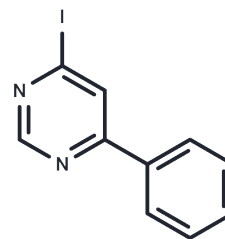


4-IPP

Chemical Properties

CAS No. :	41270-96-6
Formula:	C ₁₀ H ₇ IN ₂
Molecular Weight:	282.08
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	4-IPP (4-Iodo-6-phenylpyrimidine) is an irreversible inhibitor of macrophage migration inhibitory factor (MIF).
Targets(IC50)	Others, MIF
In vitro	4-IPP potentiated osteoblast differentiation and mineralization also through the inhibition of the p65/NF-κB signaling cascade.
In vivo	In the murine model of pathologic osteolysis induced by titanium particles, 4-IPP protected against calvarial bone destruction. Similarly, in the murine model of ovariectomy-induced osteoporosis, 4-IPP treatment ameliorated the bone loss associated with estrogen deficiency by reducing osteoclastic activities and enhancing osteoblastic bone formation.
Cell Research	Cell Line:BMMS. Concentration:0.5 μM, 1 μM, 2.5 μM, 5 μM, 10 μM, 25 μM, 50 μM, 100 μM, 200 μM. Incubation Time:24 hours, 72 hours
Animal Research	Animal Model:8-weeks-old C57BL/6J male mice. Dosage:1 mg/kg, 5 mg/kg. Administration:Intraperitoneal injection; every 2 days; for 8 weeks

Solubility Information

Solubility	DMSO: 122.5 mg/mL (434.27 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (7.09 mM), Sonication is recommended. <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	3.5451 mL	17.7255 mL	35.4509 mL
5 mM	0.709 mL	3.5451 mL	7.0902 mL
10 mM	0.3545 mL	1.7725 mL	3.5451 mL
50 mM	0.0709 mL	0.3545 mL	0.709 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

Zheng L, et al. Macrophage migration inhibitory factor (MIF) inhibitor 4-IPP suppresses osteoclast formation and promotes osteoblast differentiation through the inhibition of the NF- κ B signaling pathway. *FASEB J.* 2019 Jun;33(6):7667-7683.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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