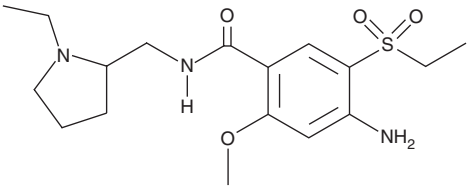
PRODUCT INFORMATION

Amisulpride

Item No. 14619

CAS Registry No.: 71675-85-9
Formal Name: 4-amino-N-[(1-ethyl-2-pyrrolidinyl) methyl]-5-(ethylsulfonyl)-2-methoxy-benzamide
Synonym: DAN 2163
MF: $C_{17}H_{27}N_3O_4S$
FW: 369.5
Purity: ≥98%
UV/Vis.: λ_{max}: 225, 278 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

Amisulpride is supplied as a crystalline solid. A stock solution may be made by dissolving the amisulpride in the solvent of choice. Amisulpride is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of amisulpride in ethanol is approximately 1 mg/ml and approximately 15 mg/ml in DMSO and DMF.

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

Description

Amisulpride is a dopamine D_2 and D_3 receptor antagonist (K_is = 3 and 3.5 nM, respectively).[1] It is also an antagonist of the serotonin (5-HT) receptor subtypes 5-HT_{2B}, 5-HT_7, and 5-HT_{7A} (K_is = 13, 11.5, and 135.5 nM, respectively). It is selective for these receptors over a panel of 39 additional receptors, ion channels, and transporters (K_is = >1,000 nM for all). Amisulpride increases 7-OH-DPAT-induced decreases in dopamine and acetylcholine release in electrically stimulated rat striatal slices (EC_{50}s = 2.2 and 1.2 nM, respectively).[2] It increases the levels of dopamine and the dopamine metabolite 3,4-dihydroxyphenylacetic acid (DOPAC) in rat striatum and nucleus accumbens when administered intraperitoneally at a dose of 10 mg/kg. Amisulpride decreases immobility time in the forced swim test in rats, as well as increases stress-induced decreases in sucrose consumption in a rat model of depression induced by chronic mild stress.[3]

References

1. Abbas, A.I., Hedlund, P.B., Huang, X.-P., *et al*. Amisulpride is a potent 5-HT_7 antagonist: Relevance for antidepressant actions *in vivo*. *Psychopharmacology (Berl)* **205(1)**, 119-128 (2009).
2. Schoemaker, H., Claustre, Y., Fage, D., *et al*. Neurochemical characteristics of amisulpride, an atypical dopamine D_2/D_3 receptor antagonist with both presynaptic and limbic selectivity. *J. Pharmacol. Exp. Ther.* **280(1)**, 83-97 (1997).
3. Papp, M. and Wieronska, J. Antidepressant-like activity of amisulpride in two animal models of depression. *J. Psychopharmacol.* **14(1)**, 46-52 (2000).

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