K-975

Cat. No.: HY-138565

CAS No.: 2563855-03-6

Molecular Formula: $C_{16}H_{14}ClNO_2$

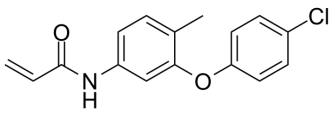
Molecular Weight: 287.74

Target: YAP

Pathway: Stem Cell/Wnt

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 : 220 mg/mL (764.58 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.4754 mL	17.3768 mL	34.7536 mL
5 mM	0.6951 mL	3.4754 mL	6.9507 mL
10 mM	0.3475 mL	1.7377 mL	3.4754 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: 5.5 mg/mL (19.11 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 5.5 mg/mL (19.11 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 5.5 mg/mL (19.11 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

K-975 is a potent, selective and orally active TEAD inhibitor, with a strong inhibitory effect against protein-protein interactions between YAP1/TAZ and TEAD. K-975 covalently binds to Cys359 located in the palmitate-binding pocket of TEAD via an acrylamide structure. K-975 exhibits antitumor activity on malignant pleural mesothelioma[1].

IC_{50} & Target

TEAD[1]

In Vitro

K-975 (0.1-10000 nM; 144 h) inhibits the cell proliferation of NF2-non-expressing malignant pleural mesothelioma (MPM) cell

lines[1].
K-975 (10-10000 nM; 24 h) inhibits protein-protein interaction (PPI) between Halo-YAP and endogenous TEAD1/4 and Halo-TAZ and TEAD1/4 in NCI-H226 cells[1].
K-975 (0.1-10000 nM; 24 h) strongly inhibits the reporter activity in NCI-H661/CTGF-Luc cells, with the maximum inhibition of ~70%, and does not inhibit the reporter activity in NCI-H661/NRF2-Luc cells[1].
K-975 (1-10000 nM; 24 h) decreases the expressions of CTGF, IGFBP3, and NPPB mRNAs, and increases the expression of FBXO32 mRNA in NCI-H226 cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	NF2-non-expressing MPM and NF2-expressing malignant MPM cells
Concentration:	0.1, 1, 10, 100, 1000, 10000 nM
Incubation Time:	144 hours
Result:	Had a stronger inhibitory effect against NF2-non-expressing cell lines than NF2-expressing cell lines. Inhibited the proliferation of MSTO-211H cells, an NF2-expressing cell line.

Western Blot Analysis[1]

Cell Line:	NCI-H226 cells
Concentration:	10, 100, 1000, 10000 nM
Incubation Time:	24 hours
Result:	Inhibited TEAD1-YAP1 PPI and TEAD4-YAP1 PPI. Inhibited TEAD1-TAZ PPI and TEAD4-TAZ PPI.

In Vivo

K-975 (10-300 mg/kg; p.o. twice a day for 14 days) inhibits the tumor growth by inhibiting YAP1/TAZ-TEAD signaling in MPM xenograft mouse models[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male SCID mice (5 weeks) injected with NCI-H226 or MSTO-211H cells[1]
Dosage:	10, 30, 100, 300 mg/kg
Administration:	P.o. twice a day for 14 days
Result:	Exhibited strong anti-tumor effect in MPM s.c. xenograft mouse models.Decreased the expressions of CTGF, IGFBP3, and NPPB, and increased the expression of FBXO32 in the NCI-H226 xenograft model.

CUSTOMER VALIDATION

- Cell Rep. 2023 Apr 12;112388.
- Br J Cancer. 2022 Dec 19.
- NPJ Precis Oncol. 2023 May 18;7(1):44.
- Biomed Pharmacother. 2023 Apr 12;162:114680.
- J Med Chem. 2022 Jun 28.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Kaneda A, et, al. The novel potent TEAD inhibitor, K-975, inhibits YAP1/TAZ-TEAD protein-protein interactions and exerts an anti-tumor effect on malignant pleural mesothelioma. Am J Cancer Res. 2020 Dec 1;10(12):4399-4415.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA