

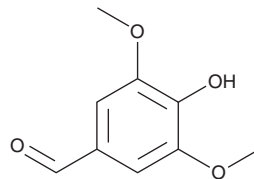
PRODUCT INFORMATION



Syringaldehyde

Item No. 33489

CAS Registry No.: 134-96-3
Formal Name: 4-hydroxy-3,5-dimethoxy-benzaldehyde
Synonyms: NSC 41153, SM 707, VND 3207
MF: $C_9H_{10}O_4$
FW: 182.2
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 216, 231, 310 nm
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

Syringaldehyde is supplied as a solid. A stock solution may be made by dissolving the syringaldehyde in the solvent of choice, which should be purged with an inert gas. Syringaldehyde is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of syringaldehyde in ethanol is approximately 1 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Syringaldehyde is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, syringaldehyde should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Syringaldehyde has a solubility of approximately 0.12 mg/ml in a 1:7 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Syringaldehyde is a polyphenol that has been found in *E. granulatus* and has diverse biological activities.¹⁻⁴ It inhibits LPS-induced COX-2 activity in RAW 264.7 cells with an IC_{50} value of $19.23 \mu\text{M}$.¹ Syringaldehyde inhibits the proliferation of HCT116, Caco-2, and HT-29 colon cancer cells (IC_{50} s = 56.3, 35.9, and $68.6 \mu\text{M}$, respectively).² It decreases plasma glucose levels in a rat model of diabetes induced by streptozotocin (STZ; Item No. 13104) when administered at doses ranging from 1.8 to 7.2 mg/kg.³ Syringaldehyde (25 and 50 mg/kg) reduces infarct size in a rat model of myocardial infarction induced by isoproterenol (Item No. 15592).⁴

References

1. Stanikunaite, R., Khan, S.I., Trappe, J.-M., *et al.* Cyclooxygenase-2 inhibitory and antioxidant compounds from the truffle *Elaphomyces granulatus*. *Phytother. Res.* **23**(4), 575-578 (2009).
2. González-Sarriás, A., Li, L., and Seeram, N.P. Anticancer effects of maple syrup phenolics and extracts on proliferation, apoptosis, and cell cycle arrest of human colon cells. *J. Funct. Foods* **4**(1), 185-196 (2012).
3. Huang, C.-H., Chen, M.-F., Chung, H.-H., *et al.* Antihyperglycemic effect of syringaldehyde in streptozotocin-induced diabetic rats. *J. Nat. Prod.* **75**(8), 1465-1468 (2012).
4. Shahzad, S., Mateen, S., Mariyath, P.M.M., *et al.* Protective effect of syringaldehyde on biomolecular oxidation, inflammation and histopathological alterations in isoproterenol induced cardiotoxicity in rats. *Biomed. Pharmacother.* **108**, 625-633 (2018).

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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