Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Vortioxetine (hydrobromide)

Catalog No: tcsc1472

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Specifications

CAS No:
960203-27-4

Formula:
$C_{18}H_{23}BrN_2S$

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

Target:
Serotonin Transporter;5-HT Receptor;5-HT Receptor

Purity / Grade:
>98%

Solubility:
DMSO : 50 mg/mL (131.80 mM; Need ultrasonic)

Alternative Names:
Lu AA21004 hydrobromide

Observed Molecular Weight:
379.36

Product Description

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Vortioxetine hydrobromide is a multimodal serotonergic agent, inhibits **5-HT$_{1A}$, 5-HT$_{1B}$, 5-HT$_{3A}$, 5-HT$_{7}$** receptor and **SERT** with **K$_i$** values of 15 nM, 33 nM, 3.7 nM, 19 nM and 1.6 nM, respectively.

IC50 & Target: Ki: 15 nM (5-HT$_{1A}$); 33 nM (5-HT$_{1B}$); 3.7 nM (5-HT$_{3A}$); 19 nM (5-HT$_{7}$); 1.6 nM (SERT)$_{[1]}$.

In Vitro: Vortioxetine (Compound 5m) is a multimodal serotonergic agent, inhibits 5-HT$_{1A}$, 5-HT$_{1B}$, 5-HT$_{3A}$, 5-HT$_{7}$ receptor and SERT with K$_i$ values of 15 nM, 33 nM, 3.7 nM, 19 nM and 1.6 nM, respectively. Vortioxetine displays antagonistic properties at 5-HT$_{3A}$ and 5-HT$_{7}$ receptors, partial agonist properties at 5-HT$_{1B}$ receptors, agonistic properties at 5-HT$_{1A}$ receptors, and potent inhibition of SERT$_{[1]}$. Vortioxetine is a partial h5-HT $_{1B}$ receptor agonist with EC$_{50}$ of 460 nM and intrinsic activity of 22% using a whole-cell cAMP-based assay. Vortioxetine binds to the r5-HT $_{7}$ receptor with a K$_i$ value of 200 nM and is a functional antagonist at the r5-HT$_{7}$ receptor with an IC$_{50}$ of 2 μM in an in vitro whole-cell cAMP assay$_{[5]}$.

In Vivo: Vortioxetine (Lu AA21004) occupies the r5-HT$_{1B}$ receptor and rSERT (ED$_{50}$= 3.2 and 0.4 mg/kg, respectively) after subcutaneous administration and is a 5-HT$_{3}$ receptor antagonist$_{[6]}$. Vortioxetine significantly increases cell proliferation and cell survival and stimulates maturation of immature granule cells in the sub granular zone of the dentate gyrus of the hippocampus after 21 days of treatment$_{[3]}$. Vortioxetine does not cause cognitive or psychomotor impairment$_{[4]}$.