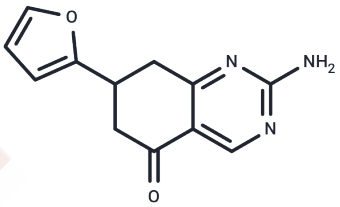
Data Sheet (Cat.No.T16333)

TargetMol

NKY80

Chemical Properties



CAS No. : 299442-43-6

Formula: C12H11N3O2

Molecular Weight: 229.23

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	NKY80 regulates the adenylyl cyclase catalytic activity in heart and lung tissues. NKY80 is a non-competitive inhibitor of adenylyl cyclase type V isoform (IC50s: 8.3 μM, 132 μM, and 1.7 mM for type V, III and II, respectively).
Targets(IC50)	Adenylate cyclase
In vitro	NKY80 (20 μM) blocks the increase in LVP and ventricular cAMP levels[2]. NKY80 (20 μM; 2 hours) completely blocks the elevations in both cAMP content and renin release from isolated JG cells[3].

Solubility Information

Solubility	DMSO: 225 mg/mL (981.55 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 (21.81 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	4.3624 mL	21.8122 mL	43.6243 mL
5 mM	0.8725 mL	4.3624 mL	8.7249 mL
10 mM	0.4362 mL	2.1812 mL	4.3624 mL
50 mM	0.0872 mL	0.4362 mL	0.8725 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

Onda T, et al. Type-specific regulation of adenylyl cyclase. Selective pharmacological stimulation and inhibitionof adenylyl cyclase isoforms. Biol Chem. 2001 Dec 21;276(51):47785-93.
Harney JA, et al. Insulin-like stimulation of cardiac fuel metabolism by physiological levels of glucagon: involvement of PI3K but not cAMP. Am J Physiol Endocrinol Metab. 2008 Jul;295(1):E155-61.
Ortiz-Capisano MC, et al. Adenylyl cyclase isoform v mediates renin release from juxtaglomerular cells. Hypertension. 2007 Mar;49(3):618-24.