



LKT Laboratories, Inc.

Alternariol

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Product Information

Product ID A4675
CAS No. 641-38-3
Chemical Name 3,4,4'-Trihydroxy-6'-methyl-2-biphenylcarboxylic acid, gamma lactone

Synonym

Formula C₁₄H₁₀O₅
Formula Wt. 258.23

Melting Point

Purity ≥98%

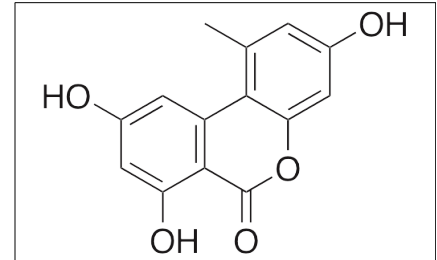
Solubility Soluble in DMSO, ethanol and methanol,

Store Temp 4° C

Ship Temp Ambient

Description Alternariol is a mycotoxin initially produced by species of *Alternaria*. Alternariol produces a weak estrogenic response in vitro and increases production of estradiol and progesterone. Alternariol is also cytotoxic; in macrophages, it increases DNA base oxidations and strand breaks. Also in macrophages, alternariol increases levels of cyclin B1 and p-cdc2, inducing G2/M phase cell cycle arrest. This compound also increases expression of DNA polymerase B through alterations in PKA-CREB signaling. Additionally, alternariol inhibits topoisomerase I and II, preventing DNA relaxation and cleavage.

Warning: Highly toxic. May be mutagenic.



Bulk quantities available upon request

Product ID	Size
A4675	1 mg
A4675	5 mg

References Frizzell C, Ndossi D, Kalayou S, et al. An in vitro investigation of endocrine disrupting effects of the mycotoxin alternariol. *Toxicol Appl Pharmacol.* 2013 Aug 15;271(1):64-71. PMID: 23665424.

Solhaug A, Holme JA, Haglund K, et al. Alternariol induces abnormal nuclear morphology and cell cycle arrest in murine RAW 264.7 macrophages. *Toxicol Lett.* 2013 May 10;219(1):8-17. PMID: 23454835.

Broggi L, Reynoso C, Resnik S, et al. Occurrence of alternariol and alternariol monomethyl ether in beverages from the Entre Rios Province market, Argentina. *Mycotoxin Res.* 2013 Feb;29(1):17-22. PMID: 23334721.

Scott PM, Zhao W, Feng S, et al. Alternaria toxins alternariol and alternariol monomethyl ether in grain foods in Canada. *Mycotoxin Res.* 2012 Nov;28(4):261-6. PMID: 23087499.

Solhaug A, Vines LL, Ivanova L, et al. Mechanisms involved in alternariol-induced cell cycle arrest. *Mutat Res.* 2012 Oct-Nov;738-739:1-11. PMID: 23031795.

Zhao J, Liu K, Lu J, et al. Alternariol induces DNA polymerase B expression through the PKA-CREB signaling pathway. *Int J Oncol.* 2012 Jun;40(6):1923-8. PMID: 22406678.

Fehr M, Pahlke G, Fritz J, et al. Alternariol acts as a topoisomerase poison, preferentially affecting the IIalpha isoform. *Mol Nutr Food Res.* 2009 Apr;53(4):441-51. PMID: 18727009.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.