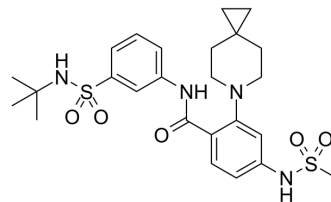


KIF18A-IN-2

Cat. No.:	HY-145802		
CAS No.:	2600559-20-2		
Molecular Formula:	C ₂₅ H ₃₄ N ₄ O ₅ S ₂		
Molecular Weight:	534.69		
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 : 50 mg/mL (93.51 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	1.8702 mL	9.3512 mL	18.7024 mL
	5 mM	0.3740 mL	1.8702 mL	3.7405 mL
	10 mM	0.1870 mL	0.9351 mL	1.8702 mL

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

BIOLOGICAL ACTIVITY

Description

KIF18A-IN-2 is a potent KIF18A inhibitor (IC₅₀=28 nM). KIF18A-IN-2 causes significant mitotic arrest and increases the number of mitotic cells in tumor tissues. KIF18A-IN-2 can be used for researching cancer^[1].

IC₅₀ & Target

IC₅₀: 28 nM (KIF18A)^[1]

In Vivo

KIF18A-IN-2 (compound 23) (100 mg/kg; i.p., single) exhibits a significant and sustained pharmacodynamic response, increasing the number of mitotic cells (pH3 positive cells) in tumor tissues for up to 24 hours^[1]. Pharmacokinetic Parameters of KIF18A-IN-2 in female CD-1 mice^[1].

IP (100 mg/kg)	
C _{max} (μM)	12.6

AUC ₀₋₂₄ (μM·h)	147
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C _{24h} (μM)	2.9
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PPB (f _u)	0.007
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MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female athymic nude mice (4-7 weeks; injected with human OVCAR-3 HGSOC cells) ^[1]
Dosage:	100 mg/kg
Administration:	i.p., single
Result:	Showed a significant and sustained pharmacodynamic response, increasing the number of mitotic cells (pH3 positive cells) in tumor tissues for up to 24 hours.

REFERENCES

[1]. Tamayo NA, et al. Targeting the Mitotic Kinesin KIF18A in Chromosomally Unstable Cancers: Hit Optimization Toward an In Vivo Chemical Probe. J Med Chem. 2022;65(6):4972-4990.

Caution: Product has not been fully validated for medical applications. For research use only.

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