MSC-4106

Cat. No.: HY-147208

CAS No.: 2738542-58-8

Molecular Formula: $C_{18}H_{12}F_3N_3O_2$

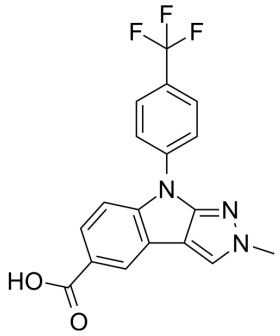
Molecular Weight: 359.3

Target: YAP

Pathway: Stem Cell/Wnt

Storage: -20°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (695.80 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.7832 mL	13.9159 mL	27.8319 mL
	5 mM	0.5566 mL	2.7832 mL	5.5664 mL
	10 mM	0.2783 mL	1.3916 mL	2.7832 mL

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

BIOLOGICAL ACTIVITY

Description

MSC-4106 is an orally active and potent inhibitor of YAP/TAZ-TEAD. MSC-4106 inhibits TEAD1 or TEAD3 auto-palmitoylation and shows inhibitory effect on NCI-H226 tumor xenograft model[1].

IC_{50} & Target

Target: YAP[1]

In Vitro

MSC-4106 (10 μM, 24 h) inhibited SK-HEP-1 reporter and NCI-266 cell viability with IC_{50} values of 4 nM and 14 nM, respectively[1].

MSC-4106 (10 μM, 6 h) crystallizes in the P-site of TEAD1, and against TEAD1 or TEAD3 palmitoylation in TEAD-Overexpressing HEK293 Cells by 97.3% and 75.9%, respectively[1].

MSC-4106 (10 μM, 4 d) targets TEAD indicated by a reduction in viability of NCI-H226 cells[1].

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

Cell Viability Assay[1]

Cell Line:	NCI-H226 (YAP dependent); SW620 YAP/TAZ KO (Yap-independent) cells
Concentration:	0, 3, 6, 9, 12, 15, 18, 21, 24, 26, 30 μM

Incubation Time:	96 hours
Result:	Showed inhibitory effect to NCI-H226 and general cytotoxic to SW620 (IC_{50} >30 μM).

Immunofluorescence[1]

Cell Line:	SK-HEP-1
Concentration:	0, 3, 6, 9, 12, 15, 18, 21, 24, 26, 30 μM
Incubation Time:	24 hours
Result:	Inhibited YAP-TEAD interation.

In Vivo

MSC-4106 (100 mg/kg/d; p.o.; 7 d) displays anti-tumor effect with controlled tumor volume and good tolerability with stable body weight in mice[1].

MSC-4106 (1, 5, 100 mg/kg/d; p.o.; 0-72 h) down-regulates Cyr61 (cysteine-rich angiogenic inducer 61) expression, the TEAD-regulated target gene, in tumor lysates at all time points at 100 mg/kg and 24 h at 5 mg/kg[1].

Pharmacokinetics (PK) profile in different species[1]

Parameter	Mouse	Rat	Dog
Cl (l/h/kg)	0.2	0.7	0.05
PO $t_{1/2}$ (h)	45	40	3.6
PO AUC (μg•h/mL)	45	10	33
V_{ss} (L/kg)	2	5	0.3
F (%)	>90	80	18

Note: PO studies were performed at 10 mg/kg; MSC-4106 was formulated in 20% Kleptose in 50 mM PBS at pH 7.4.

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

Animal Model:	NCI-H226 xenograft model in H2d Rag2 female mice (9-week-old)[1]
Dosage:	5, 100 mg/kg
Administration:	Oral gavage; once daily; 32 days
Result:	Resulted tumor growth controlled with 5 mg/kg while regressed with 100 mg/kg dosing after 32 treatment days.

REFERENCES

[1]. Timo Heinrich, et al. Optimization of TEAD P-site binding fragment hit into in vivo active lead MSC-4106. J. Med. Chem. 2022, 65, 13, 9206–9229.

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

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