
Product Data Sheet

Product Name: Eflornithine hydrochloride (DFMO hydrochloride)

Cat. No.: GC30308

Chemical Properties

Cas. No. 68278-23-9

SMILES NC(CCCN)(C(F)F)C(O)=O.[H]ClFormula $C_6H_{13}ClF_2N_2O_2$

M.Wt 218.63

Solubility $\geq 11.55\text{mg/mL}$ in WaterStorage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure **Protocol****Animal experiment:**

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].

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

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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.

Background

Eflornithine hydrochloride 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.

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

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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].

[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.

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