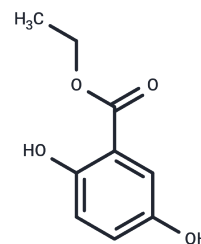


Ethyl gentisate

Chemical Properties

CAS No. :	3943-91-7
Formula:	C9H10O4
Molecular Weight:	182.17
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	Ethyl gentisate (Ethyl 2,5-dihydroxybenzoate) acts as a dual regulator of cell differentiation, promoting osteoblast differentiation while inhibiting osteoclast differentiation. It enhances osteogenic differentiation and alkaline phosphatase activity in human mesenchymal stem cells (hMSCs), and suppresses RANKL-activated osteoclastogenesis in RAW264.7 cells.
Targets(IC50)	Phosphatase, Phosphorylase

Solubility Information

Solubility	Ethanol: 30 mg/mL (164.68 mM), Sonication is recommended. PBS (pH 7.2): 10 mg/mL (54.89 mM), Sonication is recommended. DMSO: 80 mg/mL (439.15 mM), Sonication is recommended. DMF: 30 mg/mL (164.68 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: 5 mg/mL (27.45 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	5.4894 mL	27.4469 mL	54.8938 mL
5 mM	1.0979 mL	5.4894 mL	10.9788 mL
10 mM	0.5489 mL	2.7447 mL	5.4894 mL
50 mM	0.1098 mL	0.5489 mL	1.0979 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

Kwon BJ, et al., Ethyl-2, 5-dihydroxybenzoate displays dual activity by promoting osteoblast differentiation and inhibiting osteoclast differentiation. *Biochem Biophys Res Commun*. 2016 Mar 11;471(3):335-41.

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