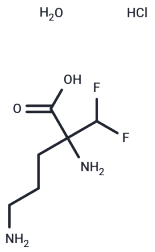
Data Sheet (Cat.No.T2593)

TargetMol

Eflornithine hydrochloride hydrate

Chemical Properties



CAS No. : 96020-91-6

Formula: C6H15ClF2N2O3

Molecular Weight: 236.64

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	Eflornithine hydrochloride hydrate (DFMO hydrochloride hydrate) is a specific and irreversible inhibitor of the ornithine decarboxylase (ODC). Eflornithine hydrochloride hydrate has antitumor activity and has also been used in the hirsutism Eflornithine hydrochloride hydrate has antitumor activity and is also used in the treatment of hirsutism.
Targets(IC50)	Parasite,Decarboxylase
In vitro	When cultured cells are treated with α-difluoromethyl-Orn, an inhibitor of polyamine biosynthesis, production of hydrogen peroxide is suppressed and programmed cell death did not occur[1].
In vivo	Eflornithine stands as the only novel compound registered for human African trypanosomiasis treatment in the past five decades, primarily serving as an alternative for cases resistant to melarsoprol involving Trypanosoma brucei gambiense. Additionally, a 15% eflornithine cream demonstrates efficacy superior to placebo in diminishing excessive, unwanted facial hair growth in patients, with 58% of individuals treated with eflornithine observing at least some improvement in facial hirsutism after 24 weeks, compared to 34% of those receiving placebo. Furthermore, the inhibitory effect on hair growth by eflornithine cream is significantly amplified when applied to mouse skin previously treated with microneedles. In hypertensive rats with coarctation, eflornithine treatment normalizes contractile responses to KCl and norepinephrine, and enhances relaxations to acetylcholine within 14 days, indicating its broader pharmacological utility.
Cell Research	BY2 cells are treated with or without cryptogein in the presence or absence of DFMO (Difluoromethylornithine) and monitered the effect of chemicals on cell growth. (Only for Reference)

Solubility Information

Solubility	DMSO: 2.77 mg/mL (11.71 mM),Sonication is recommended. H2O: 123.75 mg/mL (522.95 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.2258 mL	21.1291 mL	42.2583 mL
5 mM	0.8452 mL	4.2258 mL	8.4517 mL
10 mM	0.4226 mL	2.1129 mL	4.2258 mL
50 mM	0.0845 mL	0.4226 mL	0.8452 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

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Kumar A, et al. A method to improve the efficacy of topical eflornithine hydrochloride cream. Drug Deliv. 2016 Jun; 23(5):1495-501.
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Mastrodomenico V, Esin J J, Graham M L, et al. Polyamine depletion inhibits bunyavirus infection via generation of noninfectious interfering virions[J]. Journal of virology. 2019 May 1. pii: JVI.00530-19.