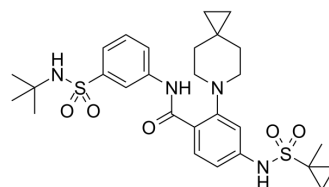


KIF18A-IN-3

Cat. No.:	HY-145803		
CAS No.:	2600577-49-7		
Molecular Formula:	C ₂₈ H ₃₈ N ₄ O ₅ S ₂		
Molecular Weight:	574.76		
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 : 100 mg/mL (173.99 mM; Need ultrasonic)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	1.7399 mL	8.6993 mL	17.3986 mL
5 mM	0.3480 mL	1.7399 mL	3.4797 mL
10 mM	0.1740 mL	0.8699 mL	1.7399 mL

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

BIOLOGICAL ACTIVITY

Description

KIF18A-IN-3 is a potent KIF18A inhibitor (IC₅₀=61 nM). KIF18A-IN-3 causes significant mitotic arrest and increases the number of mitotic cells in tumor tissues. KIF18A-IN-3 can be used for researching cancer^[1].

IC₅₀ & Target

IC₅₀: 61 nM (KIF18A)^[1]

In Vivo

KIF18A-IN-3 (compound 24) 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-3 in female CD-1 mice^[1].

	IP (100 mg/kg)
C _{max} (μM)	26.5

AUC ₀₋₂₄ (μM·h)	269
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C _{24h} (μM)	0.8
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PPB (f _u)	0.015
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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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