

PRODUCT INFORMATION



β-Funaltrexamine (hydrochloride)

Item No. 39901

CAS Registry No.: 72786-10-8

Formal Name: 4-[[[(5α,6β)-17-(cyclopropylmethyl)-4,5-epoxy-3,14-dihydroxymorphinan-6-yl] amino]-4-oxo-2-butenic acid, methyl ester, monohydrochloride

Synonyms:

β-FNA, Naltrexone fumarate methyl ester

MF: $C_{25}H_{30}N_2O_6 \cdot HCl$

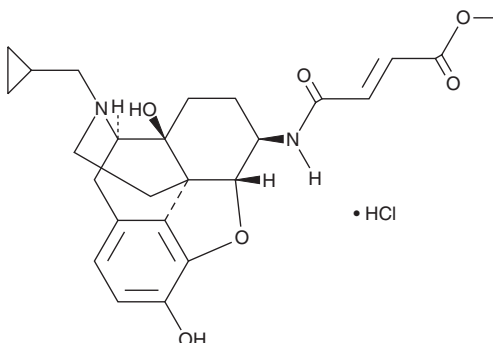
FW: 491.0

Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

β-Funaltrexamine (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the β-funaltrexamine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. β-Funaltrexamine (hydrochloride) is sparingly soluble (1-10 mg/ml) in DMSO.

Description

β-Funaltrexamine is an irreversible μ - and κ_1 -opioid receptor antagonist (K_i s = 0.3 and 0.2 nM, respectively).^{1,2} It is selective for μ - and κ_1 -opioid receptors over the δ -opioid receptor (K_i = 12.8 nM).¹ β-Funaltrexamine also reversibly inhibits electricity-induced twitches of isolated guinea pig ileal longitudinal muscle strips (IC_{50} = 48 nM), indicating opioid agonist activity.² *In vivo*, β-funaltrexamine (0.3 μg/animal, i.c.v.) inhibits conditioned place preference induced by the μ -opioid receptor agonist endomorphin 1 (Item No. 23280) in mice.³ It prevents decreases in urine output induced by the opioid agonists fentanyl, D-propoxyphene, buprenorphine, profadol, or bromadolone in water-loaded rats when administered at a dose of 40 mg/kg.⁴ β-Funaltrexamine also reduces hemokinin 1-induced increases in the latency to withdrawal in the tail-flick test in mice.⁵

References

1. Toll, L., Berzetei-Gurske, I.P., Polgar, W.E., et al. *NIDA Res. Monogr.* **178**, 440-466 (1998).
2. Takemori, A.E., Larson, D.L., and Portoghesi, P.S. *Eur. J. Pharmacol.* **70(4)**, 445-451 (1981).
3. Wu, H.-e., MacDougall, R.S., Clithero, A.D., et al. *Neurosci. Lett.* **365(3)**, 157-161 (2004).
4. Hayes, A.G., Skingle, M., and Tyers, M.B. *J. Pharmacol. Exp. Ther.* **240(3)**, 984-988 (1987).
5. Fu, C.Y., Zhao, Y.L., Dong, L., et al. *Brain Behav. Immun.* **22(6)**, 850-860 (2008).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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