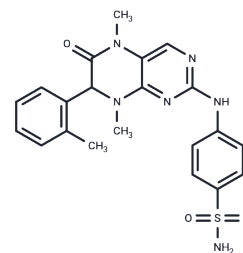


IHMT-MST1-58

Chemical Properties

CAS No. :	2414484-25-4
Formula:	C ₂₁ H ₂₂ N ₆ O ₃ S
Molecular Weight:	438.5
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	IHMT-MST1-58 is a STE20-like protein 1 kinase (MST1) inhibitor (IC ₅₀ :23 nM) with high efficiency, selectivity and oral activity. IHMT-MST1-58 can be used to study type 1 or type 2 diabetes.
Targets(IC ₅₀)	Hippo pathway
In vitro	IHMT-MST1-58 (0.1-10 μM; 1-2 h) inhibits the phosphorylation of MST1 in vitro.[1] IHMT-MST1-58 (0.03, 0.1 and 0.3 μM; 48 h) exhibits a significant protective effect of β cells from the damage caused by inflammatory cytokines.[1]
In vivo	IHMT-MST1-58 (p.o, 50 mg/kg/day, QD) combined with metformin resulted in the reduction of fasting blood glucose, demonstrating the protective effect on β cells and decrease in hemoglobin A1c levels in the STZ-induced T1D/T2D mouse models.[1]

Solubility Information

Solubility	DMSO: 29.4 mg/mL (67.05 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: < 2.94 mg/mL (6.7 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2.94 mg/mL (6.7 mM),Solution. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2805 mL	11.4025 mL	22.805 mL
5 mM	0.4561 mL	2.2805 mL	4.561 mL
10 mM	0.2281 mL	1.1403 mL	2.2805 mL
50 mM	0.0456 mL	0.2281 mL	0.4561 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Wu Y, et al. Discovery of IHMT-MST1-58 as a Novel, Potent, and Selective MST1 Inhibitor for the Treatment of Type 1/2 Diabetes. J Med Chem. 2022;65(17):11818-11839.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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