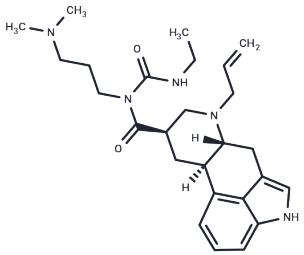
Data Sheet (Cat.No.T14853)

TargetMol

Cabergoline

Chemical Properties



CAS No. : 81409-90-7

Formula: C26H37N5O2

Molecular Weight: 451.6

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Cabergoline (FCE-21336) is an ergot derived-dopamine D2-like receptor agonist. It has high affinity for D2, D3, and 5-HT2B receptors (Ki=0.7, 1.5, and 1.2, respectively). Cabergoline permits rapid and effective hormonal and tumor control by normalizing prolactin-producing pituitary adenomas levels.
Targets(IC50)	5-HT Receptor,Autophagy,Dopamine Receptor
In vitro	Cabergoline(10 μM) is used to investigate its neuroprotective effects. MAP2 staining reveals that Cabergoline significantly suppresses the loss of neurons caused by H2O2 incubation. Pretreatment with Cabergoline inhibits H2O2-induced neuronal cell death in a dose-dependent manner. Cabergoline prevents apoptotic cell death following H2O2 exposure [1].
In vivo	Cabergoline demonstrates a longer elimination half-life (63 to 109 hours) compared to other D2-like receptor agonists, offering prolonged clinical benefits from a single dose and potential enhancements in the quality of life for individuals with chronic conditions [1]. It notably reduces the number of rapid eye movement (REM) sleep bouts in female mice, achieving a 67.3% reduction (F(1,11)=12.892, P=0.004) in non-restrained subjects, with the most considerable decrease observed during the dark phase (82.3% reduction). In male mice, Cabergoline significantly lowers baseline Prolactin (PRL) levels by 98.5% (F(1,6)=13.192, P=0.011) to 0.08 ng/mL within two hours post-injection. PRL levels normalize to baseline (5.0±0.60 ng/mL; F(1,6)=0.715, P=0.43) following a seven-day recovery period [2].

Solubility Information

Solubility	DMSO: 260 mg/mL (575.73 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.43 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2143 mL	11.0717 mL	22.1435 mL
5 mM	0.4429 mL	2.2143 mL	4.4287 mL
10 mM	0.2214 mL	1.1072 mL	2.2143 mL
50 mM	0.0443 mL	0.2214 mL	0.4429 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Odaka H, et al. Cabergoline, dopamine D2 receptor agonist, prevents neuronal cell death under oxidative stress via reducing excitotoxicity. PLoS One. 2014 Jun 10;9(6):e99271.
Xu Z, Guo L, Yu J, et al.Ligand recognition and G protein coupling of trace amine receptor TAAR1.Nature.2023: 1-3.
Jefferson F, et al. A dopamine receptor d2-type agonist attenuates the ability of stress to alter sleep in mice. Endocrinology. 2014 Nov;155(11):4411-21.