PD 168568 dihydrochloride

Cat. No.: HY-103407A

CAS No.: 1782532-06-2

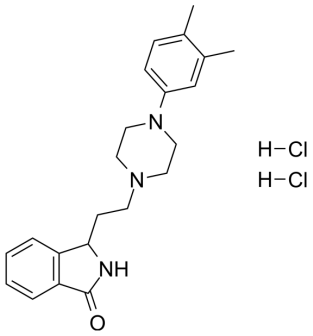
Molecular Formula: $C_{22}H_{29}Cl_2N_3O$

Molecular Weight: 422.39

Target: Dopamine Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	PD 168568 dihydrochloride is a orally active and potent dopamine receptor D_4 (DRD_4) antagonist. PD 168568 dihydrochloride contains an isoindolinone and is selective for the D_4 receptor versus D_2 and D_3, with K_i values of 8.8, 1842, and 2682 nM, respectively. PD 168568 dihydrochloride can be used for glioblastoma (GBM) research[1][2].

IC_{50} & Target	D_4 Receptor	D_2 Receptor	D_3 Receptor
	8.8 nM (Ki)	1842 nM (Ki)	2682 nM (Ki)

In Vitro

PD 168568 dihydrochloride shows selectivity inhibition toward glioblastoma neural stem cells (GNS), with IC_{50} of 25-50 μM[1].

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

In Vivo

PD 168568 dihydrochloride (3 mg/kg, Oral) has ability to inhibit amphetamine-stimulated locomotor activity in the rat[3].

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Animal Model:	Rat[1]
Dosage:	3 mg/kg
Administration:	Oral administration
Result:	Inhibit amphetamine (0.5 mg/kg, i.p.) stimulated locomotor activity.

REFERENCES

[1]. Dolma S, et al. Inhibition of Dopamine Receptor D4 Impedes Autophagic Flux, Proliferation, and Survival of Glioblastoma Stem Cells. Cancer Cell. 2016 Jun 13;29(6):859-873.

[2]. Lindsley CW, et al. Return of D4 Dopamine Receptor Antagonists in Drug Discovery. J Med Chem. 2017 Sep 14;60(17):7233-7243.

[3]. Belliotti TR, et al. Isoindolinone enantiomers having affinity for the dopamine D4 receptor. Bioorg Med Chem Lett. 1998 Jun 16;8(12):1499-502.

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

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