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

Chelerythrine Chloride

Catalog No: tcsc0205

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
3895-92-9

Formula:
$C_{21}H_{18}ClNO_4$

Pathway:
TGF-beta/Smad;Epigenetics;Autophagy

Target:
PKC;PKC;Autophagy

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 3.9 mg/mL (10.16 mM)

Observed Molecular Weight:
383.82

Product Description

Chelerythrine Chloride is a potent, cell-permeable inhibitor of **protein kinase C**, with an **IC_{50}** of 660 nM, competitive with respect to

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

the phosphate acceptor and non-competitive with respect to ATP.

IC50 & Target: IC50: 660 nM (protein kinase C)

In Vitro: Chelerythrine inhibits the BclXL-Bak BH3 peptide binding with IC_{50} of 1.5 μM and displaces Bax, a BH3-containing protein, from BclXL. Mammalian cells treated with Chelerythrine undergoes apoptosis with characteristic features that suggest involvement of the mitochondrial pathway[1]. Chelerythrine treatment inhibits LPS-induced TNF-α level and NO production in LPS-induced murine peritoneal macrophages through selective inhibition of p38 mitogen-activated protein kinase (MAPK) and extracellular signal-regulated protein kinases 1 and 2 (ERK1/2) activation. Moreover, the effects of chelerythrine on NO and cytokine TNF-α production can possibly be explained by the role of p38 MAPK and ERK1/2 in the regulation of inflammatory mediators expression[2]. Chelerythrine shows cytotoxic effect on the human monocytic leukaemia cells with LD_{50} value of 3.46 μM. Two hours after LPS stimulation, cells influenced by sanguinarine and Chelerythrine significantly decline the CCL-2 expression by a factors of 3.5 and 1.9 [3]. Chelerythrine chloride significantly enhances the phosphorylation of ERK1/2 in a dose-dependent manner. In addition, chelerythrine chloride inhibits the phosphorylation of p38[4].

In Vivo: Chelerythrine displays significant anti-inflammatory effects in experimentally induced mice endotoxic shock model in vivo through inhibition of LPS-induced tumor necrosis factor-alpha (TNF-α) level and nitric oxide (NO) production in serum[2]. Chelerythrine chloride (5 mg/kg/day, i.p.) induces apoptosis of RCC cells without significant toxicity to mice. Chelerythrine Chloride treatment leads to a dose-dependent accumulation of p53[4].