

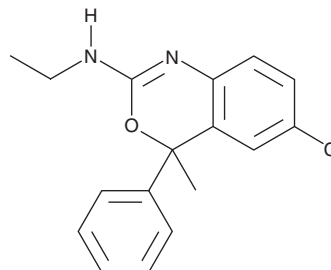
PRODUCT INFORMATION



Etifoxine

Item No. 15999

CAS Registry No.: 21715-46-8
Formal Name: 6-chloro-N-ethyl-4-methyl-4-phenyl-4H-3,1-benzoxazin-2-amine
Synonyms: Etafenoxine, HOE 36-801
MF: C₁₇H₁₇ClN₂O
FW: 300.8
Purity: ≥98%
UV/Vis.: λ_{max}: 275 nm
Supplied as: A crystalline 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

Etifoxine is supplied as a crystalline solid. A stock solution may be made by dissolving the etifoxine in the solvent of choice, which should be purged with an inert gas. Etifoxine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of etifoxine in ethanol and DMSO is approximately 20 mg/ml and approximately 30 mg/ml in DMF.

Etifoxine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, etifoxine should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Etifoxine has a solubility of approximately 0.1 mg/ml in a 1:8 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Etifoxine is a positive allosteric modulator of $\alpha_1\beta_2\gamma_2$ and $\alpha_1\beta_3\gamma_2$ subunit-containing GABA_A receptors.¹ It selectively increases GABA-induced currents in *X. laevis* oocytes expressing $\alpha_1\beta_2\gamma_2$ or $\alpha_1\beta_3\gamma_2$ over $\alpha_1\beta_1\gamma_2$ subunit-containing receptors at 20 μ M. Etifoxine inhibits binding of the GABA_A receptor agonist muscimol in rat cortical membranes with a K_d value of 23 nM in a radioligand binding assay.² It increases NGF-induced neurite outgrowth in PC12 cells when used at a concentration of 20 μ M.³ Etifoxine (12.5 mg/kg, i.p.) increases the percentage of time spent in the open arms of the elevated plus maze in high-anxiety BALB/cByJ, but not C57BL/6, mice, indicating anxiolytic-like activity.⁴ It increases the seizure threshold in a mouse model of seizures induced by picrotoxin (Item No. 20771) with a minimum effective dose (MED) of 75 mg/kg.⁵ Etifoxine (50 mg/kg, i.p.) also increases the paw withdrawal threshold on the ipsilateral side in a rat model of rheumatoid arthritis induced by complete Freund's adjuvant.⁶

References

1. Hamon, A., Morel, A., Hue, B., et al. *Neuropharmacology* **45(3)**, 293-303 (2003).
2. Verleye, M., Pansart, Y., and Gillardin, J. *Neurosci. Res.* **44(2)**, 167-172 (2002).
3. Girard, C., Liu, S., Cadepond, F., et al. *Proc. Natl. Acad. Sci. USA* **105(51)**, 20505-20510 (2008).
4. Verleye, M., Dumas, S., Heulard, I., et al. *Eur. Neuropsychopharmacol.* **21(6)**, 457-470 (2011).
5. Verleye, M., Pansart, Y., and Gillardin, J. *Neurosci. Res.* **44(2)**, 167-172 (2002).
6. Aouad, M., Zell, V., Juif, P.E., et al. *Pain* **155(2)**, 403-412 (2014).

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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