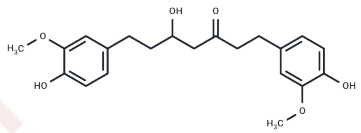
Data Sheet (Cat.No.TQ0288)

TargetMol

Hexahydrocurcumin

Chemical Properties



CAS No. : 36062-05-2

Formula: C21H26O6

Molecular Weight: 374.43

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Hexahydrocurcumin is a selective, orally active COX-2 inhibitor and inactive against COX-1.
Targets(IC50)	Reactive Oxygen Species,COX,ROS
In vitro	Hexahydrocurcumin (0-25 μM; 24-48 hours; HT-29 cells) significantly decreased HT-29 colon cancer cell viability in a time- and concentration-dependent manner, with IC50 values of 77.05 μM at 24 hours and 56.95 μM at 48 hours. When combined with 5-fluorouracil (5-FU; 5 μM), Hexahydrocurcumin markedly reduced COX-2 expression without altering COX-1 levels [1]. Moreover, Hexahydrocurcumin (7-14 μM; 24 hours) attenuated LPS-induced prostaglandin E2 (PGE2) increase in murine macrophages (RAW 264.7) in a concentration-dependent manner [2].
In vivo	In colon cancer rats, Hexahydrocurcumin (50 mg/kg; oral administration; daily; for 16 weeks; male Wistar rats) treatment significantly reduces the numbers of aberrant crypt foci. Hexahydrocurcumin also markedly decreases COX-2 protein expression [3].
Cell Research	Cell Line: HT-29 cells. Concentration: 0 μM, 5 μM, 10 μM, 25 μM. Incubation Time: 24 hours or 48 hours [1]
Animal Research	Animal Model: Male Wistar rats (100-120 g) injected with dimethylhydrazine (DMH). Dosage: 50 mg/kg. Administration: Oral administration; daily; for 16 weeks [3]

Solubility Information

Solubility	DMSO: 150 mg/mL (400.61 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.34 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6707 mL	13.3536 mL	26.7073 mL
5 mM	0.5341 mL	2.6707 mL	5.3415 mL
10 mM	0.2671 mL	1.3354 mL	2.6707 mL
50 mM	0.0534 mL	0.2671 mL	0.5341 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Srimuangwong K, et al. Hexahydrocurcumin enhances inhibitory effect of 5-fluorouracil on HT-29 human colon cancer cells. World J Gastroenterol. 2012 May 21;18(19):2383-9.
Li F, et al. In vitro antioxidant and anti-inflammatory activities of 1-dehydro-[6]-gingerdione, 6-shogaol, 6-dehydroshogaol and hexahydrocurcumin. Food Chem. 2012 Nov 15;135(2):332-7.
Srimuangwong K, et al. Effects of hexahydrocurcumin in combination with 5-fluorouracil on dimethylhydrazine-induced colon cancer in rats. World J Gastroenterol. 2012 Dec 21;18(47):6951-9.

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