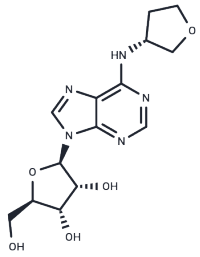
Data Sheet (Cat.No.T17023)

TargetMol

Tecadenoson

Chemical Properties



CAS No. : 204512-90-3

Formula: C14H19N5O5

Molecular Weight: 337.33

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	Tecadenoson (CVT-510) is a selective A1 adenosine receptor agonist.
Targets(IC50)	Adenosine Receptor
In vitro	Tecadenoson is approximately 5 fold more potent to prolong the stimulus-to-His bundle (S-H interval), a measure of slowing AV nodal conduction (EC50=41?nM) than to increase coronary conductance (EC50=200?nM) in the atrial-paced isolated heart. Tecadenoson shortens atrial (EC50=73?nM) but not the ventricular monophasic action potentials (MAP). At concentrations of Tecadenoson (40?nM) and diltiazem (1?μM) that induces equal prolongation of S-H interval (~ 10?ms), diltiazem, but not Tecadenoson, significantly decreases left ventricular developed pressure (LVP) and markedly increases coronary conductance [1].
In vivo	Intravenous infusions of Tecadenoson and diltiazem causes nearly equal prolongations of P-R interval In atrial-paced anaesthetized guinea-pigs. Tecadenoson (2, 5, 20 μg/kg i. p.) causes a rapid and sustained dose-dependent decrease in NEFA at doses that do not cause bradycardia. Tecadenoson (50 μg/kg) treatment induces a significant bradycardia (50% decrease in heart rate at 25 min) [1][2].

Solubility Information

Solubility	DMSO: 155 mg/mL (459.49 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: 5 mg/mL (14.82 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	2.9645 mL	14.8223 mL	29.6446 mL
5 mM	0.5929 mL	2.9645 mL	5.9289 mL
10 mM	0.2964 mL	1.4822 mL	2.9645 mL
50 mM	0.0593 mL	0.2964 mL	0.5929 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

Snowdy S, et al. A comparison of an A1 adenosine receptor agonist (CVT-510) with diltiazem for slowing of AVnodal conduction in guinea-pig. Br J Pharmacol. 1999 Jan;126(1):137-46.
Fraser H, et al. N-[3-(R)-tetrahydrofuranyl]-6-aminopurine riboside, an A1 adenosine receptor agonist, antagonizes catecholamine-induced lipolysis without cardiovascular effects in awake rats. J Pharmacol Exp Ther. 2003 Apr;305(1):225-31.