

Tributyrin

Chemical Properties

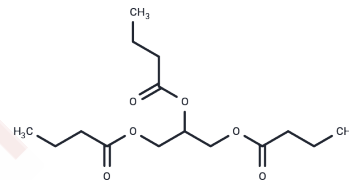
CAS No. : 60-01-5

Formula: C₁₅H₂₆O₆

Molecular Weight: 302.36

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Tributyrin (Glyceryl tributyrate), a neutral short-chain fatty acid triglyceride, is a stable and rapidly absorbed prodrug of Butyric Acid. It diffuses through biological membranes and is metabolized by intracellular lipases, releasing effective butyrate directly into cells in vivo, exhibiting potent proapoptotic, antiproliferative, and differentiation-inducing effects.
Targets(IC50)	Apoptosis, Interleukin, TNF

Solubility Information

Solubility	DMSO: 100 mg/mL (330.73 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3073 mL	16.5366 mL	33.0732 mL
5 mM	0.6615 mL	3.3073 mL	6.6146 mL
10 mM	0.3307 mL	1.6537 mL	3.3073 mL
50 mM	0.0661 mL	0.3307 mL	0.6615 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

Guariento AH, Furtado KS, de Conti A, Campos A, Purgatto E, Carrilho J, Shinohara EM, Tryndyak V, Han T, Fuscoe JC, Ross SA, Beland FA, Pogribny IP, Moreno FS. Transcriptomic responses provide a new mechanistic basis for the chemopreventive effects of folic acid and tributyrin in rat liver carcinogenesis. *Int J Cancer*. 2014 Jul 1;135(1):7-18. doi: 10.1002/ijc.28642. PubMed PMID: 24302446; PubMed Central PMCID: PMC4229010.

Cresci G, Nagy LE, Ganapathy V. Lactobacillus GG and tributyrin supplementation reduce antibiotic-induced intestinal injury. *JPEN J Parenter Enteral Nutr*. 2013 Nov;37(6):763-74. doi: 10.1177/0148607113486809. PubMed PMID: 23630018; PubMed Central PMCID: PMC3818407.

de Conti A, Tryndyak V, Koturbash I, Heidor R, Kuroiwa-Trzmielina J, Ong TP, Beland FA, Moreno FS, Pogribny IP. The chemopreventive activity of the butyric acid prodrug tributyrin in experimental rat hepatocarcinogenesis is associated with p53 acetylation and activation of the p53 apoptotic signaling pathway. *Carcinogenesis*. 2013 Aug; 34(8):1900-6. doi: 10.1093/carcin/bgt124. PubMed PMID: 23568954.

Cresci GA, Bush K, Nagy LE. Tributyrin supplementation protects mice from acute ethanol-induced gut injury. *Alcohol Clin Exp Res*. 2014 Jun;38(6):1489-501. doi: 10.1111/acer.12428. PubMed PMID: 24890666; PubMed Central PMCID: PMC4185400.

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