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- Expressversand

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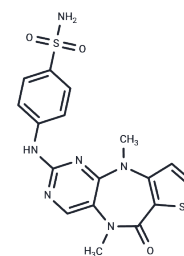
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XMU-MP-1

Chemical Properties

CAS No. :	2061980-01-4
Formula:	C17H16N6O3S2
Molecular Weight:	416.48
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	XMU-MP-1 is an inhibitor of the pro-apoptotic, sterile 20-like kinases MST1 and 2.
Targets(IC50)	Hippo pathway
In vitro	XMU-MP-1 effectively reduces the phosphorylation of MOB1, LATS1/2, and YAP in HepG2 cells in a concentration-dependent manner, with effective doses ranging from 0.1 to 10 μ M. It also inhibits MOB1 phosphorylation induced by hydrogen peroxide and prevents MST1/2 autophosphorylation across various cell lines, including mouse macrophage-like cells, human osteosarcoma, and human colorectal adenocarcinoma cells. By blocking MST1/2 kinase activities, XMU-MP-1 activates the downstream effector, Yes-associated protein (YAP), thereby promoting cell growth. Its action potently and reversibly suppresses the activities of MST1/2 kinases, enhancing YAP activation in cells.
In vivo	XMU-MP-1 displays excellent 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. XMU-MP-1 treatment exhibited 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. Thus, the pharmacological modulation of MST1/2 kinase activities provides a novel approach to potentiate tissue repair and regeneration, with XMU-MP-1 as the first lead for the development of targeted regenerative therapeutics.
Kinase Assay	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].

Solubility Information

Solubility	DMSO: 12.5 mg/mL (30.01 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
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
50 mM	0.048 mL	0.2401 mL	0.4802 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

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.
Wang H, Shang Y, Wang E, et al. MST1 mediates neuronal loss and

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