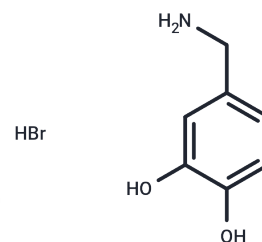


3,4-Dihydroxybenzylamine hydrobromide

Chemical Properties

CAS No. :	16290-26-9
Formula:	C7H10BrNO2
Molecular Weight:	220.06
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	3,4-Dihydroxybenzylamine hydrobromide (NSC-263475 hydrobromide) inhibits DNA polymerase activity in melanoma cells and displays growth inhibitory activity in melanoma cell lines with varying degrees of tyrosinase activity.
Targets(IC50)	DNA/RNA Synthesis
In vitro	3,4-Dihydroxybenzylamine hydrobromide (1 μ M-10 mM; 48 hours) inhibits the growth of melanoma cell lines with IC50 values of 30, 84, 90, and 68 μ M for SK-MEL-30, SK-MEL-2, SK-MEL-3, and RPMI-7951 cells, respectively, and exhibits IC50 values of 10, 25, 67, and 184 μ M for S91A, S91B, L1210, and SCC-25 cells. Cytotoxicity in SK-MEL-2 and SK-MEL-28 is enhanced by buthionine sulfoximine (BSO), decreasing the IC50 values of 3,4-DHBA by 127% in SK-MEL-28 and by 148% in SK-MEL-2 cells[1].
In vivo	3,4-Dihydroxybenzylamine hydrobromide (200, 400, 600 and 800 mg/kg; i.p.; 21 days) has different effects at different doses, the median life-span are 17, 24.5, 26, 29 and 25 days respectively. 3,4-Dihydroxybenzylamine hydrobromide (1000 mg/kg; i.p.; 7 days) has the least toxic effect in non-tumor-bearing B6D2F1 mice, and mice is tolerated at this dose[2].
Cell Research	Cell Line: Human and Murine Melanoma Cell Lines; Non-Melanoma Cell Lines Concentration: 1 μ M-10 mM Incubation Time: 48 hours [1]
Animal Research	Animal Model: C57BL/6 mice with B6D2F1 cells Dosage: 200 mg/kg, 400 mg/kg, 600 mg/kg, and 800 mg/kg Administration: Intraperitoneal injection [2]

Solubility Information

Solubility	DMSO: 80 mg/mL (363.54 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (15 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.5442 mL	22.7211 mL	45.4422 mL
5 mM	0.9088 mL	4.5442 mL	9.0884 mL
10 mM	0.4544 mL	2.2721 mL	4.5442 mL
50 mM	0.0909 mL	0.4544 mL	0.9088 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

- Prezioso JA1, et al. Effects of tyrosinase activity on the cytotoxicity of 3,4-dihydroxybenzylamine and buthionine sulfoximine in human melanoma cells. *Pigment Cell Res.* 1990 Mar-Apr;3(2):49-54.
- Michael M. Wick, et al. 3,4-Dihydroxybenzylamine: Antitumor Activity Against A Dopamine Analog B16 Melanoma.
- FitzGerald GB, et al. 3,4-Dihydroxybenzylamine: an improved dopamine analog cytotoxic for melanoma cells in part through oxidation products inhibitory to dna polymerase. *J Invest Dermatol.* 1983 Feb;80(2):119-23.

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