

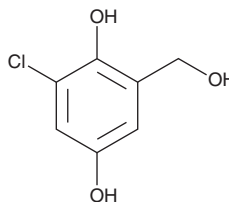
PRODUCT INFORMATION



3-Chlorogentisyl Alcohol

Item No. 40663

CAS Registry No.: 32744-80-2
Formal Name: 2-chloro-6-(hydroxymethyl)-1,4-benzenediol
MF: $C_7H_7ClO_3$
FW: 174.6
Purity: $\geq 98\%$
Supplied as: A solid
Storage: -20°C
Stability: ≥ 4 years
Item Origin: Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

3-Chlorogentisyl alcohol is supplied as a solid. A stock solution may be made by dissolving the 3-chlorogentisyl alcohol in the solvent of choice, which should be purged with an inert gas. 3-Chlorogentisyl alcohol is sparingly soluble (1-10 mg/ml) in ethanol and DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 3-chlorogentisyl alcohol can be prepared by directly dissolving the solid in aqueous buffers. 3-Chlorogentisyl alcohol is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2).

Description

3-Chlorogentisyl alcohol is a phenol and microbial metabolite that has been found in *Ampelomyces* and has diverse biological activities.¹⁻³ It scavenges DPPH (Item No. 14805) radicals in a cell-free assay ($IC_{50} = 1 \mu\text{M}$).² 3-Chlorogentisyl alcohol is active against methicillin-resistant *S. aureus* (MRSA; MIC = 50 $\mu\text{g/ml}$), as well as 13 Gram-positive and Gram-negative bacteria when used at a concentration of 50 $\mu\text{g/disc}$.^{1,2} 3-Chlorogentisyl alcohol has concentration-dependent antifouling activity against barnacle (*B. amphitrite*) cyprids in the conventional submerged assay using polystyrene plates. It induces apoptosis and cell cycle arrest at the S phase in HeLa cervical cancer cells when used at a concentration of 50 μM .³ 3-Chlorogentisyl alcohol (35 μM) induces ssDNA breaks in a comet assay using HeLa cells.

References

1. Kwong, T.F.N., Miao, L., Li, X., *et al.* Novel antifouling and antimicrobial compound from a marine-derived fungus *Ampelomyces sp.* *Mar. Biotechnol.* (NY) **8**(6), 634-640 (2006).
2. Li, Y., Li, X., and Son, B.W. Antibacterial and radical scavenging epoxycyclohexenones and aromatic polyols from a marine isolate of the fungus *Aspergillus*. *Nat. Prod. Sci.* **11**(3), 136-138 (2005).
3. Zhang, Y., Ahn, E.-Y., Jiang, Y., *et al.* 3-Chloro-2,5-dihydroxybenzyl alcohol activates human cervical carcinoma HeLa cell apoptosis by inducing DNA damage. *Int. J. Oncol.* **31**, 1317-1323 (2007).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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