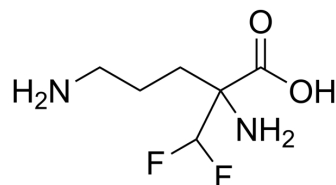


Eflornithine

Cat. No.:	HY-B0744
CAS No.:	70052-12-9
Molecular Formula:	C ₆ H ₁₂ F ₂ N ₂ O ₂
Molecular Weight:	182.17
Target:	Parasite
Pathway:	Anti-infection
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H₂O : 83.33 mg/mL (457.43 mM; ultrasonic and warming and heat to 60°C)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	5.4894 mL	27.4469 mL	54.8938 mL
	5 mM	1.0979 mL	5.4894 mL	10.9788 mL
	10 mM	0.5489 mL	2.7447 mL	5.4894 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Eflornithine is a specific, irreversible inhibitor of the enzyme ornithine decarboxylase. Eflornithine is a medication for the treatment of African trypanosomiasis and excessive facial hair growth in women.

IC₅₀ & Target

Trypanosoma

In Vivo

Eflornithine is the only new molecule registered for the treatment of human African trypanosomiasis over the last 50 years. It is the drug used mainly as a back-up for melarsoprol refractory *Trypanosoma brucei gambiense* cases^[1]. In subjects with excessive, unwanted facial hair, eflornithine 15% cream is superior to placebo in reducing hair growth. After 24 weeks' treatment, 58% of eflornithine and 34% of placebo subjects have at least some improvement in facial hirsutism^[2]. The hair growth inhibitory activity of eflornithine is significantly enhanced when the eflornithine cream is applied onto a mouse skin area pretreated with microneedles^[3]. Treatment of coarctation hypertensive rats with eflornithine results in a normalization of the contractile intensity to KCl and norepinephrine and relaxations to acetylcholine by 14 days of hypertension^[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration ^[3]

Mice: The skin area where the hair is removed is then treated with the eflornithine hydrochloride 13.9% cream (-50 mg per mouse per treatment) using a spatula 2 times a day in an interval of at least 8 h for a maximum period of 36 days^[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Sci Adv. 2023 May 19;9(20):eade0718.
- JACC Basic Transl Sci. 2022 Aug 3;7(8):820-840.
- Commun Biol. 2019 May 8;2:171.
- Cancer Nanotechnol. 2023 May 9.
- Food Biosci. 2023 Oct, 55, 102970.

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REFERENCES

- [1]. Burri C, et al. Eflornithine for the treatment of human African trypanosomiasis. Parasitol Res. 2003 Jun;90 Supp 1:S49-52.
- [2]. Balfour JA, et al. Topical eflornithine. Am J Clin Dermatol. 2001;2(3):197-201; discussion 202.
- [3]. Kumar A, et al. A method to improve the efficacy of topical eflornithine hydrochloride cream. Drug Deliv. 2016 Jun;23(5):1495-501.
- [4]. Lipke DW, et al. Eflornithine alters changes in vascular responsiveness associated with coarctation hypertension. Clin Exp Hypertens. 1997 Apr;19(3):297-312.

Caution: Product has not been fully validated for medical applications. For research use only.

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