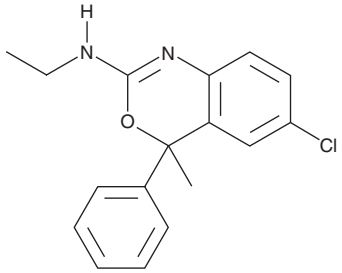
# PRODUCT INFORMATION

## 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:** $C_{17}H_{17}ClN_2O$
**FW:** 300.8
**Purity:** ≥98%
**UV/Vis.:** $\lambda_{max}$: 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 µM. Etifoxine inhibits binding of the $GABA_A$ receptor agonist muscimol in rat corticol 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 µM.[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).





**CAYMAN CHEMICAL**
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
**PHONE:** [800] 364-9897
[734] 971-3335
**FAX:** [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM