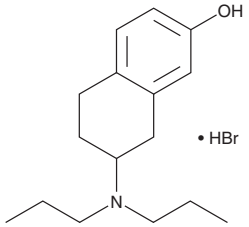
# PRODUCT INFORMATION

## 7-hydroxy DPAT (hydrobromide)

*Item No. 29516*

**CAS Registry No.:** 76135-30-3
**Formal Name:** 7-(dipropylamino)-5,6,7,8-tetrahydro-2-naphthalenol, monohydrobromide
**MF:** $C_{16}H_{25}NO \bullet HBr$
**FW:** 328.3
**Purity:** ≥95%
**Supplied as:** A crystalline solid
**Storage:** -20°C
**Stability:** ≥4 years




*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

### Laboratory Procedures

7-hydroxy DPAT (hydrobromide) is supplied as a crystalline solid. A stock solution may be made by dissolving the 7-hydroxy DPAT (hydrobromide) in the solvent of choice, which should be purged with an inert gas. 7-hydroxy DPAT (hydrobromide) is soluble in DMSO.

### Description

7-hydroxy DPAT is a dopamine $D_3$ receptor agonist.[1] It selectively binds to the dopamine $D_3$ over the $D_2$, $D_1$, and $D_4$ receptors ($K_i$s = 0.78, 61, 650, and 5,300 nM, respectively, in radioligand binding assays). 7-hydroxy DPAT increases calcium mobilization in HEK293 cells expressing the D3 receptor with an $EC_{50}$ value of 13.5 nM in a FLIPR assay.[2] It decreases the release of striatal dopamine and its metabolite 3,4-dihydroxyphenylacetic acid (DOPAC; Item No. 24912) in rats when administered intraperitoneally at a dose of 0.25 mg/kg.[3] 7-hydroxy DPAT (2 µg/µl for eight weeks, i.c.v.) reduces the loss of ipsilateral substantia nigra pars compacta (SNC) dopaminergic neurons in a rat model of Parkinson's disease induced by 6-OHDA (Item No. 25330).[4] It also decreases amphetamine-induced ipsilateral rotations and increases the number of steps reached with the contralateral paw in the staircase test in the same model.

### References


1. Lévesque, D., Diaz, J.A., Pilon, C., *et al*. Identification, characterization, and localization of the dopamine $D_3$ receptor in rat brain using 7-[$^3$H]hydroxy-*N*,*N*-di-*n*-propyl-2-aminotetralin. *Proc. Natl. Acad. Sci. USA* **89(17)**, 8155-8159 (1992).
2. Moreland, R.B., Nakane, M., Donnelly-Roberts, D., *et al*. Comparative pharmacology of human dopamine $D_2$-like receptor stable cell lines coupled to calcium flux through $G\alpha_{qo5}$. *Biochem. Pharmacol*. **68(4)**, 761-772 (2004).
3. Mulder, T.B.A., de Vries, J.B., Dijkstra, D., *et al*. Further in vitro and in vivo studies with the putative presynaptic dopamine agonist N,N-dipropyl-7-hydroxy-2-aminotetralin. *Naunyn Schmiedebergs Arch. Pharmacol*. **336(5)**, 494-501 (1987).
4. Van Kampen, J.M. and Eckman, C.B. Dopamine D3 receptor agonist delivery to a model of Parkinson's disease restores the nigrostriatal pathway and improves locomotor behavior. *J. Neurosci*. **26(27)**, 7272-7280 (2006).





**CAYMAN CHEMICAL**
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
**PHONE:** [800] 364-9897
[734] 971-3335
**FAX:** [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM