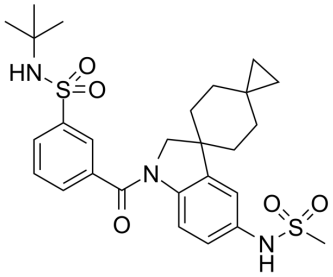
KIF18A-IN-7

Cat. No.:	HY-153066
CAS No.:	2914878-00-3
Molecular Formula:	$C_{27}H_{35}N_3O_5S_2$
Molecular Weight:	545.71
Target:	Microtubule/Tubulin
Pathway:	Cell Cycle/DNA Damage; Cytoskeleton
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 : 25 mg/mL (45.81 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.8325 mL	9.1624 mL	18.3248 mL
	5 mM	0.3665 mL	1.8325 mL	3.6649 mL
	10 mM	0.1832 mL	0.9162 mL	1.8325 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.58 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

KIF18A-IN-7 (Compound 22) is an orally active KIF18A inhibitor with an IC_{50} of 9.4 nM against KIF18A microtubule-dependent ATPase activity[1].

IC_{50} & Target

IC50: 9.4 nM (KIF18A microtubule-dependent ATPase activity)[1]

In Vitro

KIF18A-IN-7 (Compound 22; 7 days) inhibits JIMT-1, NIH-OVCAR3 and HCC-15 cells viability with IC_{50}s of 0.0078, 0.0097 and 0.011 μM, respectively[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	HCC-15, JIMT-1 and NIH-OVCAR3

Concentration:	
Incubation Time:	7 days
Result:	Inhibited cell viability with IC_{50}s of 0.0078, 0.0097 and 0.011 μM against JIMT-1, NIH-OVCAR3 and HCC-15 cells, respectively.

In Vivo

KIF18A-IN-7 (Compound 22; 10-60 mg/kg; p.o.; twice or once a day for 1 month) inhibits HCC15 and OVCAR3 tumor growth in mice[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	SCID Beige mice, HCC15 tumor model[1]
Dosage:	10, 30 and 60 mg/kg
Administration:	PO, twice a day for 1 month
Result:	Inhibited tumor growth by 30±15%, 72±6% and 82±9% at 10, 30 and 60 mg/kg, respectively.

Animal Model:	Balb/C nude mice, OVCAR3 tumor model[1]
Dosage:	10, 30 and 60 mg/kg
Administration:	PO, once a day for 1 month
Result:	Inhibited tumor growth by 24±26%, 72±17% and 82±10% at 10, 30 and 60 mg/kg, respectively.

REFERENCES

[1]. COGAN, et al. SPIRO INDOLINE INHIBITORS OF KIF18A. Patent WO2023028564.

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