ZNL-05-044

Cat. No.: HY-155874

Molecular Formula: $C_{21}H_{22}Cl_2N_6OS$

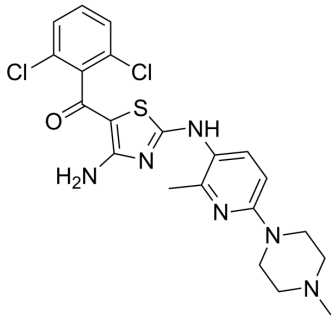
Molecular Weight: 477.41

Target: CDK

Pathway: Cell Cycle/DNA Damage

Storage: 4°C, stored under nitrogen

* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (209.46 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0946 mL	10.4732 mL	20.9464 mL
	5 mM	0.4189 mL	2.0946 mL	4.1893 mL
	10 mM	0.2095 mL	1.0473 mL	2.0946 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 (5.24 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.24 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

ZNL-05-044 is a CDK11 inhibitor with an IC_{50}s of 0.23 μM and 0.27 μM against CDK11A and CDK11B, respectively (NanoBRET assay). ZNL-05-044 leads to G2/M cell cycle arrest and impairs RNA splicing[1].

IC_{50} & Target

IC50: 0.23 μM (CDK11A in NanoBRET assay), 0.27 μM (CDK11B in NanoBRET assay), 135 nM (CDK4/cyclin D1 in Adapta activity assay), 189 nM (CDK9/cyclin T1 in Adapta activity assay), 217 nM (CDK6/cyclin D1 in Adapta activity assay)[1]
Kd: 69 nM (CDK11A in KdELECT assay)[1]

REFERENCES

[1]. Li Z, et al. Synthesis and Structure-Activity relationships of cyclin-dependent kinase 11 inhibitors based on a diaminothiazole scaffold. Eur J Med Chem. 2022 Aug 5;238:114433.

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