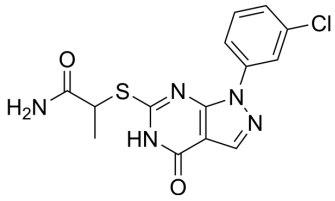
HS38

Cat. No.:	HY-15847		
CAS No.:	1030203-81-6		
Molecular Formula:	$C_{14}H_{12}ClN_5O_2S$		
Molecular Weight:	349.8		
Target:	DAPK		
Pathway:	Apoptosis		
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 : 7.14 mg/mL (20.41 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.8588 mL	14.2939 mL	28.5878 mL
	5 mM	0.5718 mL	2.8588 mL	5.7176 mL
	10 mM	0.2859 mL	1.4294 mL	2.8588 mL

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

BIOLOGICAL ACTIVITY

Description

HS38 is a potent, selective, and ATP-competitive inhibitor of death-associated protein kinase 1 (DAPK1) and zipper-interacting protein kinase (ZIPK, also called DAPK3), with K_ds of 300 nM and 280 nM, respectively. HS38 is also a PIM3 inhibitor with an IC_{50} of 200 nM. HS38 can be used for the research of smooth muscle related disorders[1].

IC_{50} & Target

Kd: 300 nM (DAPK1), 79 nM (DAPK2), 280 nM (ZIPK), IC50: 200 nM (DAPK1), 200 nM (PIM3)[1]

In Vitro

HS38 displays high affinity toward DAPK2, with a K_d of 79 nM. DAPK2 is not implicated in smooth muscle contractility[1].
HS38 significantly reduces relative RLC20 phosphorylation in both the basal and sphingosine 1-phosphate (S1P) activated states in human aortic SM cells[1].
HS38 reduces contractile forces generated by intact mouse aorta in aortic tissue[1].
HS38 reduces the contractile force, RLC20 phosphorylation, and MYPT1 phosphorylation in Ca^{2+}-sensitized rabbit ileum[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	CA-VSMCs
Concentration:	10 μM
Incubation Time:	40 minutes
Result:	Reduced relative RLC20 phosphorylation in both the basal and S1P activated states.

CUSTOMER VALIDATION

- Life Sci. 2023 Apr 1;121653.

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REFERENCES

[1]. David A Carlson, et al. Fluorescence Linked Enzyme Chemoproteomic Strategy for Discovery of a Potent and Selective DAPK1 and ZIPK Inhibitor. ACS Chem Biol. 2013 Dec 20; 8(12): 2715–2723.

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