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: C_{13}H_{14}ClN_{3}O_{2}
FW: 279.7
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max} = 229, 271 nm

Laboratory Procedures

For long term storage, we suggest that AWD 131-138 be stored as supplied at -20°C. It should be stable for at least two years.

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. AWD 131-138 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. 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.\(^{2,3}\)\(^{4}\) It has a superior pharmacokinetic profile in dogs vs. humans.\(^{3,5}\)

References