

Product Data Sheet

Product Name: LY 344864

Cat. No.: GC17039

Chemical Properties

Cas. No. 186544-26-3

Chemical Name (R)-N-(3-(dimethylamino)-2,3,4,9-tetrahydro-1H-carbazol-6-yl)-4-fluorobenzamide

SMILES CN([C@]1([H])CCC2=C(C3=C(N2)C=CC(NC(C4=CC=C(F)C=C4)=O)=C3)C1)C

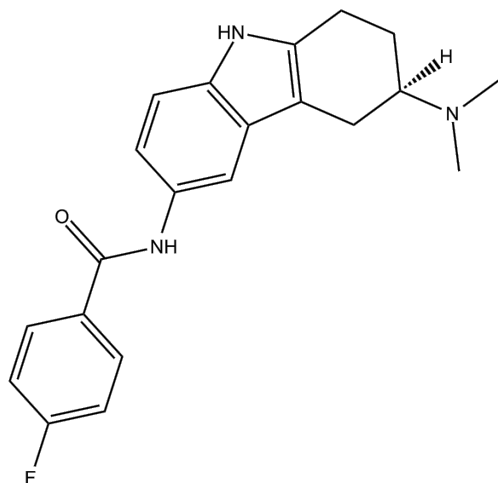
Formula $C_{21}H_{22}FN_3O$ M.Wt 351.42

Solubility DMSO : ≥ 350 mg/mL (995.96 mM) Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Protocol

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

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Animal experiment: Rats[2] Male albino Wistar rats are divided into different groups. Rats in the experimental LY344864 and sham groups receive LY 344864 (1 or 2 µg/5 µL; intracerebroventricular [i.c.v.]), vehicle (5 µl/rat i.c.v.), or saline (5 µl/rat i.c.v.) during the acquisition phase[2]

References:

- [1]. Phebus LA, et al. Characterization of LY344864 as a pharmacological tool to study 5-HT_{1F} receptors: binding affinities, brain penetration and activity in the neurogenic dural inflammation model of migraine. Life Sci. 1997;61(21):2117-26.
- [2]. Shahidi S, et al. Intracerebroventricular microinjection of the 5-HT_{1F} receptor agonist LY 344864 inhibits methamphetamine conditioned place preference reinstatement in rats. Pharmacol Biochem Behav. 2018 Aug 2.

Background

IC₅₀ Value: 6 nM (K_i) LY344864 is a selective receptor agonist with an affinity of 6 nM (K_i) at the recently cloned 5-HT_{1F} receptor. It possesses little affinity for the 56 other serotonergic and non-serotonergic neuronal binding sites examined [1]. in vitro: the 5-HT_{1A}, 5-HT_{1B} and 5-HT_{1D} receptor agonists 8-OH-DPAT (3 µM), CP93129 (3 µM) and L694247 (3 µM), but not the 5-HT_{1F} receptor agonist LY344864 (1 - 3 µM) inhibited evoked IPSCs [2]. in vivo: After an intravenous dose of 1 mg/kg, rat plasma LY344864 levels declined with time whereas brain cortex levels remained relatively constant for the first 6 hours after injection. Oral and intravenous LY344864 administration potently inhibited dural protein extravasation caused by electrical stimulation of the trigeminal ganglion in rats [1]. Sumatriptan, zolmitriptan, rizatriptan, and naratriptan all contracted the rabbit saphenous vein from baseline tone, whereas LY344864 in concentrations up to 10⁻⁴ M did not contract the rabbit saphenous vein. Furthermore, vascular contractions to sumatriptan were markedly augmented in the presence of prostaglandin F_{2α} (PGF_{2α}). However, even in the presence of PGF_{2α} (3 × 10⁻⁷ M), LY344864 did not contract the rabbit saphenous vein in concentrations well in excess of its 5-HT_{1F} receptor affinity (pK_i = 8.2) [3]. Clinical trial: N/A

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