

3-Hydroxykynurenine

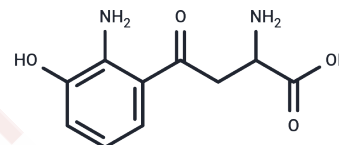
Chemical Properties

CAS No. : 484-78-6

Formula: C₁₀H₁₂N₂O₄

Molecular Weight: 224.21

Storage: Keep away from moisture, Keep away from direct sunlight, Store at low temperature
 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-Hydroxykynurenine (3-hydroxy-DL-Kynurenine) is an active metabolite of tryptophan and inhibits yeast and rat liver aldehyde dehydrogenase by 97 and 69%.
Targets(IC50)	Apoptosis,Others,Endogenous Metabolite
In vitro	In CD3/CD28 bead-stimulated CD4+ T cells, 3-Hydroxykynurenine (0-100 μM) dose-dependently inhibits CD4+ T-cell proliferation (IC50 = 70 μM). 3-Hydroxykynurenine (0-100 μM) dose-dependently induces significant CD4+ T-cell-mediated cell[3].
In vivo	In BALB/c (H2d) mice, 3-Hydroxykynurenine (560 mg/kg; i.p.) significantly prolongs graft survival whether administered between days 1 to 7, days 7 to 14, or days 1 to 14[3].

Solubility Information

Solubility	DMSO: 1.4 mg/mL (6.24 mM),Sonication and heating to 60°C are recommended. Ethanol: 2 mg/mL (8.92 mM),Sonication is recommended. DMF: 0.5 mg/mL (2.23 mM),Sonication is recommended. PBS (pH 7.2): 0.5 mg/mL (2.23 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.4601 mL	22.3005 mL	44.601 mL
5 mM	0.892 mL	4.4601 mL	8.9202 mL
10 mM	0.446 mL	2.2301 mL	4.4601 mL
50 mM	0.0892 mL	0.446 mL	0.892 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

- Badawy, A.A.-B., and Morgan, C.J. Tryptophan metabolites as potent inhibitors of aldehyde dehydrogenase activity and potential alcoholism-aversion therapeutic agents. *Int. Congr. Ser.* 1304, 344-351 (2007).
- S Okuda, et al. 3-Hydroxykynurenine, an endogenous oxidative stress generator, causes neuronal cell death with apoptotic features and region selectivity. *J Neurochem.* 1998 Jan;70(1):299-307.
- Sarah S Zaher, et al. 3-hydroxykynurenine suppresses CD4+ T-cell proliferation, induces T-regulatory-cell development, and prolongs corneal allograft survival. *Invest Ophthalmol Vis Sci.* 2011 Apr 22;52(5):2640-8.

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