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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
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Ro 10-5824 dihydrochloride

Cat. No.: HY-101384A

CAS No.: 189744-94-3

Molecular Formula: $C_{17}H_{22}Cl_2N_4$

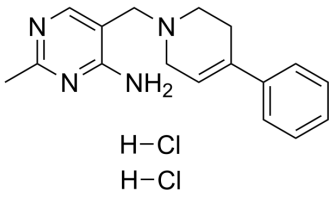
Molecular Weight: 353.29

Target: Dopamine Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 100 mg/mL (283.05 mM; Need ultrasonic)

DMSO : 8.33 mg/mL (23.58 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.8305 mL	14.1527 mL	28.3054 mL
5 mM	0.5661 mL	2.8305 mL	5.6611 mL
10 mM	0.2831 mL	1.4153 mL	2.8305 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 50 mg/mL (141.53 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Ro 10-5824 dihydrochloride is a selective dopamine D4 receptor partial agonist, with K_i of 5.2 nM.

IC_{50} & Target

Ki: 5.2 nM (dopamine D4 receptor)[2]

In Vitro

RO-10-5824 shows high affinity binding with a K_i=5.2±0.9 nM (n=3), 250-fold selectivity vs human D3R, and >1000 fold selectivity for D4 vs human D2, D1, and D5 receptors. RO-10-5824 stimulates ^{35}S-GTPγS binding with an EC_{50} value of 205±67 nM (n=7) and maximal induction at 36±4% above basal level[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Ro 10-5824 (3 mg/kg) increases the success rate in the ORD task. At doses of 1 and 3 mg/kg, Ro 10-5824 increases baseline gamma band activity in the frontal cortex. Ro 10-5824 has no effect on spontaneous locomotion[1]. RO-10-5824 (10.0 mg/kg) does not increase center entries in the open field in a single 60-min session without the novel object present, nor does it increase overall transitions in the initial experiment with C57 mice[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [2]

In the experiment, 39 C57 and 40 DBA mice are tested over a three-day period. On days 1 and 2, mice are placed into the VT for 60 min and locomotor behavior is recorded. On the third day, mice are placed into the VT chamber for 60 min. Following the 60-min period, mice are removed from the chambers and administered 0, 1.0, 3.0, or 10.0 mg/kg of RO-10-5824 (n=9-11 per group). Mice are assigned to drug group pseudo-randomly, with each dose being represented in a cage of four mice. A novel paper cup measuring 9.5 cm in height and 7.5 cm in diameter at the rim is placed upside down in the center of each open field and secured to the floor with tape. Mice are returned to the VT 10 min following injection and tested for an additional 30 min.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Brain Behav Immun. 2020 Oct;89:133-144.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Nakazawa S, et al. Behavioral and neurophysiological effects of Ro 10-5824, a dopamine D4 receptor partial agonist, in common marmosets. Psychopharmacology (Berl). 2015 Sep;232(17):3287-95.

[2]. Powell SB, et al. RO-10-5824 is a selective dopamine D4 receptor agonist that increases novel object exploration in C57 mice. Neuropharmacology. 2003 Mar;44(4):473-81.

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