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

Gambogic Acid

Catalog No: tcsc1456

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Specifications

CAS No:
2752-65-0

Formula:
$C_{38}H_{44}O_8$

Pathway:
Autophagy;Apoptosis

Target:
Autophagy;Bcl-2 Family

Purity / Grade:
>98%

Solubility:
10 mM in DMSO

Alternative Names:
Beta-Guttiferrin

Observed Molecular Weight:
628.75

Product Description

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

Gambogic acid is derived from the gamboges resin of the tree *Garcinia hanburyi*. Gambogic acid inhibits **Bcl-X_L**, **Bcl-2**, **Bcl-W**, **Bcl-B**, **Bfl-1** and **Mcl-1** with **IC_{50}**s of 1.47 μM, 1.21 μM, 2.02 μM, 0.66 μM, 1.06 μM and 0.79 μM.

IC50 & Target: IC50: 1.47 μM (Bcl-X_L), 1.21 μM (Bcl-2), 2.02 μM (Bcl-W), 0.66 μM (Bcl-B), 1.06 μM (Bfl-1) and 0.79 μM (Mcl-1)[1]

In Vitro: Gambogic Acid is a medicinal compound derived from the gamboges resin of the tree, *Garcinia hanburyi*. Gambogic Acid has documented cytotoxic activity against tumor cell lines in culture, with concentrations required for killing 50% of cells (LD_{50} of ~1 μM). The activity of Gambogic Acid against the 6 human anti-apoptotic Bcl-2-family proteins is contrasted, using FPAs. Gambogic Acid displaces to various extents FITC-BH3 peptide binding to all 6 proteins, with apparent IC_{50} 1.47 μM for Bcl-X_L, 1.21 μM for Bcl-2, 2.02 μM for Bcl-W, 0.66 μM for Bcl-B, 1.06 μM for Bfl-1, and 0.79 μM for Mcl-1[1]. The growth inhibitory effects of Gambogic Acid (GA) or Cisplatin (CDDP) on A549, NCI-H460, and NCI-H1299 cells are assessed by the MTT assay after 48 h exposure. A concentration-dependent inhibition of cell growth is observed with Gambogic Acid and CDDP, with IC_{50}s of 3.56±0.36 and 21.88±3.21 μM for A549 cells, 4.05±0.51 and 25.76±4.03 μM for NCI-H460 cells, and 1.12±0.31 μM and 25.21±4.38 μM for NCI-H1299 cells[2].

In Vivo: To further investigate whether Gambogic Acid synergises CDDP against tumour growth in vivo, A549 tumors are implanted in SCID mice. When mice are treated with CDDP combined with Gambogic Acid, the tumor inhibition rate is 69.3%, whereas those of mice treated with CDDP and GA alone are 57.2% and 29.0%, respectively[2].