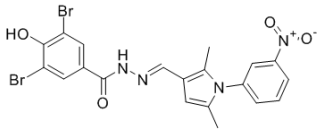
Kinesore

Cat. No.:	HY-112777
CAS No.:	363571-83-9
Molecular Formula:	$C_{20}H_{16}Br_2N_4O_4$
Molecular Weight:	536.17
Target:	Others
Pathway:	Others

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 : 125 mg/mL (**233.14 mM;** Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.8651 mL	9.3254 mL	18.6508 mL
5 mM	0.3730 mL	1.8651 mL	3.7302 mL
10 mM	0.1865 mL	0.9325 mL	1.8651 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 (3.88 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Kinesore is an inhibitor of the **KLC2-SKIP** Interaction.

IC_{50} & Target

KLC2-SKIP[1].

In Vitro

Remarkably, in kinesore-treated cells, the microtubule network is entirely reorganized into a series of loops and bundles. In addition, the lysosomal compartment accumulates in a juxtanuclear position, where there are relatively few microtubules. At 50 μM kinesore, this phenotype is highly penetrant, with 95±2.4% (n=3, total of 200 cells) of cells exhibiting a reorganized nonradial microtubule network. In titration experiments, in cells treated for 1 h, this phenotype becomes apparent at a concentration of 25 μM kinesore, with relatively little effect at or below concentrations of 12.5 μM. The effect is reversible because a 2-h washout of kinesore from cells treated for 1 h led to the reestablishment of the radial microtubule array. This kinesore-induced reorganization of the microtubule network

is observed in a panel of mammalian normal and cancer cell lines. In wild-type cells, 50 μM kinesore induces the remodeling of the microtubule network and the formation of extensive microtubule-rich projections. This phenotype is strongly suppressed in Kif5B knockout cells, confirming that microtubule remodeling induced by kinesore is dependent upon the presence of kinesin-1[1].

PROTOCOL

Cell Assay [1]

To examine the effect of kinesore in cells, **HeLa cells** are treated with **50 μM** kinesore or vehicle control (0.1% DMSO) for 1 h[1].

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

REFERENCES

[1]. Randall TS, et al. A small-molecule activator of kinesin-1 drives remodeling of the microtubule network. Proc Natl Acad Sci U S A. 2017 Dec 26;114(52):13738-13743.

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