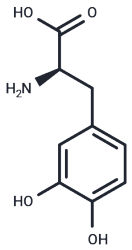
Data Sheet (Cat.No.T37605)

TargetMol

D-DOPA

Chemical Properties



CAS No. : 5796-17-8

Formula: C9H11NO4

Molecular Weight: 197.19

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	D-DOPA is an enantiomer of the dopamine precursor L-DOPA . It can be converted to L-DOPAviasequential oxidation and transamination, which are mediated by D-amino acid oxidase (DAAO) and DOPA transaminase, respectively, in rat kidney homogenates.1It reduces the number of dopaminergic neurons in primary rat embryonic mesencephalic cultures in a concentration-dependent manner.2Intraventricular administration of D-DOPA (200 μg/animal) increases striatal dopamine levels in rats.3D-DOPA (20 mg/kg, i. p.) induces contralateral turns in a rat model of Parkinson's disease induced by 6-OHDA .4
Targets(IC50)	Others,Carboxypeptidase

Solubility Information

Solubility	0.1 M HCl: 10 mg/mL (50.71 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.0713 mL	25.3563 mL	50.7125 mL
5 mM	1.0143 mL	5.0713 mL	10.1425 mL
10 mM	0.5071 mL	2.5356 mL	5.0713 mL
50 mM	0.1014 mL	0.5071 mL	1.0143 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

Wu, M., Zhou, X.-J., Konno, R., et al.D-dopa is unidirectionally converted to L-dopa by D-amino acid oxidase, followed by dopa transaminaseClin. Exp. Pharmacol. Physiol.33(11)1042-1046(2006)

Ling, Z.-D., Pieri, S.C., and Carvey, P.M.Comparison of the neurotoxicity of dihydroxyphenylalanine stereoisomers in cultured dopamine neuronsClin. Neuropharmacol.19(4)360-365(1996)

Karoum, F., Freed, W.J., Chuang, L.-W., et al.D-dopa and L-dopa similarly elevate brain dopamine and produce turning behavior in ratsBrain Res.440(1)190-194(1988)

Moses, J., Siddiqui, A., and Silverman, P.B.Sodium benzoate differentially blocks circling induced by D-and L-dopa in the hemi-parkinsonian ratNeurosci. Lett.218(3)145-148(1996)

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