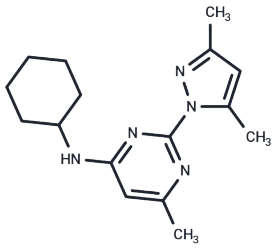
Data Sheet (Cat.No.T20968)

TargetMol

CyPPA

Chemical Properties



CAS No. : 73029-73-9

Formula: C16H23N5

Molecular Weight: 285.39

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	CyPPA, a subtype-selective positive modulator of SK channels, decreased spontaneous firing rate, increased the duration of the apamin-sensitive afterhyperpolarization.
Targets(IC50)	Dopamine Receptor,Potassium Channel
In vitro	CyPPA, a positive modulator of SK2 and SK3, reduces the activity of dopaminergic neurons and inhibits dopamine release with EC50 values of 14 μM and 5.6 μM, repectively. CyPPA counteracts hyperdopaminergic behaviors induced by methylphenidate.
In vivo	In vivo studies revealed that systemic administration of CyPPA attenuated methylphenidate-induced hyperactivity and stereotypic behaviors in mice. CyPPA induces a concentration-dependent increase in the apparent Ca2+ sensitivity of channel activation, changing the EC50 (Ca2+) from 429 nM to 59 nM

Solubility Information

Solubility	DMSO: 99 mg/mL (346.89 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.504 mL	17.5199 mL	35.0398 mL
5 mM	0.7008 mL	3.504 mL	7.008 mL
10 mM	0.3504 mL	1.752 mL	3.504 mL
50 mM	0.0701 mL	0.3504 mL	0.7008 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

Herrik KF, Redrobe JP, Holst D, Hougaard C, Sandager-Nielsen K, Nielsen AN, Ji H, Holst NM, Rasmussen HB, Nielsen EØ, Strøbæk D, Shepard PD, Christophersen P. CyPPA, a Positive SK3/SK2 Modulator, Reduces Activity of Dopaminergic Neurons, Inhibits Dopamine Release, and Counteracts Hyperdopaminergic Behaviors Induced by Methylphenidate. Front Pharmacol. 2012 Feb 13;3:11. doi: 10.3389/fphar.2012.00011. eCollection 2012. PubMed PMID: 22347859; PubMed Central PMCID: PMC3278045.

Dolga AM, Letsche T, Gold M, Doti N, Bacher M, Chiamvimonvat N, Dodel R, Culmsee C. Activation of KCNN3/SK3/K(Ca)2.3 channels attenuates enhanced calcium influx and inflammatory cytokine production in activated microglia. Glia. 2012 Dec;60(12):2050-64. doi: 10.1002/glia.22419. Epub 2012 Sep 21. PubMed PMID: 23002008; PubMed Central PMCID: PMC3799773.

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