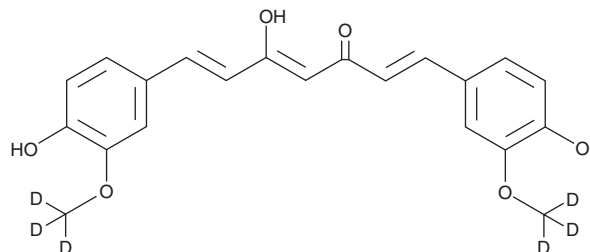


PRODUCT INFORMATION



Curcumin-d₆ Item No. 25438

CAS Registry No.: 1335198-02-1
Formal Name: (1E,4Z,6E)-5-hydroxy-1,7-bis[4-hydroxy-3-(methoxy-d₃)phenyl]-1,4,6-heptatrien-3-one
MF: C₂₁H₁₄D₆O₆
FW: 374.4
Chemical Purity: ≥98% (Curcumin)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₆); ≤1% d₀
Supplied as: A 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

Curcumin-d₆ is intended for use as an internal standard for the quantification of curcumin (Item Nos. 81025 | 81025.1) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Curcumin-d₆ is supplied as a solid. A stock solution may be made by dissolving the curcumin-d₆ in the solvent of choice, which should be purged with an inert gas. Curcumin-d₆ is soluble in the organic solvent acetone at a concentration of approximately 20 mg/ml.

Description

Curcumin is the major yellow pigment in turmeric and curry and has antioxidant, anti-inflammatory, and antitumor activities.¹⁻⁴ It inhibits nitric oxide (NO) production (IC₅₀ = 6 μM) and reduces inducible nitric oxide synthase (iNOS) activity in LPS-stimulated RAW 264.7 cells.¹ Curcumin inhibits release of histamine and the inflammatory cytokines TNF-α, IL-1β, IL-6, and IL-8 from HMC-1 mast cells.² *In vivo*, curcumin decreases serum levels of histamine and TNF-α, inhibits histopathological changes of nasal mucosa, and decreases the number of sneezes and nasal rubbing in a mouse model of ovalbumin-induced rhinitis. Curcumin (100 or 200 mg/kg) prevents ovalbumin-induced accumulation of 3-nitrotyrosine (3-NT), a marker of oxidative stress, in mouse heart. Topical administration of curcumin (1-10 μmol) reduces the number of tumors induced by phorbol 12-myristate 13-acetate (TPA; Item No. 10008014) in mouse skin.³ Dietary administration of curcumin reduces the number of tongue neoplasms and preneoplastic lesions induced by 4-nitroquinoline 1-oxide (4-NQO) in rats.⁴

References

1. Brouet, I. and Ohshima, H. *Biochem. Biophys. Res. Commun.* **206**(2), 533-540 (1995).
2. Zhang, N., Li, H., Jia, J., et al. *Cell. Immunol.* **298**(1-2), 88-95 (2015).
3. Conney, A.H., Lysz, T., Ferraro, T., et al. *Adv. Enzyme Regul.* **31**, 385-396 (1991).
4. Tanaka, T., Makita, H., Ohnishi, M., et al. *Cancer Res.* **54**(17), 4653-4659 (1994).

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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