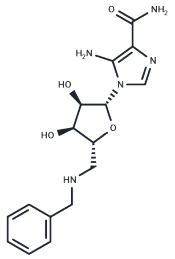
Data Sheet (Cat.No.T13713)

TargetMol

GP531

Chemical Properties



CAS No. : 142344-87-4

Formula: C16H21N5O4

Molecular Weight: 347.37

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	GP531 is a second-generation adenosine regulating agent. It is pharmacologically silent under basal conditions but increases localized endogenous adenosine during ischemia.
Targets(IC50)	AChR,Adenosine Receptor
In vivo	GP531 administration does not alter heart rate or mean aortic pressure but significantly improves left ventricular function by reducing end-diastolic pressure, volumes, and wall stress, while enhancing ejection fraction (EF), deceleration time of early mitral inflow velocity, and the slope of end-systolic pressure-volume relationship (PVR), without an increase in myocardial oxygen consumption (MVO2). At low doses, GP531 diminishes infarct size by 34% and the no-reflow zone extent by 31% compared to control, with high doses achieving reductions of 22% and 16%, respectively. Unlike adenosine, GP531 does not impact overall hemodynamics or blood flow, showcasing its efficacy in mitigating ischemic/reperfusion injury severity at lower doses without inducing adverse hemodynamic events such as bradycardia and hypotension.

Solubility Information

Solubility	DMSO: 125 mg/mL (359.85 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: 3.3 mg/mL (9.5 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	2.8788 mL	14.3939 mL	28.7877 mL
5 mM	0.5758 mL	2.8788 mL	5.7575 mL
10 mM	0.2879 mL	1.4394 mL	2.8788 mL
50 mM	0.0576 mL	0.2879 mL	0.5758 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

Hale SL, et al. Cardioprotection with adenosine-regulating agent, GP531: effects on no-reflow, infarct size, and blood flow following ischemia/ reperfusion in the rabbit. J Cardiovasc Pharmacol Ther. 2010 Mar;15(1):60-7.
Wang M, et al. Acute intravenous infusion of an adenosine regulating agent improves left ventricular function in dogs with advanced heart failure. Cardiovasc Drugs Ther. 2013 Dec;27(6):489-98.