

Demethoxycurcumin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Demethoxycurcumin

Catalog No.: CFN99185

Cas No.: 22608-11-3

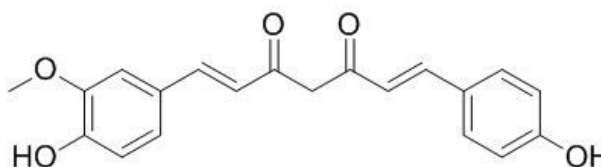
Purity: > 98%

M.F: C₂₀H₁₈O₅

M.W: 338.35

Physical Description: Yellow powder

Synonyms: (1E,6E)-1-(4-Hydroxy-3-methoxyphenyl)-7-(4-hydroxyphenyl)hepta-1,6-diene-3,5-dione; 1,6-Heptadiene-3,5-dione, 1-(4-hydroxy-3-methoxyphenyl)-7-(4-hydroxyphenyl)-(1E,6E)-; (1E,6E)-1-(4-Hydroxy-3-methoxy-phenyl)-7-(4-hydroxy-phenyl)-hepta-1,6-diene-3,5-dione.



[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Food and cosmetic research;
4. Synthetic precursor compounds;
5. Intermediates & Fine Chemicals;
6. Ingredient in supplements, beverages;
7. Aromatics;
8. Others.

[Source]

The herb of *Curcuma longa L.*

[Biological Activity or Inhibitors]

Demethoxycurcumin (DMC) is one of the main active compounds of curcuminoids found in turmeric powder, which is used as a spice in Asian cooking and traditional medicine, has anti-inflammation and anti-cancer activities, the mechanism of DMC-mediated anti-invasive activity involves modulation of the expression of invasion-associated proteins, possibly by targeting NF- κ B in MDA-MB-231 cells.^[1]

Demethoxycurcumin has the relative potency for suppression of tumor necrosis factor (TNF)-induced nuclear factor-B (NF-B) activation, the relative potency is curcumin > demethoxycurcumin > bisdemethoxycurcumin, they also exhibit variable anti-inflammatory and anti-proliferative activities, which do not correlate with their ability to modulate the ROS status.^[2]

Demethoxycurcumin, curcumin and bisdemethoxycurcumin have pro-oxidant, anti-oxidant and cleavage activities on DNA.^[3]

Demethoxycurcumin has differential potency for inhibition of cancer cell invasion, the differential potency is BDMC > or = DMC > Cur, whereas the cell migration is not affected, shows higher antimetastasis potency than curcumin by the differentially down-regulation of ECM degradation enzymes.^[4]

Demethoxycurcumin exerts its in vitro anti-inflammatory effect in LPS-activated N9 microglial cells by blocking nuclear factor- κ B (NF- κ B) and MAPKs activation, which may be partly due to its potent down-regulation of the NADPH-derived iROS production.^[5]

Demethoxycurcumin can induce the apoptosis of human lung cancer NCI-H460 cells through the mitochondrial-dependent pathway, it may be used as a novel anticancer agent for the treatment of lung cancer in the future.^[6]

[Solvent]

Chloroform, Dichloromethane, DMSO, Acetone.

[HPLC Method]^[7]

Mobile phase: Acetonitrile- 0.1% Trifluoro-acetic acid H₂O=50:50 ;

Flow rate: 1.5 ml/min;

Column temperature: 30 °C;

The wave length of determination: 420 nm.

[Storage]

2-8°C, Protected from air and light, refrigerate or freeze.

[References]

- [1] Yodkeeree S, Ampasavate C, Sung B, *et al. Eur. J. Pharmacol.*, 2009, 627(1-3):8-15.
- [2] Sandur SK, Pandey MK, Sung B, *et al. Carcinogenesis*, 2007, 28(8):1765-73.
- [3] Jayaprakasha G K, Rao L J, Sakariah K K. *Food Chem.*, 2006, 98(4):720-4.
- [4] Ahsan H, Parveen N, Khan N U, *et al. Chem.-Biol .Interact*, 1999, 121(2):161-75.
- [5] Yodkeeree S, Chaiwangyen W, Garbisa S, *et al. J. Nutr. Biochem.*, 2009, 20(20):87-95.
- [6] Zhang L, Wu C, Zhao S, *et al. Int. Immunopharmacol.*, 2010, 10(3):331-8.
- [7] Jadhav B K, Mahadik K R, Paradkar A R. *Chromato*, 2007, 65(7):483-8.

[Contact]

Address:

S5-3 Building, No. 111, Dongfeng Rd.,
Wuhan Economic and Technological Development Zone,
Wuhan, Hubei 430056,
China

Email: info@chemfaces.com

Tel: +86-27-84237783

Fax: +86-27-84254680

Web: www.chemfaces.com

Tech Support: service@chemfaces.com