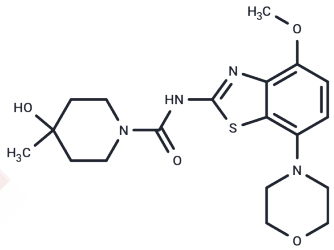
Data Sheet (Cat.No.T7320)

TargetMol

Tozadenant

Chemical Properties



CAS No. : 870070-55-6

Formula: C19H26N4O4S

Molecular Weight: 406.5

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	Tozadenant (SYN115) is an adenosine A2A receptor antagonist(Ki of 11.5 nM and 6 nM on human and rhesus,respectively)
Targets(IC50)	Adenosine Receptor
In vivo	When compared to the drugs tested alone, Radiprodil and Tozadenant combination led to a significant increase of motor activity and an improvement of motor disability in MPTP-treated marmosets. In addition, the motor restoration brought about by the combination was almost completely devoid of dyskinesia[1]
Animal Research	Before initiating the Radiprodil & Tozadenant combination experiment, 14 primates were challenged with a dose of 8 mg/kg (po) of L-Dopa and behaviour was recorded for 5 hours. This "Pre-L-Dopa-test" was used to select the 12 subjects required for the study. Their response to the L-Dopa challenge was subsequently used as a comparator to the ensuing response to the different drug treatments and combinations. The effects of the drugs alone or in combination were assessed after acute oral gavage.This experiment investigated the effects on motor deficits of Radiprodil plus Tozadenant twice daily at an interval of 5 hrs according to a modified Latin square design in n = 12 MPTP-treated marmosets. At the time of the second drugs administration a novel object (cotton reel, table tennis ball) was placed into the cage. The four different treatments were (1) Tozadenant (150 mg/kg) plus Radiprodil (2.0 mg/kg), (2) Tozadenant (150 mg/kg) plus vehicle, (3) Radiprodil (2.0 mg/kg) plus vehicle, (4) vehicle[1].

Solubility Information

Solubility	DMSO: 50 mg/mL (123 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 (4.92 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	2.460 mL	12.3001 mL	24.6002 mL
5 mM	0.492 mL	2.460 mL	4.920 mL
10 mM	0.246 mL	1.230 mL	2.460 mL
50 mM	0.0492 mL	0.246 mL	0.492 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

Anne M , Jean-Marie N , Sarah R , et al. Antiparkinsonian effects of the \"Radiprodil and Tozadenant\" combination in MPTP-treated marmosets[J]. PLOS ONE, 2017, 12(8):e0182887-.

Hauser R A , Olanow C W , Kieburtz K D , et al. Tozadenant (SYN115) in patients with Parkinson\"s disease who have motor fluctuations on levodopa: a phase 2b, double-blind, randomised trial[J]. The Lancet Neurology, 2014, 13(8):767-776.

Barret O , Hannestad J , Alagille D , et al. Adenosine 2A Receptor Occupancy by Tozadenant and Preladenant in Rhesus Monkeys[J]. Journal of Nuclear Medicine, 2014, 55(10):1712-1718.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481