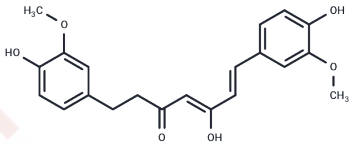
Data Sheet (Cat.No.T3S1701)

TargetMol

Dihydrocurcumin

Chemical Properties



CAS No. : 76474-56-1

Formula: C21H22O6

Molecular Weight: 370.4

Storage: Store at low temperature
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	Dihydrocurcumin is the main metabolite of curcumin, which can reduce fat accumulation and oxidative stress response. Dihydrocurcumin can regulate the mRNA and protein expression levels of SREBP-1C, PNPLA3 and PPARα, increase the protein expression levels of pAKT and PI3K, and reduce the intracellular NO and ROS contents through Nrf2 signaling pathway.
Targets(IC50)	Fatty Acid Synthase,PPAR
In vitro	Colon bacteria may mediate the transformation of curcumin, but this metabolism has not been well studied. Methods AND RESULTS: The metabolism of curcumin to Escherichia Ferguson (ATCC 35469) and two strains of Escherichia coli (ATCC 8739 and DH10B) was studied in modified colonic bacteria (mMCB) medium of porcine cecal fluid with or without medication. LC-MS analysis showed that after fermentation for 36 h, the conversion rate of curcumin was 16-37%, the conversion rate of demethoxycurcumin (DMC) was 6-16%, the conversion rate of dimethoxycurcumin (bi-DMC) was 7-15%, and the conversion rate of dimethoxycurcumin (bi-DMC) was 7-15%. The amount of curcumin degradation varies with different strains and medium. Three metabolites (dihydrocurcumin (DHC), tetrahydrocurcumin (THC) and ferulic acid (FA)) were identified in the fermentation culture of all strains. In addition, a compound of m/z [M-H](-) 470 was found and identified as curcumin-adduct (curcumin-L-cysteine) by precise mass FT-ICR-MS. Conclusion: This study provides a new scheme for the bacterial metabolism of curcumin[1].

Solubility Information

Solubility	DMSO: 22.5 mg/mL (60.75 mM),Sonication and heating to 60°C are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6998 mL	13.4989 mL	26.9978 mL
5 mM	0.540 mL	2.6998 mL	5.3996 mL
10 mM	0.270 mL	1.3499 mL	2.6998 mL
50 mM	0.054 mL	0.270 mL	0.540 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

Qingqing Yu, et al.Dihydrocurcumin ameliorates the lipid accumulation, oxidative stress and insulin resistance in oleic acid-induced L02 and HepG2 cells.Biomedicine & Pharmacotherapy Volume 103, July 2018, Pages 1327-1336
Azam Hassaninasab, et al.Discovery of the curcumin metabolic pathway involving a unique enzyme in an intestinal microorganism. Proc Natl Acad Sci U S A. 2011 Apr 19;108(16):6615-20.
Suryani Tan, et al. Degradation of curcuminoids by in vitro pure culture fermentation. J Agric Food Chem. 2014 Nov 12;62(45):11005-15.
Pierre Kamnaing.et al.Trypanocidal diarylheptanoids from Aframomum letestuianum.J Nat Prod. 2003 Mar;66(3):364-7.