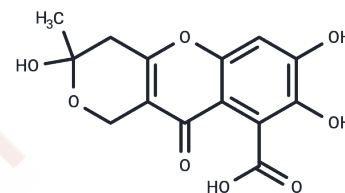


Fulvic Acid

Chemical Properties

CAS No. :	479-66-3
Formula:	C ₁₄ H ₁₂ O ₈
Molecular Weight:	308.24
Storage:	Keep away from moisture Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	Fulvic Acid is a natural product of humus produced by microorganisms in soil, sediment or aquatic environments. Fulvic acid is a phenolic acid and fungal metabolite isolated from Penicillium for the first time. Fulvic Acid inhibits the dimerization of amyloid b (17-42) (AB17-42), destroys the pre-formed trimer of AB17-42, and binds to the catalytic site of phosphodiesterase 5A (PDE5A), which can regulate the body's immune system, affect the oxidation state of cells, and improve gastrointestinal function. Fulvic Acid can be used as an oxidant or reducing agent and has the potential to study chronic inflammatory diseases such as diabetes.
Targets(IC50)	Antioxidant,PDE
In vitro	Fulvic acid (15mg/L) enhanced growth and achieved the highest EPA content (13.9%) in the evolved diatom. Fulvic acid enhanced antioxidant potential and unprecedentedly governed the expression of PUFA and lipid biosynthetic genes. This investigation demonstrates the efficacy of adaptive evolution empowered by fulvic acid.[1] Embryogenic cell masses (ECM) of Abies cephalonica were grown on proliferation media in the presence and absence of fulvic acid (FA), FA increased the proliferation rate, especially during the early sampling days, and the percentage of PEM in their advanced developmental stage. During the maturation phase, fulvic matter also induced a delay in somatic embryo formation. The structure-activity relationship observed here suggests that the influence of FA on ECM may be attributed to specific bioactive molecules that are preferentially released from the FA loose superstructure.[2]

Solubility Information

Solubility	DMSO: 3.09 mg/mL (10.02 mM),Sonication is recommended. Methanol: Soluble Chloroform: Soluble (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2442 mL	16.2211 mL	32.4423 mL
5 mM	0.6488 mL	3.2442 mL	6.4885 mL
10 mM	0.3244 mL	1.6221 mL	3.2442 mL
50 mM	0.0649 mL	0.3244 mL	0.6488 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

Wang X, et al. Adaptive evolution of microalgal strains empowered by fulvic acid for enhanced polyunsaturated fatty acid production. *Bioresour Technol.* 2019;277:204-210.

Zancani M, et al. Fulvic acid affects proliferation and maturation phases in *Abies cephalonica* embryogenic cells. *J Plant Physiol.* 2011;168(11):1226-1233.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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