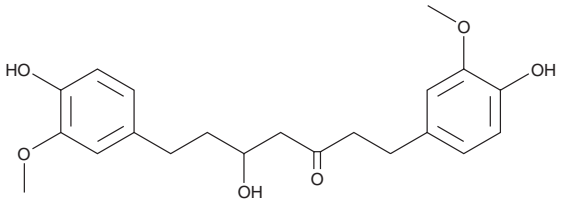
PRODUCT INFORMATION

Hexahydrocurcumin

Item No. 11714

CAS Registry No.:	36062-05-2
Formal Name:	5-hydroxy-1,7-*bis*(4-hydroxy-3-methoxyphenyl)-3-heptanone
MF:	$C_{21}H_{26}O_6$
FW:	374.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 279 nm
Supplied as:	A solution in ethanol
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

Hexahydrocurcumin 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. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of hexahydrocurcumin in these solvents is approximately 0.25, 5, and 10 mg/ml, respectively.

Hexahydrocurcumin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of hexahydrocurcumin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Hexahydrocurcumin 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

Hexahydrocurcumin is a natural product and an active metabolite of curcumin.[1] It reduces prostaglandin E_2 (PGE_2) production stimulated by phorbol 12-myristate 13-acetate (PMA; Item No. 10008014) by 37% in human colonic epithelial cells when used at a concentration of 20 µM. Hexahydrocurcumin (3.125-25 µM) inhibits overproduction of nitric oxide induced by LPS in RAW 264.7 macrophage cells in a concentration-dependent manner.[2] It does not affect LPS-induced cytokine release but inhibits LPS-induced iNOS and COX-2 upregulation and NF-κB activation when used at a concentration of 50 µM. Hexahydrocurcumin prevents the formation of aberrant crypt foci in a dimethylhydrazine rat model of colon cancer and potentiates the effect of 5-fluorouracil (Item No. 14416).[3]

References

1. Ireson, C., Orr, S., Jones, D.J., *et al.* Characterization of metabolites of the chemopreventive agent curcumin in human and rat hepatocytes and in the rat *in vivo*, and evaluation of their ability to inhibit phorbol ester-induced prostaglandin E_2 production. *Cancer Res.* **61(3)**, 1058-1064 (2001).
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. Srimuangwong, K., Tocharus, C., Tocharus, J., *et al.* Effects of hexahydrocurcumin in combination with 5-fluorouracil on dimethylhydrazine-induced colon cancer in rats. *World J. Gastroenterol.* **18(47)**, 6951-6959 (2012).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM