SGC-AAK1-1

Cat. No.: HY-123940

CAS No.: 2247894-32-0

Molecular Formula: $C_{21}H_{25}N_5O_3S$

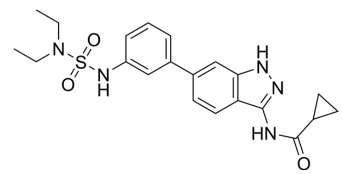
Molecular Weight: 427.52

Target: AAK1

Pathway: Neuronal Signaling

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 : 50 mg/mL (116.95 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	2.3391 mL	11.6954 mL	23.3907 mL
5 mM	0.4678 mL	2.3391 mL	4.6781 mL
10 mM	0.2339 mL	1.1695 mL	2.3391 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.85 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SGC-AAK1-1 is a potent and selective AAK1 (AP2 associated kinase 1) inhibitor with an IC_{50} of 270 nM and a K_i of 9 nM. SGC-AAK1-1 also potently inhibits BMP2K. SGC-AAK1-1 is used to study Wnt pathway related to AAK1[1].

IC_{50} & Target

IC50: 270 nM (AAK1)[1].
Ki: 9 nM (AAK1)[1]

In Vitro

SGC-AAK1-1 (1.25 μM) significantly reduces phosphorylation of AP2M1 (T156) and activates WNT-driven BAR activity compared in a dose-dependent manner in HT1080 cells[1].
SGC-AAK1-1 blocks AAK1 kinase activity, resulting in increased β-catenin protein stability and β-catenin-dependent transcription[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Agajanian MJ, et al. WNT Activates the AAK1 Kinase to Promote Clathrin-Mediated Endocytosis of LRP6 and Establish a Negative Feedback Loop. Cell Rep. 2019 Jan 2;26(1):79-93.e8.

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