

# Rotigotine

Catalog No: tcsc0376



## Available Sizes

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg



## Specifications

**CAS No:**

99755-59-6

**Formula:**

$C_{19}H_{25}NOS$

**Pathway:**

GPCR/G Protein;Neuronal Signaling;GPCR/G Protein;Neuronal Signaling;GPCR/G Protein

**Target:**

Dopamine Receptor;Dopamine Receptor;Adrenergic Receptor;5-HT Receptor;5-HT Receptor

**Purity / Grade:**

>98%

**Solubility:**

10 mM in DMSO

**Alternative Names:**

N-0437;N-0923

**Observed Molecular Weight:**

315.47

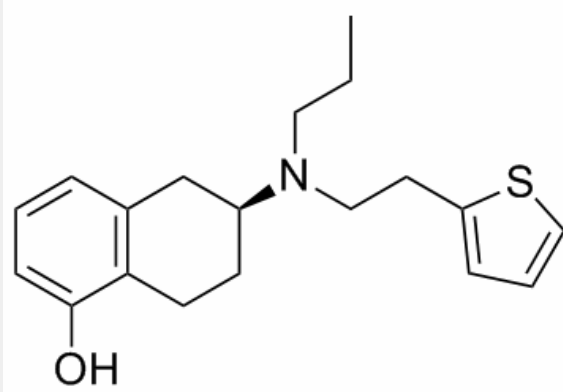
## Product Description

Rotigotine is a full agonist of **dopamine receptor**, a partial agonist of the **5-HT1A receptor**, and an antagonist of the **α2B-adrenergic receptor**, with  $K_i$ s of 0.71 nM, 4-15 nM, and 83 nM for the dopamine D3 receptor and D2, D5, D4 receptors, and dopamine D1 receptor.

IC50 & Target:  $K_i$ : 0.71 nM (dopamine D3 receptor), 4-15 nM (D2, D5, D4 receptors), 83 nM (dopamine D1 receptor)<sup>[1][2]</sup>, 176 nM (α1A), 273 nM (α1B), 338 nM (α2A), 27 nM (α2B), 30 nM (5-HT1A), 86 nM (5-HT7)<sup>[2]</sup>

**In Vitro:** Rotigotine has a 10-fold selectivity for D3 ( $pK_i$  9.2) receptors compared with D2, D4 and D5 ( $pK_i$  8.5-8.0) and a 100-fold selectivity compared with D1 receptors ( $pK_i$  7.2). In functional studies, Rotigotine behaves as full agonist at all dopamine receptors but notably the potency for stimulation of D1 receptors is similar to that for D2 and D3 receptors ( $pEC_{50}$  respectively: 9.0, 9.4-8.6, 9.7)<sup>[1]</sup>. Rotigotine (10 μM) decreases the number of THir neurons by 40% in primary mesencephalic cell culture. Rotigotine (0.01 μM) slightly protects dopaminergic neurons against MPP<sup>+</sup> toxicity, significantly protects dopaminergic neurons against rotenone-induced cell death, and significantly inhibits ROS production by rotenone<sup>[4]</sup>.

**In Vivo:** In primed rats, Rotigotine (0.035, 0.1 and 0.35 mg/kg) induces contralateral turning behavior in a dose dependent manner. In drug naive rats, the turning behavior induced by Rotigotine, either alone or in combination with SCH 39166, is reduced compared to primed rats<sup>[3]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!