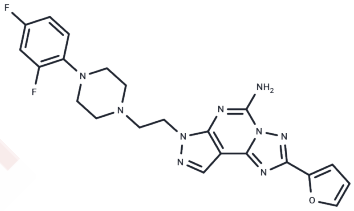
Data Sheet (Cat.No.T12868)

TargetMol

Sch412348

Chemical Properties



CAS No. : 377727-26-9

Formula: C22H21F2N9O

Molecular Weight: 465.46

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	Sch412348 is a potent competitive the human adenosine A2A receptor antagonist with Ki of 0.6 nM and has >1000-fold selectivity over all other adenosine receptors.
Targets(IC50)	AChR,Adenosine Receptor
In vitro	Sch412348 is determined to have KB values of 0.3 nM, respectively at the A2A receptor; the value are in good agreement with the Ki values determined in radioligand binding assays. A similar functional assay with A2B receptor-expressing cells is used to demonstrate selectivity over A2B receptors.Sch412348 also completely antagonizes cAMP in cells expressing the recombinant human A2A receptor. The KB value for Sch412348 is 273 nM, indicating that Sch412348 is 910-fold selective for the A2A receptor over the A2B receptor.
In vivo	Administering Sch412348 orally (0.1-1 mg/kg) to rats enhances the effects of 3,4-dihydroxy-L-phenylalanine (L-Dopa) in inducing contralateral rotations after creating lesions in the medial forebrain bundle with 6-hydroxydopamine, and significantly diminishes the cataleptic effects caused by haloperidol. Furthermore, Sch412348 (1 and 3 mg/kg) was observed to reduce haloperidol-induced catalepsy at both 1 hour [$F(3,20)=3.9$, $p<0.05$] and 4 hours [$F(3,20)=7.5$, $p<0.01$] post-administration in a dose-dependent manner. Additionally, Sch412348 (0.1-1 mg/kg) notably decreases the duration of immobility in mice during the tail suspension test (TST) at a 1 mg/kg dose [$F(2,51)=10.6$, $p<0.01$]. The substance also increased activity levels in mice [$F(4,27)=2.9$, $p<0.05$], particularly in the 0.3 and 3 mg/kg treatment groups, which showed significantly higher activity than those treated with a vehicle, with the 1 mg/kg dose nearing significance ($p=0.052$).

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1484 mL	10.7421 mL	21.4841 mL
5 mM	0.4297 mL	2.1484 mL	4.2968 mL
10 mM	0.2148 mL	1.0742 mL	2.1484 mL
50 mM	0.043 mL	0.2148 mL	0.4297 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

Hodgson RA, et al. Characterization of the potent and highly selective A2A receptor antagonists preladenant and SCH 412348 [7-[2-[4-2,4-difluorophenyl]-1-piperazinyl]ethyl]-2-(2-furanyl)-7H-pyrazolo[4,3-e][1,2,4]triazolo[1,5-c] pyrimidin-5-amine] in rodent models of movement disorders and depression. J Pharmacol Exp Ther. 2009 Jul;330 (1):294-303.

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