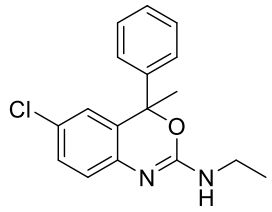
Product data sheet

MedKoo Cat#: 576347 Name: Etifoxine CAS#: 21715-46-8 Chemical Formula: $C_{17}H_{17}ClN_2O$ Exact Mass: 300.1029 Molecular Weight: 300.79	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
Etifoxine is a positive allosteric modulator of α1β2γ2 and α1β3γ2 subunit-containing GABAA receptors.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	60.0	199.47
DMF	30.0	99.74
DMF:PBS (pH 7.2) (1:8)	0.1	0.33
Ethanol	20.0	66.49

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	3.32 mL	16.62 mL	33.25 mL
5 mM	0.66 mL	3.32 mL	6.65 mL
10 mM	0.33 mL	1.66 mL	3.32 mL
50 mM	0.07 mL	0.33 mL	0.66 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Riban V, Meunier J, Buttigieg D, Villard V, Verleye M. In Vitro and In Vivo Neuroprotective Effects of Etifoxine in β-Amyloidinduced Toxicity Models. CNS Neurol Disord Drug Targets. 2020;19(3):227-240. doi: 10.2174/1871527319666200601151007. PMID: 32479250.
2. Kokova VY, Zagorchev PI, Apostolova EG, Peychev LP. Etifoxine does not impair muscle tone and motor function in rats as assessed by in vivo and in vitro methods. Gen Physiol Biophys. 2020 Mar;39(2):179-186. doi: 10.4149/gpb_2019053. PMID: 32329445.

In vivo study

1. Kamoun N, Gazzo G, Goumon Y, Andry V, Yalcin I, Poisbeau P. Long-lasting analgesic and neuroprotective action of the non-benzodiazepine anxiolytic etifoxine in a mouse model of neuropathic pain. Neuropharmacology. 2021 Jan;182:108407. doi: 10.1016/j.neuropharm.2020.108407. Epub 2020 Nov 16. PMID: 33212115.
2. Zhang H, Ma L, Guo WZ, Jiao LB, Zhao HY, Ma YQ, Hao XM. TSPO ligand etifoxine attenuates LPS-induced cognitive dysfunction in mice. Brain Res Bull. 2020 Dec;165:178-184. doi: 10.1016/j.brainresbull.2020.10.013. Epub 2020 Oct 16. PMID: 33075418.

Product data sheet

7. Bioactivity

Biological target:

Etifoxine, a non-benzodiazepine GABAergic compound, is a positive allosteric modulator of α1β2γ2 and α1β3γ2 subunit-containing GABAA receptors.

In vitro activity

In neuronal cultures intoxicated with Aβ1-42, etifoxine dose-dependently decreased oxidative stress (methionine sulfoxide positive neurons), tau-hyperphosphorylation and synaptic loss (ratio PSD95/synaptophysin).

Reference: CNS Neurol Disord Drug Targets. 2020;19(3):227-240. https://pubmed.ncbi.nlm.nih.gov/32479250/

In vivo activity

The intraperitoneal EFX (etifoxine) treatment for five consecutive days (50 mg/kg) relieved mechanical allodynia in a sustained manner. Besides its effect on evoked mechanical hypersensitivity, EFX also alleviated aversiveness of ongoing pain as well as anxiodepressive-like consequences of neuropathic pain following cuff-induced mononeuropathy. This study suggests that EFX presents promising therapeutic potential for the relief of both somatosensory and affective consequences of neuropathic pain, a beneficial effect that is likely to involve monoamine descending controls.

Reference: Neuropharmacology. 2021 Jan;182:108407. https://pubmed.ncbi.nlm.nih.gov/33212115/

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.