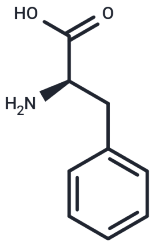
Data Sheet (Cat.No.T0689)

TargetMol

D-Phenylalanine

Chemical Properties



CAS No. : 673-06-3

Formula: C9H11NO2

Molecular Weight: 165.19

Storage: Keep away from direct sunlight
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-Phenylalanine, a necessary aromatic amino acid, is a precursor of thyroxine, dopamine, melanin, and noradrenaline (norepinephrine).
Targets(IC50)	Endogenous Metabolite,Monocarboxylate transporter
In vitro	Aspirin (oral administration of 200 mg/kg) co-administered with D-phenylalanine (oral administration of 500 mg/kg) rather than with sodium zomepirac (oral administration of 200 mg/kg) resulted in a statistically significant minor increase in the aversion threshold. The oral administration of 500 mg/kg D-Phenylalanine alone caused a minor, statistically insignificant increase in the aversion threshold that was not reversed by naloxone.
In vivo	D-Phenylalanine binds to carboxypeptidase A by disrupting the functional active site at Glu-270 and the hydrogen bonds between zinc-bound water molecules, facilitating the displacement of metal-bound water anions.

Solubility Information

Solubility	DMSO: Insoluble, H2O: 10 mM,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	6.0536 mL	30.2682 mL	60.5364 mL
5 mM	1.2107 mL	6.0536 mL	12.1073 mL
10 mM	0.6054 mL	3.0268 mL	6.0536 mL
50 mM	0.1211 mL	0.6054 mL	1.2107 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

Christianson DW, et al. J Biol Chem, 1989, 264(22), 12849-12853.
Chen G Y, Yin S J, Chen L, et al. Nanoporous ZIF-8 Microparticles as Acetylcholinesterase and Alkaline Phosphatase Mimics for the Selective and Sensitive Detection of Ascorbic Acid Oxidase and Copper Ions. Biosensors. 2022, 12 (11): 1049.
Halpern LM, et al. Pain, 1986, 24(2), 223-237.