Web: www.taiclone.com
Tel: +886-2-2735-9682
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Lurasidone (Hydrochloride)

Catalog No: tcsc0866

Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Size: 200mg

Size: 500mg

Specifications

CAS No:
367514-88-3

Formula:
$C_{28}H_{37}ClN_4O_2S$

Pathway:
GPCR/G Protein;Neuronal Signaling;Neuronal Signaling;GPCR/G Protein

Target:
Dopamine Receptor;Dopamine Receptor;5-HT Receptor;5-HT Receptor

Purity / Grade:
>98%

Solubility:
DMSO : 1 mg/mL (1.89 mM; Need ultrasonic and warming); H2O :

Alternative Names:
SM-13496 (Hydrochloride)

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Observed Molecular Weight:
529.14

Product Description

Lurasidone is an antagonist of both **dopamine D_2** and **5-HT_7** with **IC_{50}**s of 1.68 and 0.495 nM, respectively. Lurasidone is also a partial agonist of **5-HT_{1A}** receptor with an **IC_{50}** of 6.75 nM.

IC50 & Target: IC50: 1.68 nM (dopamine D_2), 0.495 nM (5-HT_7), 6.75 nM (5-HT_{1A})[1]

In Vitro: Lurasidone is an antagonist of dopamine D_2 and 5-HT_7 with IC_{50}s of 1.68±0.09 and 0.495±0.090 nM, respectively. Lurasidone is also a partial agonist of 5-HT_{1A} receptor with an IC_{50} of 6.75±0.97 nM. *In vitro* receptor binding experiments reveal that Lurasidone demonstrates affinity for dopamine D_2 and 5-HT_{2A} receptors higher than other tested antipsychotics. Lurasidone does not increase [^{35}S]GTPγS binding to the membrane preparations for dopamine D_2 receptors by itself, but it antagonizes dopamine-stimulated [^{35}S]GTPγS binding in a concentration-dependent manner with a K_B value of 2.8±1.1 nM[1].

In Vivo: Lurasidone 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 (ED_{50} values 2.3 to 5.0 mg/kg) shows a comparable potency with olanzapine (ED_{50} values 1.1 to 5.1 mg/kg), higher potency than clozapine (ED_{50} 9.5 to 290 mg/kg), and slightly lower potency than haloperidol (ED_{50} values 0.44 to 1.7 mg/kg). Lurasidone (1 to 10 mg/kg) dose-dependently inhibits conditioned avoidance response (CAR) in rats, and the ED_{50} values are 6.3 mg/kg. Lurasidone dose-dependently inhibits TRY-induced forepaw clonic seizure and p-CAMP-induced hyperthermia with ED_{50} values of 5.6 and 3.0 mg/kg, respectively. Lurasidone (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[1].