

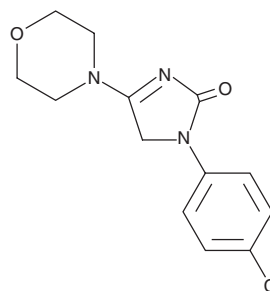
PRODUCT INFORMATION



AWD 131-138

Item No. 16235

CAS Registry No.: 188116-07-6
Formal Name: 1-(4-chlorophenyl)-1,5-dihydro-4-(4-morpholinyl)-2H-imidazol-2-one
Synonyms: ELB138, Imepitoin
MF: C₁₃H₁₄ClN₃O₂
FW: 279.7
Purity: ≥98%
UV/Vis.: λ_{max}: 229, 271 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

AWD 131-138 is supplied as a crystalline solid. A stock solution may be made by dissolving the AWD 131-138 in the solvent of choice, which should be purged with an inert gas. AWD 131-138 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of AWD 131-138 in ethanol is approximately 0.25 mg/ml and approximately 10 mg/ml in DMSO and DMF.

AWD 131-138 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, AWD 131-138 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. AWD 131-138 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

AWD 131-138 is a partial agonist of the GABA_A receptor that acts at the benzodiazepine binding site, dose-dependently stimulating GABA currents with a threshold of 0.3-1.0 μM.¹ This effect is blocked by the benzodiazepine antagonist flumazenil (Item No. 14252).¹ AWD 131-138 displays a broad spectrum of anticonvulsant activity in diverse seizure and epilepsy models without a tendency toward tolerance or abuse.²⁻⁴ It has a superior pharmacokinetic profile in dogs vs. humans.^{3,5}

References

1. Sigel, E., Baur, R., Netzer, R., *et al.* The antiepileptic drug AWD 131-138 stimulates different recombinant isoforms of the rat GABA_A receptor through the benzodiazepine binding site. *Neurosci. Lett.* **245(2)**, 85-88 (1998).
2. Rundfeldt, C., Gasparic, A., and Wlaz, P. Imepitoin as novel treatment option for canine idiopathic epilepsy: Pharmacokinetics, distribution, and metabolism in dogs. *J. Vet. Pharmacol. Therap.* **37**, 421-434 (2015).
3. Rundfeldt, C. and Löscher, W. The pharmacology of imepitoin: the first partial benzodiazepine receptor agonist developed for the treatment of epilepsy. *CNS Drugs* **28(1)**, 29-43 (2014).
4. Yasar, S., Bergman, J., Munzar, P., *et al.* Evaluation of the novel antiepileptic drug, AWD 131-138, for benzodiazepine-like discriminative stimulus and reinforcing effects in squirrel monkeys. *Eur. J. Pharmacol.* **465(3)**, 257-265 (2003).
5. Patterson, E.E. Canine epilepsy: An underutilized model. *ILAR J.* **55(1)**, 182-186 (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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