Pergolide mesylate

Cat. No.: HY-13720A

CAS No.: 66104-23-2

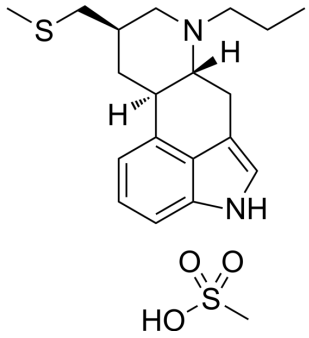
Molecular Formula: $C_{20}H_{30}N_2O_3S_2$

Molecular Weight: 410.59

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

DMSO : ≥ 25 mg/mL (60.89 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.4355 mL	12.1776 mL	24.3552 mL
5 mM	0.4871 mL	2.4355 mL	4.8710 mL
10 mM	0.2436 mL	1.2178 mL	2.4355 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (5.07 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.07 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.07 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Pergolide mesylate (Pergolide methanesulfonate), an Ergoline derivative, is a potent and orally active dopamine D_1 and D_2 receptors agonist. Pergolide mesylate can be used for Parkinson's disease and hyperprolactinaemia research[1][2].

IC_{50} & Target

D_2 Receptor	D_1 Receptor

In Vitro

Pergolide (10 nM-50 μM) treatment dose-dependently inhibits H_2O_2-induced cell death in SH-SY5Y neuroblastoma cells. Pergolide protects SH-SY5Y neuroblastoma cells from cell death specifically induced by H_2O_2, acting in very low concentrations (nanomolar range) and in very early stages of the neurotoxic intracellular process[2].

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

Cell Viability Assay[2]

Cell Line:	SH-SY5Y cells
Concentration:	0.01 μM, 0.1 μM, 0.5 μM, 1 μM, 5 μM, 10 μM, 50 μM
Incubation Time:	Pretreated for 2 hours
Result:	Dose-dependently inhibited H_2O_2-induced cell death in SH-SY5Y neuroblastoma cells.

In Vivo

Pergolide (0.3 mg/kg; intraperitoneal injection; daily; 11 days) treatment reduces the number of working/reference memory errors a 6-OHDA-induced rat model of Parkinson's disease. Pergolide facilitates spatial memory and improves brain oxidative balance[3] .

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Animal Model:	Wistar rats (200-250 g) induced with 6-hydroxydopamine (6-OHDA)[3]
Dosage:	0.3 mg/kg
Administration:	Intraperitoneal injection; daily; 11 days
Result:	A reduced number of working/reference memory errors was observed. And significant decreased of MDA level.

CUSTOMER VALIDATION

- Nature. 2023 Dec;624(7992):672-681.

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REFERENCES

[1]. S Franks, et al. Effectiveness of pergolide mesylate in long term treatment of hyperprolactinaemia. Br Med J (Clin Res Ed). 1983 Apr 9;286(6372):1177-9.

[2]. Daniela Uberti, et al. Pergolide protects SH-SY5Y cells against neurodegeneration induced by H(2)O(2). Eur J Pharmacol. 2002 Jan 2;434(1-2):17-20.

[3]. Alin Ciobica, et al. The effects of pergolide on memory and oxidative stress in a rat model of Parkinson's disease. J Physiol Biochem. 2012 Mar;68(1):59-69.

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