

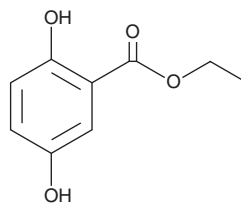
# PRODUCT INFORMATION



## ethyl 2,5-Dihydroxybenzoate

Item No. 21013

**CAS Registry No.:** 3943-91-7  
**Formal Name:** 2,5-dihydroxy-benzoic acid, ethyl ester  
**Synonym:** ethyl Gentisate  
**MF:** C<sub>9</sub>H<sub>10</sub>O<sub>4</sub>  
**FW:** 182.2  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 216, 238, 339 nm  
**Supplied as:** A crystalline solid  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

ethyl 2,5-Dihydroxybenzoate is supplied as a crystalline solid. A stock solution may be made by dissolving the ethyl 2,5-dihydroxybenzoate in the solvent of choice, which should be purged with an inert gas. ethyl 2,5-Dihydroxybenzoate is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ethyl 2,5-dihydroxybenzoate in ethanol and DMF is approximately 30 mg/ml and approximately 20 mg/ml in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ethyl 2,5-dihydroxybenzoate can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ethyl 2,5-dihydroxybenzoate in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

ethyl 2,5-Dihydroxybenzoate is a dual modulator of bone cell differentiation. It promotes osteoblast differentiation, enhancing alkaline phosphatase activity, osteocalcin expression, and calcium deposition in human mesenchymal stem cells.<sup>1</sup> ethyl 2,5-Dihydroxybenzoate also inhibits RANKL-activated osteoclastogenesis in RAW 264.7 cells.<sup>1</sup>

### Reference

1. Kwon, B.-J., Lee, M.H., Koo, M.-A., *et al.* Ethyl-2, 5-dihydroxybenzoate displays dual activity by promoting osteoblast differentiation and inhibiting osteoclast differentiation. *Biochem. Biophys. Res. Commun.* **471(3)**, 335-341 (2016).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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