Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Tetrahydrocurcumin

Catalog No: tcsc3739

Available Sizes

Size: 5mg

Size: 10mg

Specifications

CAS No:
36062-04-1

Formula:
$C_{21}H_{24}O_6$

Pathway:
Autophagy;Metabolic Enzyme/Protease;Metabolic Enzyme/Protease

Target:
Autophagy;Cytochrome P450;Endogenous Metabolite

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 3.8 mg/mL (10.20 mM)

Alternative Names:
HZIV 81-2

Observed Molecular Weight:
372.41

Product Description

Tetrahydrocurcumin is a Curcuminoid found in turmeric (*Curcuma longa*) that is produced by the reduction of Curcumin. Tetrahydrocurcumin inhibit **CYP2C9** and **CYP3A4**.

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IC50 & Target: CYP2C9, CYP3A4[1]

In Vitro: Tetrahydrocurcumin (THC) has a number of attractive properties not shared with Curcumin that may make it superior. Tetrahydrocurcumin inhibited lipoxygenase as low as 1 μM. Tetrahydrocurcumin is tested for its ability to inhibit CYP2C9, CYP3A4, CYP1A2 and CYP2D6. Tetrahydrocurcumin yields dose-dependent inhibition of CYP2C9, and to a lesser extent, CYP3A4. Tetrahydrocurcumin exhibits maximum inhibition of CYP2C9 and CYP3A4 at 50 to 100 μM. Tetrahydrocurcumin does not show a consistent dose-response inhibition of CYP1A2 or CYP2D6 over the range of concentrations tested. In some cases, the percent inhibition exceeds 100%. The effect of Tetrahydrocurcumin on cancer cell viability is measured. Sup-T1 cells, T-cell lymphoblastic lymphoma cells, are treated with Tetrahydrocurcumin to determine its ability to induce growth inhibition using an MTS assay, and the corresponding IC50 values are in the mid-to-high micromolar range[1].

In Vivo: The serum Tetrahydrocurcumin (THC) concentration versus time curve shows that more than one absorption and distribution phase is present. Initially, a rapid absorption phase with an average Tmax of 6.8 μg/mL at 1 h is observed, followed by a short elimination phase. This is followed by two redistributions with two smaller Tetrahydrocurcumin maxima at 6 and 24 h. Both redistribution phases has similar maxima of about 1 μg/mL. The total amount of Tetrahydrocurcumin excrets unchanged in urine was up to 8 μg at 24 h[1].