

Dihydrocurcumin

Chemical Properties

CAS No.:	76474-56-1
Formula:	C ₂₁ H ₂₂ O ₆
Molecular Weight:	370.4
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

Biological Description

Description	Dihydrocurcumin is an intermediate product converted from curcumin.
Targets(IC ₅₀)	Others: None
In vitro	Colonic bacteria may mediate the transformation of curcuminoids, but studies of this metabolism are limited. METHODS AND RESULTS:Here, the metabolism of curcuminoids by <i>Escherichia fergusonii</i> (ATCC 35469) and two <i>Escherichia coli</i> strains (ATCC 8739 and DH10B) was examined in modified medium for colon bacteria (mMCB) with or without pig cecal fluid. LC-MS analysis showed that 16-37% of curcumin, 6-16% of demethoxycurcumin (DMC) and 7-15% of bis-demethoxycurcumin (Bis-DMC), and 7-15% of bis-demethoxycurcumin (Bis-DMC) were converted following 36 h of fermentation, with the amount of curcuminoids degraded varying depending on the bacterial strain and medium used. Three metabolites (Dihydrocurcumin (DHC), tetrahydrocurcumin (THC), and ferulic acid (FA)) were found in fermentation cultures with all strains used. In addition, a compound with m/z [M - H](-) 470 was found and identified to be a curcumin adduct (curcumin-l-cysteine), using accurate mass FT-ICR-MS. CONCLUSIONS:This study provides insights into the bacterial metabolism of curcuminoids.

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.700 mL	13.499 mL	26.998 mL
5 mM	0.540 mL	2.700 mL	5.400 mL
10 mM	0.270 mL	1.350 mL	2.700 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. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

- Degradation of curcuminoids by in vitro pure culture fermentation. J Agric Food Chem. 2014 Nov 12;62(45):11005-15.
- 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.

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