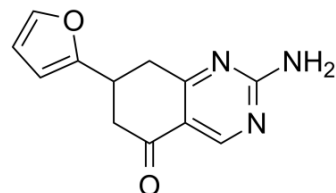


NKY80

| | | | |
|---------------------------|---|-------|----------|
| 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 | 6 months |
| | | -20°C | 1 month |



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]} . |
| IC₅₀ & 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.

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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