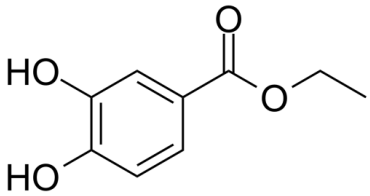
Data Sheet

Product Name:	Ethyl 3,4-dihydroxybenzoate
Cat. No.:	CS-W017125
CAS No.:	3943-89-3
Molecular Formula:	$C_9H_{10}O_4$
Molecular Weight:	182.18
Target:	Apoptosis; Autophagy; HIF/HIF Prolyl-Hydroxylase; NO Synthase; Reactive Oxygen Species
Pathway:	Apoptosis; Autophagy; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB
Solubility:	DMSO : 100 mg/mL (548.91 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

Ethyl 3,4-dihydroxybenzoate (Ethyl protocatechuate), an antioxidant, is a **prolyl-hydroxylase** inhibitor found in the testa of peanut seeds. Ethyl 3,4-dihydroxybenzoate protects myocardium by activating **NO synthase** and generating mitochondrial **ROS**. Ethyl 3,4-dihydroxybenzoate induces cell **autophagy** and **apoptosis** in ESCC cells. Ethyl 3,4-dihydroxybenzoate is a collagen synthesis inhibitor and has a bone protecting-effect[1][2][3][4].

References:

[1]. Bo Han, et al. A prolyl-hydroxylase inhibitor, ethyl-3,4-dihydroxybenzoate, induces cell autophagy and apoptosis in esophageal squamous cell carcinoma cells via up-regulation of BNIP3 and N-myc downstream-regulated gene-1. PLoS One. 2014 Sep 18;9(9):e107204.

[2]. Sebastian Philipp, et al. Desferoxamine and ethyl-3,4-dihydroxybenzoate protect myocardium by activating NOS and generating mitochondrial ROS. Am J Physiol Heart Circ Physiol. 2006 Jan;290(1):H450-7.

[3]. Byeong-Ju Kwon, et al. Ethyl-3,4-dihydroxybenzoate with a dual function of induction of osteogenic differentiation and inhibition of osteoclast differentiation for bone tissue engineering. Tissue Eng Part A. 2014 Nov;20(21-22):2975-84.

[4]. D Nandan, et al. Ethyl-3,4-dihydroxybenzoate inhibits myoblast differentiation: evidence for an essential role of collagen. J Cell Biol. 1990 May;110(5):1673-9.

CAIndexNames:

Benzoic acid, 3,4-dihydroxy-, ethyl ester

SMILES:

O=C(OCC)C1=CC=C(O)C(O)=C1

Caution: Product has not been fully validated for medical applications. For research use only.

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