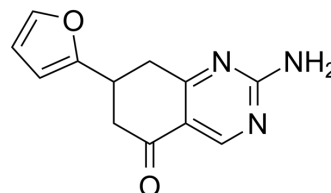


NKY80

Cat. No.:	HY-103195		
CAS No.:	299442-43-6		
Molecular Formula:	C ₁₂ H ₁₁ N ₃ O ₂		
Molecular Weight:	229.23		
Target:	Adenylate Cyclase		
Pathway:	GPCR/G Protein		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro	DMSO : 250 mg/mL (1090.61 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	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	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (9.07 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (9.07 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (9.07 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	NKY80 is a potent, selective and non-competitive adenylyl cyclase (AC) type V isoform inhibitor with IC ₅₀ s of 8.3 μM, 132 μM and 1.7 mM for type V, III and II, respectively. NKY80 is a non-nucleoside quinazolinone and regulates the AC catalytic activity in heart and lung tissues ^{[1][2]} .
IC ₅₀ & Target	IC ₅₀ : 8.3 μM (AC type V), 132 μM (AC type III) and 1.7 mM (AC type II) ^[1]
In Vitro	NKY80 (20 μM) blocks the elevations in both LVP and ventricular cAMP levels produced by the maximal concentration (10

nM)^[2].

NKY80 (20 μ M; 2 hours) completely blocks the increase in both cAMP content and renin release from isolated JG cells^[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Ruprecht-Karls-University Heidelberg. 2023 Aug 3.

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REFERENCES

[1]. Onda T, et al. Type-specific regulation of adenylyl cyclase. Selective pharmacological stimulation and inhibition of adenylyl cyclase isoforms. *Biol Chem*. 2001 Dec 21;276(51):47785-93.

[2]. 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.

[3]. Ortiz-Capisano MC, et al. Adenylyl cyclase isoform ν mediates renin release from juxtaglomerular cells. *Hypertension*. 2007 Mar;49(3):618-24.

Caution: Product has not been fully validated for medical applications. For research use only.

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