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DATASHEET

Olanzapine

Product overview

Name	Olanzapine
Cat No	HB1786
Alternative names	OZP
Biological action	Antagonist
Purity	>99%
Description	5-HT_{2A} and D_2 antagonist. Potent DREADD agonist. Atypical antipsychotic.

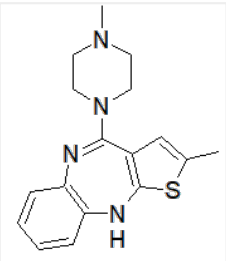
Biological Data

Biological description	5-HT_{2A} and D_2 antagonist (K_i values are 4 and 11 nM respectively). Also shows affinity at many other receptors e.g. 5-HT_{2C}, D_1 / D_4, α1, H_1 and M_{1-4} receptors. Also a potent hM4Di DREADD receptor agonist (EC_{50} = ~5 nM *in vitro*. Atypical antipsychotic which also shows anticholinergic properties.

Solubility & Handling

Storage instructions	+4°C
Solubility overview	Soluble in DMSO (100mM) or water (100mM, 1eq. HCl)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	2-Methyl-4-(4-methyl-1-piperazinyl) -10*H*-thieno[2,3-*b*][1,5]benzodiazepine
Molecular Weight	312.43
Chemical structure	
Molecular Formula	$C_{17}H_{20}N_4S$
CAS Number	132539-06-1
PubChem identifier	4585
SMILES	CC1=CC2=C(NC3=CC=CC=C3N=C2S1)N4CCN(CC4)C
InChi	InChI=1S/C17H20N4S/c1-12-11-13-16(21-9-7-20(2)8-10-21)18-14-5-3-4-6-15(14)19-17(13)22-12/h3-6,11,18H,7-10H2,1-2H3
InChiKey	WXPNDRBBWZMPQG-UHFFFAOYSA-N
MDL number	MFCD00866702
Appearance	Yellow solid

References

The behavioral pharmacology of olanzapine, a novel atypical" antipsychotic agent"

Moore NA *et al* (1992) J Pharmacol Exp Ther 262(2)
PubMedID 1354253

Radioreceptor binding profile of the atypical antipsychotic olanzapine

Bymaster FP *et al* (1996) Neuropsychopharmacology 14(2)
PubMedID 8822531

Olanzapine: A potent agonist at the hM4D(Gi) DREADD amenable to clinical translation of chemogenetics

Weston M *et al* (2019) Sci Adv 5(4)
PubMedID 31001591