GSK-3/CDK5/CDK2-IN-1

Cat. No.: HY-134622

CAS No.: 395074-72-3

Molecular Formula: $C_{21}H_{22}N_4O_2$

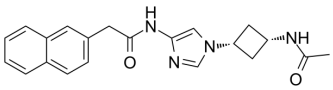
Molecular Weight: 362.42

Target: CDK; GSK-3

Pathway: Cell Cycle/DNA Damage; PI3K/Akt/mTOR; Stem Cell/Wnt

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 : 100 mg/mL (275.92 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.7592 mL	13.7961 mL	27.5923 mL
5 mM	0.5518 mL	2.7592 mL	5.5185 mL
10 mM	0.2759 mL	1.3796 mL	2.7592 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 (6.90 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.90 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.90 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

GSK-3/CDK5/CDK2-IN-1, an imidazole derivative, is an inhibitor of cdk5, cdk2, and GSK-3 extracted from patent WO2002010141A1, example 9a. GSK-3/CDK5/CDK2-IN-1 can be used for the research of cancer, and neurodegenerative diseases[1].

IC_{50} & Target

cdk5[1]
cdk2[1]
GSK-3[1]

In Vitro	GSK-3/CDK5/CDK2-IN-1 inhibits the phosphorylation of cdk5 peptide substrate phosphorylation, with an IC_{50} of less than about 50 μM[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Ahlijanian MK, et, al. Preparation of acylaminoimidazoles as inhibitors of cdk5, cdk2, and GSK-3. WO2002010141A1.

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