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

Meisoindigo

Catalog No: tcsc2696

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
97207-47-1

Formula:
$C_{17}H_{12}N_2O_2$

Pathway:
Apoptosis

Target:
Apoptosis

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 51 mg/mL (184.59 mM)

Alternative Names:
Dian III;N-Methylisoindigotin;Natura-α

Observed Molecular Weight:
276.29

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Product Description

Meisoindigo(Natura-α; N-Methylisoindigotin; Dian III), a derivative of Indigo naturalis, might induce apoptosis and myeloid differentiation of acute myeloid leukemia (AML).

IC50 value:

Target: apoptosis inducer

in vitro: Meisoindigo inhibited the growth of leukemic cells by inducing marked apoptosis and moderate cell-cycle arrest at the G(0)/G(1) phase. It down-regulated anti-apoptotic Bcl-2, and up-regulated pro-apoptotic Bak and Bax and cell-cycle related proteins, p21and p27. Furthermore, it induced myeloid differentiation, as demonstrated by morphologic changes, up-regulation of CD11b, and increased nitroblue tetrazolium reduction activity in all cell lines tested. In addition, meisoindigo down-regulated the expression of human telomerase reverse transcriptase and enhanced the cytotoxicity of conventional chemotherapeutic agents, cytarabine and idarubicin. As with the results from cell lines, meisoindigo also induced apoptosis, up-regulated p21 and p27, and down-regulated Bcl-2 in primary AML cells [1]. meisoindigo effectively inhibits HT-29 cell proliferation (IC(50) 4.3 mmol/L), arrests HT-29 cells in G2/ M phase and induces HT-29 cell apoptosis. The downstream genes and proteins of GSK-3beta(ser(9)) expression level decrease [2].

in vivo: The in vivo anti-leukemic activity of meisoindigo was also demonstrated by decreased spleen size in a dose-dependent manner [1]. Meisoindigo significantly inhibits the HT-29 xenograft tumors growth at the dose of 100 mg/kg. The mechanism of meisoindigo activity against HT-29 cells may be related to its inhibition of glycogen synthase kinase-3beta, GSK-3beta(ser(9)) phosphorylation in Wnt signaling pathway [2].