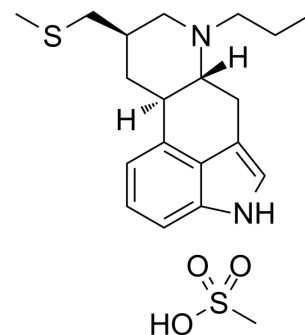


## Pergolide mesylate

<b>Cat. No.:</b>	HY-13720A
<b>CAS No.:</b>	66104-23-2
<b>Molecular Formula:</b>	C <sub>20</sub> H <sub>30</sub> N <sub>2</sub> O <sub>3</sub> S <sub>2</sub>
<b>Molecular Weight:</b>	410.59
<b>Target:</b>	Dopamine Receptor
<b>Pathway:</b>	GPCR/G Protein; Neuronal Signaling
<b>Storage:</b>	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : ≥ 25 mg/mL (60.89 mM)					
	* "≥" means soluble, but saturation unknown.					
	<b>Preparing Stock Solutions</b>	<b>Solvent</b>	<b>Mass</b>	<b>1 mg</b>	<b>5 mg</b>	<b>10 mg</b>
		<b>Concentration</b>				
		<b>1 mM</b>		2.4355 mL	12.1776 mL	24.3552 mL
<b>5 mM</b>			0.4871 mL	2.4355 mL	4.8710 mL	
<b>10 mM</b>		0.2436 mL	1.2178 mL	2.4355 mL		
Please refer to the solubility information to select the appropriate solvent.						
<b>In Vivo</b>	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

<b>Description</b>	Pergolide mesylate (Pergolide methanesulfonate), an Ergoline derivative, is a potent and orally active dopamine D <sub>1</sub> and D <sub>2</sub> receptors agonist. Pergolide mesylate can be used for Parkinson's disease and hyperprolactinaemia research <sup>[1][2]</sup> .	
<b>IC<sub>50</sub> &amp; Target</b>	D <sub>2</sub> Receptor	D <sub>1</sub> Receptor
<b>In Vitro</b>	Pergolide (10 nM-50 μM) treatment dose-dependently inhibits H <sub>2</sub> O <sub>2</sub> -induced cell death in SH-SY5Y neuroblastoma cells. Pergolide protects SH-SY5Y neuroblastoma cells from cell death specifically induced by H <sub>2</sub> O <sub>2</sub> , acting in very low concentrations (nanomolar range) and in very early stages of the neurotoxic intracellular process <sup>[2]</sup> .	

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

#### Cell Viability Assay<sup>[2]</sup>

Cell Line:	SH-SY5Y cells
Concentration:	0.01 $\mu$ M, 0.1 $\mu$ M, 0.5 $\mu$ M, 1 $\mu$ M, 5 $\mu$ M, 10 $\mu$ M, 50 $\mu$ M
Incubation Time:	Pretreated for 2 hours
Result:	Dose-dependently inhibited H <sub>2</sub> O <sub>2</sub> -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<sup>[3]</sup>.

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Animal Model:	Wistar rats (200-250 g) induced with 6-hydroxydopamine (6-OHDA) <sup>[3]</sup>
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.

## 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<sub>2</sub>O<sub>2</sub>. 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.

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

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