



LKT Laboratories, Inc.

Curcumin

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Product Information

Product ID C8069

CAS No. 458-37-7

Chemical Name (1E,6E)-1,7-Bis(4-hydroxy-3-methoxyphenyl)-1,6-heptadiene-3,5-dione

Synonym Turmeric yellow

Formula C₂₁H₂₀O₆

Formula Wt. 368.38

Melting Point 183° C

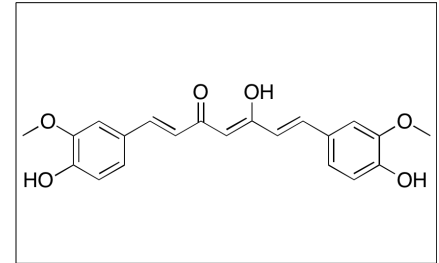
Purity ≥97% curcuminoid content

Solubility Insoluble in water. Soluble in ethanol (10 mg/mL), DMSO (74 mg/mL), chloroform, acetone, DMF. Soluble in 0.1 M NaOH to 2 mg/mL, do not store more

Store Temp Ambient

Ship Temp Ambient

Description Curcumin is the active component of turmeric, a member of the ginger family. Curcumin is a diarylheptanoid; it displays a wide variety of health benefits, including antioxidative, anticancer chemotherapeutic, antifungal, antibiotic, and atherosclerotic prophylactic activities. In an animal model of running-induced oxidative damage, curcumin decreases NADPH-oxidase mRNA and hydrogen peroxide levels, decreasing oxidative stress. Curcumin increases levels of APOBEC1, increasing beneficial ApoB-48 and decreasing harmful ApoB-100, facilitating increased clearance of lipid particles from plasma in vitro. In cellular models of cancer, curcumin activates mammalian sterile 20-like kinase 1 (MST1), activating JNK and inducing apoptosis. In cellular models of glioma, curcumin downregulates expression of sonic hedgehog (Shh), Smo, GLI1, cyclin D1, and Bcl-2, inhibiting proliferation and migration and increasing apoptosis; in related animal models, curcumin decreases tumor volume and prolongs survival. In an animal model of Alzheimer's disease utilizing the Morris water maze, curcumin rescues cognitive deficits by inhibiting collapsing response mediator protein 2 (CRMP2) and protecting against amyloid-B (AB)-induced hippocampal damage. This compound inhibits fMLP- and LPS-induced suppression of neutrophil apoptosis by preventing activation of NF-κB and decreasing production of pro-inflammatory mediators such as IL-6, IL-8, MIP-1α, and MIP-1β. Curcumin also displays antibacterial and antifungal activities, inhibiting cell wall biosynthesis of *Candida albicans* in vitro.



Bulk quantities available upon request

Product ID	Size
C8069	5 g
C8069	10 g
C8069	50 g

References Kawanishi N, Kato K, Takahashi M, et al. Curcumin attenuates oxidative stress following downhill running-induced muscle damage. *Biochem Biophys Res Commun.* 2013 Nov 22;441(3):573-8. PMID: 24184481.

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Tian N, Li X, Luo Y, et al. Curcumin regulates the metabolism of low density lipoproteins by improving the C-to-U RNA editing efficiency of apolipoprotein B in primary rat hepatocytes. *Mol Med Rep.* 2013 Oct 24. [Epub ahead of print]. PMID: 24173373.

Wang Y, Yin H, Li J, et al. Amelioration of β-amyloid-induced cognitive dysfunction and hippocampal axon degeneration by curcumin is associated with suppression of CRMP-2 hyperphosphorylation. *Neurosci Lett.* 2013 Oct 21. [Epub ahead of print]. PMID: 24157857.

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Gunes H, Gulen D, Mutlu R, et al. Antibacterial effects of curcumin: an in vitro minimum inhibitory concentration study. *Toxicol Ind Health.* 2013 Oct 21. [Epub ahead of print]. PMID: 24097361.

Kumar A, Dhamgaye S, Maurya IK, et al. Curcumin targets cell wall integrity via calcineurin mediated signaling in *Candida*

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.