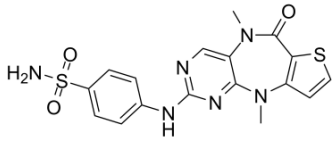
XMU-MP-1

Cat. No.:	HY-100526
CAS No.:	2061980-01-4
Molecular Formula:	$C_{17}H_{16}N_6O_3S_2$
Molecular Weight:	416.48
Target:	Hippo (MST)
Pathway:	Stem Cell/Wnt

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 : 8.33 mg/mL (**20.00 mM**; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.4011 mL	12.0054 mL	24.0108 mL
5 mM	0.4802 mL	2.4011 mL	4.8022 mL
10 mM	0.2401 mL	1.2005 mL	2.4011 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: ≥ 0.83 mg/mL (1.99 mM); Clear solution
2. Add each solvent one by one: **10% DMSO >> 90% (20% SBE-β-CD in saline)**
   Solubility: ≥ 0.83 mg/mL (1.99 mM); Clear solution
3. Add each solvent one by one: **10% DMSO >> 90% corn oil**
   Solubility: ≥ 0.83 mg/mL (1.99 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	XMU-MP-1 is a reversible and selective **MST1/2** inhibitor with **IC_{50}**s of 71.1 and 38.1 nM, respectively[1].
IC_{50} & Target	IC50: 71.1 (MST1), 38.1 nM (MST2)[1]
In Vitro	At concentrations ranging from 0.1 to 10 μM, XMU-MP-1 reduces the phosphorylation of endogenous MOB1, LATS1/2, and YAP in HepG2 cells in a dose-dependent manner. XMU-MP-1 treatment inhibits hydrogen peroxide-

	stimulated MOB1 phosphorylation and MST1/2 autophosphorylation in a variety of cell lines, including mouse macrophage-like cells, human osteosarcoma, human colorectal adenocarcinoma cells. XMU-MP-1 blocks MST1/2 kinase activities, thereby activating the downstream effector Yes-associated protein and promoting cell growth. XMU-MP-1 can potently and reversibly suppress the activities of kinases MST1/2 and enhance their downstream YAP activation in cells[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	XMU-MP-1 displays excellent in in vivo pharmacokinetics and is able to augment mouse intestinal repair, as well as liver repair and regeneration, in both acute and chronic liver injury mouse models at a dose of 1 to 3 mg/kg via intraperitoneal injection. XMUMP-1 treatment exhibits substantially greater repopulation rate of human hepatocytes in the Fah-deficient mouse model than in the vehicle-treated control, indicating that XMU-MP-1 treatment might facilitate human liver regeneration[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Kinase Assay [1]	XMU-MP-1 is dissolved in DMSO (stock concentration, 10 mM). For the in vitro kinase inhibition assays, recombinant GST-tagged MOB1a and various forms of recombinant His-tagged full-length MST1 or MST2 kinase are expressed and purified from Escherichia coli. The assays are performed with the various doses of XMU-MP-1 in the kinase assay buffer for 30 min at 30°C[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- **Nat Immunol**. 2017 Sep;18(9):973-984.
- **Cell Rep**. 2017 Dec 19;21(12):3612-3623.
- **Br J Pharmacol**. 2019 Oct;176(20):3956-3971.
- **Phytomedicine**. 2020, Jul 28.
- **Biochem J**. 2019 Mar 12;476(5):875-887.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Fan F, et al. Pharmacological targeting of kinases MST1 and MST2 augments tissue repair and regeneration. Sci Transl Med. 2016 Aug 17;8(352):352ra108.

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