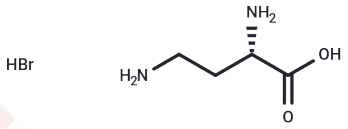
Data Sheet (Cat.No.T77795)

TargetMol

L-DABA hydrobromide

Chemical Properties



CAS No. : 73143-97-2

Formula: C4H11BrN2O2

Molecular Weight: 199.05

Storage: Keep away from moisture
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	L-DABA hydrobromide (L-2,4-Diaminobutyric acid hydrobromide) is a potent GABA transaminase inhibitor with antitumor and anticonvulsant activity for the study of neurological disorders.
Targets(IC50)	GABA Receptor,Endogenous Metabolite
In vitro	Incubation with 10 mM L-2,4-Diaminobutyric acid for 24 h at 37°C irreversibly and completely damages tumor cells. The cell-destructive effect caused by L-DABA hydrobromide is likely a result of osmotic lysis induced by the non-saturated intracellular accumulation of L-DABA hydrobromide. Concomitant incubation with L-alanine and L-methionine can abolish the harmful effect of L-DABA hydrobromide[1]. Kinetic studies indicate that L-DABA hydrobromide is a non-linear, non-competitive inhibitor of GABA transaminase activity. The elevation of GABA levels induced by L-DABA hydrobromide parallels the inhibition of GABA transaminase activity[2]. L-2,4-Diaminobutyric acid, an amino acid analogue, produces a cytolytic effect with a human glioma cell line, SKMG-1, and normal human fibroblasts. The concentrations of L-DABA hydrobromide necessary to reduce the cell count to 50% of control following a 24-h incubation at 37°C are 12.5 mM for the human fibroblasts and 20 mM for the glioma cell line[2].
In vivo	Treatment with L-DABA hydrobromide leads to a 43.4% reduction in tumor growth[1]. In vivo, L-DABA hydrobromide more effectively inhibits GABA transaminase than it does in vitro[3].

Solubility Information

Solubility	DMSO: 2 mg/mL (10.05 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.0239 mL	25.1193 mL	50.2386 mL
5 mM	1.0048 mL	5.0239 mL	10.0477 mL
10 mM	0.5024 mL	2.5119 mL	5.0239 mL
50 mM	0.1005 mL	0.5024 mL	1.0048 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

Ronquist G, et al. Antitumor activity of L-2,4 diaminobuturic acid against mouse fibrosarcoma cells in vitro and in vivo. J Cancer Res Clin Oncol. 1980;96(3):259-68.
Panasci L, et al. The cytolytic effect of L-2,4 diaminobutyric acid with malignant glioma cells and fibroblasts. Cancer Chemother Pharmacol. 1988;21(2):143-4.
Beart PM, et al. l-2,4-Diaminobutyric acid and the GABA system. Neurosci Lett. 1977 Jul;5(3-4):193-8.