

Product Data Sheet

Product Name: Dodecyl Gallate

Cat. No.: GC47258

Chemical Properties

Cas. No. 1166-52-5

SMILES O=C(C1=CC(O)=C(C(O)=C1)O)OCCCCCCCCCCCCC

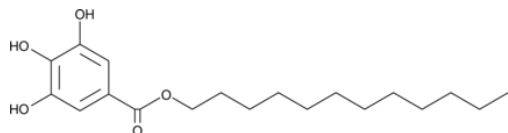
Formula C₁₉H₃₀O₅ M.Wt 338.4

Solubility DMF: 30 mg/ml, DMSO: 30 mg/ml, Ethanol: 30 mg/ml, Ethanol: PBS (pH 7.2) (1:2): 0.3 mg/ml
Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Dodecyl gallate is a derivative of the antioxidant gallic acid that has diverse biological activities, including antioxidant, antiproliferative, and antibacterial properties.^{1,2,3} It inhibits proliferation of a variety of cancer cells, including WEHI-231 mouse B cell lymphoma, Daudi human lymphoma, and HT-29 human colon cancer cells (IC₅₀s = 0.8, 1.4, and 17.0 μM, respectively).¹ It induces apoptosis of WEHI-231 cells but not L-929 mouse fibroblasts. Dodecyl gallate decreases peroxidation of ox brain phospholipid liposomes by 71 and 76% when used at concentrations of 12 and 50 μM, respectively, and scavenges trichloromethyl peroxy radicals at 0.05% w/v.² It is active against a variety of Gram-positive bacteria, including *B. subtilis* (MIC = 25 μg/ml), as well as *M. luteus*, *S. aureus*, and methicillin-resistant *S. aureus* (MRSA; MICs = 12.5 μg/ml for all), and acts by inhibiting the bacterial membrane respiratory chain.³

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

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1.Serrano, A., Palacios, C., Roy, G., et al.Derivatives of gallic acid induce apoptosis in tumoral cell lines and inhibit lymphocyte proliferationArch. Biochem. Biophys.350(1)49-54(1998) 2.Aruoma, O.I., Murcia, A., Butler, J., et al.Evaluation of the antioxidant and prooxidant actions of gallic acid and its derivativesJ. Agric. Food Chem.41(11)1880-1885(1993) 3.Kubo, I., Fujita, K.-i., Nihei, K.-i., et al.Non-antibiotic antibacterial activity of dodecyl gallateBioorg. Med. Chem.11(4)573-580(2003)

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