

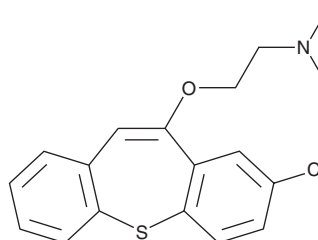
PRODUCT INFORMATION



Zotepine

Item No. 23909

CAS Registry No.: 26615-21-4
Formal Name: 2-[(8-chlorodibenzo[b,f]thiepin-10-yl)oxy]-
N,N-dimethyl-ethanamine
MF: $C_{18}H_{18}ClNOS$
FW: 331.9
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 247, 267, 295 nm
Supplied as: A crystalline solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Zotepine is supplied as a crystalline solid. A stock solution may be made by dissolving the zotepine in the solvent of choice, which should be purged with an inert gas. Zotepine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of zotepine in ethanol and DMF is approximately 10mg/ml and approximately 2 mg/ml in DMSO.

Zotepine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, zotepine should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Zotepine has a solubility of approximately 0.25 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Zotepine is an atypical antipsychotic.¹ It is a dopamine D_2 and D_3 receptor antagonist ($K_{iS} = 5.37$ and 6.45 nM, respectively) that reverses dopamine inhibition of forskolin-stimulated cAMP production in CHO cells expressing human D_2 and D_3 receptors. *In vivo*, zotepine inhibits head twitches induced by 5-hydroxy-L-tryptophan (Item No. 20539), a behavior mediated by the serotonin (5-HT) receptor subtype $5-HT_2$, in mice ($ED_{50} = 0.13$ mg/kg).² It acts as an α_2 -adrenergic receptor (α_2 -AR) antagonist, reducing the hind limb flexor reflex stimulated by clonidine (Item No. 15949) in rats. Zotepine blocks gnawing behavior and body turning induced by apomorphine (Item No. 16094) and methamphetamine in rats.³ It also induces catalepsy and inhibits apomorphine-induced vomiting in dogs. Formulations containing zotepine have been used in the treatment of schizophrenia and acute mania.

References

1. Vanhauwe, J.F., Ercken, M., van de Wiel, D., *et al.* Effects of recent and reference antipsychotic agents at human dopamine D_2 and D_3 receptor signaling in Chinese hamster ovary cells. *Psychopharmacology (Berl)*. **150**(4), 383-390 (2000).
2. Czyrak, A., Jaros, T., Moryl, E., *et al.* Pharmacological effects of zotepine and other antipsychotics on the central $5-HT_2$ receptors. *Pharmacopsychiatry* **26**(2), 53-58 (1993).
3. Lai, H., Carino, M.A., Sperry, R., *et al.* Effects of microinjection of 2-chloro-11 (2-dimethylaminoethoxy)-dibenzo[b,f]-thiepine (zotepine), thioridazine and haloperidol into the striatum and nucleus accumbens on stereotypic behaviour and motor activity. *J. Pharm. Pharmacol.* **33**(4), 252-254 (1981).

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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