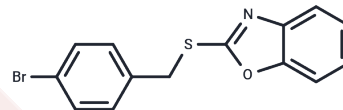


BMP signaling agonist sb4

Chemical Properties

CAS No. : 100874-08-6
 Formula: C₁₄H₁₀BrNOS
 Molecular Weight: 320.2
 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	BMP signaling agonist sb4 (SB 4) is an agonist of benzoxazole bone morphogenetic protein (BMP) signaling (EC ₅₀ :74 nM)
Targets(IC ₅₀)	TGF-beta/Smad
In vitro	SB4, that rapidly stimulated BMP signaling in these cells. Activation of BMP signaling by sb4 increased the phosphorylation of key second messengers (SMAD-1/5/9) and also increased expression of direct target genes (inhibitors of DNA binding, Id1 and Id3) in canonical BMP signaling[1].

Solubility Information

Solubility	DMSO: 83.33 mg/mL (260.24 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: 1 mg/mL (3.12 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	3.123 mL	15.6152 mL	31.2305 mL
5 mM	0.6246 mL	3.123 mL	6.2461 mL
10 mM	0.3123 mL	1.5615 mL	3.123 mL
50 mM	0.0625 mL	0.3123 mL	0.6246 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

Bradford S T J , Ranghini E J , Grimley E , et al. High-throughput screens for agonists of bone morphogenetic protein (BMP) signaling identify potent benzoxazole compounds[J]. Journal of Biological Chemistry, 2019.

Zhang H, Chen C, Liu Y, et al. NRF-2/HO-1 Pathway-Mediated SHOX2 Activation Is a Key Switch for Heart Rate Acceleration by Yixin-Fumai Granules. Oxidative Medicine and Cellular Longevity. 2022

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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