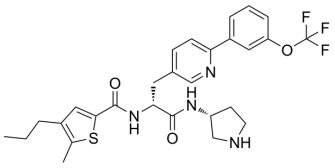
AZ82

Cat. No.:	HY-12241
CAS No.:	1449578-65-7
Molecular Formula:	$C_{28}H_{31}F_3N_4O_3S$
Molecular Weight:	560.63
Target:	Kinesin
Pathway:	Cell Cycle/DNA Damage; Cytoskeleton
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (222.96 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.7837 mL	8.9185 mL	17.8371 mL
5 mM	0.3567 mL	1.7837 mL	3.5674 mL
10 mM	0.1784 mL	0.8919 mL	1.7837 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: ≥ 2.08 mg/mL (3.71 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.71 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

AZ82 is a selective kinesin-like protein KIFC1 (HSET/KIFC1) inhibitor, with a K_i of 43 nM and an IC_{50} of 300 nM for KIFC1.

IC_{50} & Target

HSET/KIFC1 300 nM (IC_{50})	HSET/KIFC1 43 nM (Ki)

In Vitro

AZ82 is shown to specifically induce multipolar spindles in BT-549 cells, but not in cancer cells with normal centrosome number, such as HeLa[1]. AZ82 binds specifically to KIFC1/MT complex but not to KIFC1 or MT alone. Treatment with AZ82 caused centrosome declustering in BT-549 breast cancer cells with amplified centrosomes. AZ82 inhibits both processes with an IC_{50} of 0.90 ± 0.09 μM for mant-ATP binding and 1.26 ± 0.51 μM for mant-ADP releasing[2].

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

CUSTOMER VALIDATION

- Development. 2022 Feb 10;dev.200231.

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REFERENCES

[1]. Godinho SA, et al. Causes and consequences of centrosome abnormalities in cancer. Philos Trans R Soc Lond B Biol Sci. 2014 Sep 5;369(1650).

[2]. Discovery and mechanistic study of a small molecule inhibitor for motor protein KIFC1. Wu J, et al. ACS Chem Biol. 2013 Oct 18;8(10):2201-8.

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

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