cat.No.T22513)

TargetMol

4-PPBP maleate

Chemical Properties



CAS No. : 201216-39-9

Formula: C25H31NO4

Molecular Weight: 409.52

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	4-PPBP maleate is a potent σ1 receptor (ligand) agonist and a selective, non-competitive NR1a/2B NMDA receptor antagonist in the context of Xenopus oocytes expression, with neuroprotective properties.
Targets(IC50)	NMDAR,iGluR,Sigma receptor
In vitro	ERK1/2 phosphorylation is induced by 4-PPBP maleate in primary neurons.[3]
In vivo	In rats, administration of 4-PPBP maleate (1 μmol/kg; i.v.) leads to a reduction in brain injury following transient focal ischemia.[2]

Solubility Information

Solubility	Ethanol: < 10.24 mg/mL,Sonication is recommended. DMSO: 225 mg/mL (549.42 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4419 mL	12.2094 mL	24.4188 mL
5 mM	0.4884 mL	2.4419 mL	4.8838 mL
10 mM	0.2442 mL	1.2209 mL	2.4419 mL
50 mM	0.0488 mL	0.2442 mL	0.4884 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

Whittemore ER, et al. Antagonism of N-methyl-D-aspartate receptors by sigma site ligands: potency, subtype-selectivity and mechanisms of inhibition. J Pharmacol Exp Ther. 1997;282(1):326-338.
Takahashi H, et al. PPBP [4-phenyl-1-(4-phenylbutyl) piperidine] decreases brain injury after transient focal ischemia in rats. Stroke. 1996;27(11):2120-2123.
Tan F, et al. The σ 1 receptor agonist 4-PPBP elicits ERK1/2 phosphorylation in primary neurons: a possible mechanism of neuroprotective action. Neuropharmacology. 2010;59(6):416-424.

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