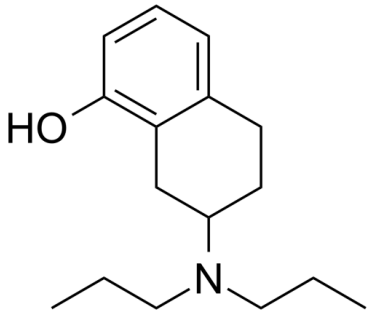
Data Sheet

Product Name:	8-OH-DPAT
Cat. No.:	CS-0043224
CAS No.:	78950-78-4
Molecular Formula:	C16H25NO
Molecular Weight:	247.38
Target:	5-HT Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Solubility:	DMSO : ≥ 155 mg/mL (626.57 mM)



BIOLOGICAL ACTIVITY:

8-OH-DPAT is a potent and selective **5-HT** agonist, with a **pIC_{50}** of 8.19 for 5-HT1A and a **K_i** of 466 nM for 5-HT7; 8-OH-DPAT weakly binds to 5-HT1B (pIC_{50}, 5.42), 5-HT (pIC_{50} <5). IC50 & Target: pIC50: 8.19 (5-HT1A)[1]
Ki: 466 nM (5-HT7)[2] **In Vitro:** 8-OH-DPAT is a potent and selective 5-HT agonist, with a pIC_{50} of 8.19 for 5-HT1A; weakly binds to 5-HT1B (pIC_{50}, 5.42), 5-HT (pIC_{50} <5)[1]. 8-OH-DPAT has high affinity at 5-HT7 with a K_i of 466 nM, and does not bind to 5-HT6 or 5-HT4 [2]. **In Vivo:** 8-OH-DPAT (1 mg/kg) normalizes hypolocomotion, significantly increases wakefulness and reduces the duration of REM sleep without effect on the duration of non-REM sleep in the dark period in orexin knockout (KO) mice. 8-OH-DPAT shows no obvious effect on wakefulness or the duration of either REM sleep or non-REM sleep in WT mice. 8-OH-DPAT (1 mg/kg, s.c.) activates 5-HT1A receptor in orexin knockout mice[3].

PROTOCOL (Extracted from published papers and Only for reference)

Animal Administration: 8-OH-DPAT is dissolved in saline[3].[3]Mice[3]
The locomotor activity of **mice** is measured by an infrared sensor placed in individual home cages. To compare the locomotor activity in the light and dark periods, locomotor activity is monitored at 30-min intervals starting at 8:00 a.m. and 8:00 p.m., respectively. To measure the effects of psychostimulants (**8-OH-DPAT, 1, 3 mg/kg, s.c**; etc.) on locomotor activity in the dark period, all drugs are administered at 8:00 p.m., and locomotor activity is then measured through 3 h[3].

References:

[1]. DEREK N. MIDDLEMISS, et al. 8-HYDROXY-2-(DI-n-PROPYLAMINO)-TETRALIN DISCRIMINATES BETWEEN SUBTYPES OF

[2]. Bard JA, et al. Cloning of a novel human serotonin receptor (5-HT7) positively linked to adenylate cyclase. J Biol Chem. 1993 Nov 5;268(31):23422-6.

[3]. Mori T, et al. Narcolepsy-like sleep disturbance in orexin knockout mice are normalized by the 5-HT1A receptor agonist 8-OH-DPAT. Psychopharmacology (Berl). 2016 Jun;233(12):2343-53.

CAIndexNames:

1-Naphthalenol, 7-(dipropylamino)-5,6,7,8-tetrahydro-

SMILES:

OC1=C2CC(N(CCC)CCC)CCC2=CC=C1

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 732-484-9848 Fax: 888-484-5008 E-mail: sales@ChemScene.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA