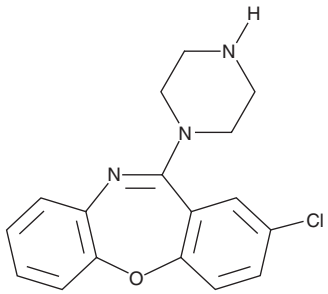
PRODUCT INFORMATION

Amoxapine

Item No. 17347



CAS Registry No.:	14028-44-5
Formal Name:	2-chloro-11-(1-piperazinyl)-dibenz[b,f][1,4]oxazepine
Synonym:	CL-67772
MF:	$C_{17}H_{16}ClN_3O$
FW:	313.8
Purity:	≥95%
UV/Vis.:	λ_{max}: 210, 252 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

Amoxapine is supplied as a crystalline solid. A stock solution may be made by dissolving the amoxapine in the solvent of choice. Amoxapine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of amoxapine in ethanol is approximately 1 mg/ml and approximately 10 mg/ml in DMSO and DMF.

Amoxapine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, amoxapine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Amoxapine 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

Amoxapine is a tetracyclic antidepressant with a wide range of pharmacological effects. It inhibits norepinephrine and serotonin reuptake, binding the respective transporters with K_d values of 16 and 58 nM.[1] It has also been shown to act as either an antagonist or inverse agonist at serotonin 5-$HT_{2A,\ 2B,\ 2C,\ 3,\ 6,\ 7}$ (K_is = 1 and 2 nM for 5-HT_{2A} and 5-HT_{2C}, respectively), dopamine $D_{2,\ 3,\ 4}$ (K_d = 160 nM for D_2), α_1-adrenergic (K_d = 50 nM), and histamine H_1 (K_d = 25 nM) receptors.[2,3]

References

1. Tatsumi, M., Groshan, K., Blakely, R.D., *et al.* Pharmacological profile of antidepressants and related compounds at human monoamine transporters. *Eur. J. Pharmacol.* **340(2-3)**, 249-258 (1997).
2. Pälvimäki, E.P., Roth, B.L., Majasuo, H., *et al.* Interactions of selective serotonin reuptake inhibitors with the serotonin 5-HT_{2C} receptor. *Psychopharmacology (Berl)* **126(3)**, 234-240 (1996).
3. Richelson, E. and Nelson, A. Antagonism by antidepressants of neurotransmitter receptors of normal human brain *in vitro*. *J. Pharmacol. Exp. Ther.* **230(1)**, 94-102 (1984).

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