Product Datasheet

Lurasidone hydrochloride (orb1225185)

Catalog Number	orb1225185
Category	Small Molecules
Description	Lurasidone is an atypical antipsychotic developed by Dainippon Sumitomo Pharma. It was approved by the U.S. Food and Drug Administration (FDA) for treatment of schizophrenia on October 29, 2010 and is currently pending approval for the treatment of bipolar disorder in the United States. (In Vitro):Lurasidone (Hydrochloride) (SM-13496 (Hydrochloride)) is an antagonist of dopamine D2 and 5-HT7 with IC50s of 1.68±0.09 and 0.495±0.090 nM, respectively. Lurasidone (Hydrochloride) (SM-13496 (Hydrochloride)) is also a partial agonist of 5-HT1A receptor with an IC50 of 6.75±0.97 nM. In vitro receptor binding experiments reveal that Lurasidone (Hydrochloride) (SM-13496 (Hydrochloride)) demonstrates affinity for dopamine D2 and 5-HT2A receptors higher than other tested antipsychotics. Lurasidone does not increase [35S]GTPγS binding to the membrane preparations for dopamine D2 receptors by itself, but it antagonizes dopamine-stimulated [35S]GTPγS binding in a concentration-dependent manner with a KB value of 2.8±1.1 nM.\n(In Vivo):Lurasidone (Hydrochloride) (SM-13496 (Hydrochloride)) dose-dependently increases the ratio of DOPAC/dopamine in both regions, but it shows a preferential effect on the frontal cortex compare with the striatum, especially at higher doses. Lurasidone (Hydrochloride) (SM-13496 (Hydrochloride)) (ED50 values 2.3 to 5.0 mg/kg) shows a comparable potency with olanzapine (ED50 values 1.1 to 5.1 mg/kg), higher potency than clozapine (ED50 9.5 to 290 mg/kg), and slightly lower potency than haloperidol (ED50 values 0.44 to 1.7 mg/kg). Lurasidone (Hydrochloride) (SM-13496 (Hydrochloride)) (1 to 10 mg/kg) dose-dependently inhibits conditioned avoidance response (CAR) in rats, and the ED50 values are 6.3 mg/kg. Lurasidone (Hydrochloride) (SM-13496 (Hydrochloride)) dose-dependently inhibits TRY-induced forepaw clonic seizure and p-CAMP-induced hyperthermia with ED50 values of 5.6 and 3.0 mg/kg, respectively. Lurasidone (Hydrochloride) (SM-13496 (Hydrochloride)) (0.3 to 30 mg/kg) dose-dependently and significantly increases the number of shocks received by rats in the conflict test with MED of 10 mg/kg ($p<0.01$).

Biorbyt Ltd.
7 Signet Court, Swann Road
Cambridge
CB5 8LA
United Kingdom
Email: info@biorbyt.com, support@biorbyt.com
Phone: +44 (0)1223 859353 | Fax: +1 (415) 651-8558

Biorbyt LLC
68 TW Alexander Drive
Research Triangle Park
Durham
NC 27713-2847
United States
Email: info@biorbyt.com, support@biorbyt.com
Phone: +1 (415) 906-5211 | Fax: +1 (415) 651-8558

Target	5-HT Receptor
Purity	>98% (HPLC)
MW	529.14
Target Areas	5-HT1A| 5-HT2A| 5-HT7| D2| Norepinephrine α2C
Solubility (25°C)	DMSO: 1 mg/mL (1.88 mM)
CAS Number	367514-88-3
Formula	$C_{28}H_{36}N_4O_2S{\cdot}HCl$
SMILES	C1CC[C@H]([C@@H](C1)CN2CCN(CC2)C3=NSC4=CC=CC=C43)CN5C(=O)[C@H]6[C@@H]7CC[C@@H](C7)[C@H]6C5=O.Cl
Storage	Storage temperature: -20°C. Stability: ≥ 2 years
Note	For research use only
Expiration Date	12 months from date of receipt.

Biorbyt Ltd.
7 Signet Court, Swann Road
Cambridge
CB5 8LA
United Kingdom
Email: info@biorbyt.com, support@biorbyt.com
Phone: +44 (0)1223 859353 | Fax: +1 (415) 651-8558

Biorbyt LLC
68 TW Alexander Drive
Research Triangle Park
Durham
NC 27713-2847
United States
Email: info@biorbyt.com, support@biorbyt.com
Phone: +1 (415) 906-5211 | Fax: +1 (415) 651-8558