

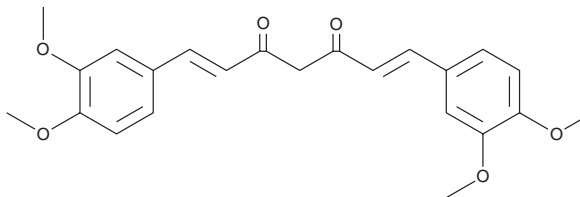
PRODUCT INFORMATION



Dimethoxycurcumin

Item No. 10009986

CAS Registry No.: 160096-59-3
Formal Name: 1,7-bis(3,4-dimethoxyphenyl)-1,6-heptadiene-3,5-dione
Synonym: Di-O-methylcurcumin
MF: C₂₃H₂₄O₆
FW: 396.4
Purity: ≥90%
UV/Vis.: λ_{max}: 418 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Dimethoxycurcumin is supplied as a crystalline solid. A stock solution may be made by dissolving the dimethoxycurcumin in the solvent of choice, which should be purged with an inert gas. Dimethoxycurcumin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of dimethoxycurcumin in these solvents is approximately 0.25, 5, and 10 mg/ml, respectively.

Dimethoxycurcumin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, dimethoxycurcumin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Dimethoxycurcumin has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Dimethoxycurcumin is a derivative of curcumin (Item No. 81025) that has anti-inflammatory and antioxidant activities.¹⁻³ It inhibits mitogen-induced proliferation of CD4⁺ T cells, CD8⁺ T cells, and B cells, as well as secretion of IL-2, IL-4, IL-6, and IFN-γ induced by concanavalin A (Item No. 14951) in isolated human lymphocytes when used at concentrations ranging from 1 to 10 μM.¹ Dimethoxycurcumin (1-10 μM) inhibits LPS-induced nitric oxide (NO) production and expression of inducible nitric oxide synthase (iNOS) in RAW 264.7 cells.² It inhibits hemolysis of isolated human red blood cells (RBCs) induced by AAPH (Item No. 82235) when used at a concentration of 10 μM.³

References

1. Patwardhan, R.S., Checker, R., Sharma, D., *et al.* Dimethoxycurcumin, a metabolically stable analogue of curcumin, exhibits anti-inflammatory activities in murine and human lymphocytes. *Biochem. Pharmacol.* **82(6)**, 642-657 (2011).
2. Pae, H.-O., Jeong, S.-O., Kim, H.S., *et al.* Dimethoxycurcumin, a synthetic curcumin analogue with higher metabolic stability, inhibits NO production, inducible NO synthase expression and NF-κB activation in RAW264.7 macrophages activated with LPS. *Mol. Nutr. Food Res.* **52(9)**, 1082-1091 (2008).
3. Deng, S.-L., Chen, W.-F., Zhou, B., *et al.* Protective effects of curcumin and its analogues against free radical-induced oxidative haemolysis of human red blood cells. *Food Chem.* **98(1)**, 112-119 (2006).

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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