

# 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 :  $\geq 3.8$  mg/mL (10.20 mM)

**Alternative Names:**

HZIV 81-2

**Observed Molecular Weight:**

372.41

## Product Description

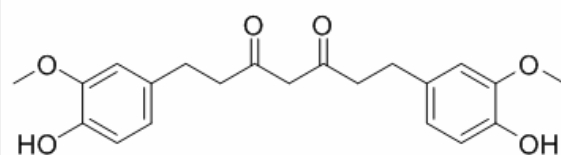
Tetrahydrocurcumin is a Curcuminoid found in turmeric (*Curcuma longa*) that is produced by the reduction of Curcumin.

Tetrahydrocurcumin inhibit **CYP2C9** and **CYP3A4**.

IC50 & Target: CYP2C9, CYP3A4<sup>[1]</sup>

**In Vitro:** Tetrahydrocurcumin (THC) has a number of attractive properties not shared with Curcumin that may make it superior. Tetrahydrocurcumin inhibited lipxygenase as low as 1  $\mu$ M. 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  $\mu$ M. 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<sup>[1]</sup>.

**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  $\mu$ g/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  $\mu$ g/mL. The total amount of Tetrahydrocurcumin excrets unchanged in urine was up to 8  $\mu$ g at 24 h<sup>[1]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!