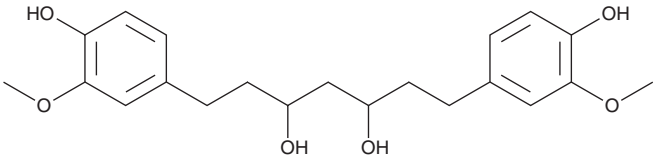
PRODUCT INFORMATION

Octahydrocurcumin

Item No. 33686

CAS Registry No.: 36062-07-4
Formal Name: 1,7-*bis*(4-hydroxy-3-methoxyphenyl)-3,5-heptanediol
Synonyms: Hexahydrobisdemethoxycurcumin, Hexahydrocurcuminol
MF: $C_{21}H_{28}O_6$
FW: 376.4
Purity: ≥95%
Supplied as: A solution in ethanol
Storage: -80°C
Stability: ≥2 years
Item Origin: Synthetic



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

Laboratory Procedures

Octahydrocurcumin is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Octahydrocurcumin is soluble in the organic solvent methanol at a concentration of approximately 10 mg/ml.

Description

Octahydrocurcumin is an active metabolite of curcumin (Item Nos. 81025 | 81025.1) that has diverse biological activities.[1-4] It scavenges DPPH radicals in a cell-free assay (IC_{50} = 12.3 µM).[1] Octahydrocurcumin (6.25 µM) inhibits LPS-induced increases in inducible nitric oxide synthase (iNOS) and COX-2 levels, production of nitric oxide (NO), and nuclear translocation of NF-κB in RAW 264.7 cells.[2] It is active against the bacteria *B. subtilis*, *K. pneumoniae*, *E. coli*, *E. aerogenes*, *P. aeruginosa*, and *S. aureus*, as well as *C. albicans*, in disc assays.[3] Octahydrocurcumin (5, 10, and 20 mg/kg) increases survival, reduces tumor weight, and induces tumor cell apoptosis in an H22 murine hepatocellular carcinoma model.[4]

References

1. Deters, M., Knochenwefel, H., Lindhorst, D., *et al.* Different curcuminoids inhibit T-lymphocyte proliferation independently of their radical scavenging activities. *Pharm. Res.* **25(8)**, 1822-1827 (2008).
2. Zhao, F., Gong, Y., Hu, Y., *et al.* Curcumin and its major metabolites inhibit the inflammatory response induced by lipopolysaccharide: translocation of nuclear factor-κB as potential target. *Mol. Med. Rep.* **11(4)**, 3087-3093 (2015).
3. Singh, R.P. and Jain, D.A. Antimicrobial activity of hydrogenated derivatives of curcumin. *Pharm. Res.* **5(7)**, 3650-3653 (2012).
4. Zhang, Z., Luo, D., Xie, J., *et al.* Octahydrocurcumin, a final hydrogenated metabolite of curcumin, possesses superior anti-tumor activity through induction of cellular apoptosis. *Food Funct.* **9(4)**, 2005-2014 (2018).

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