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

Deguelin

Catalog No: tcsc1802

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Specifications

CAS No:
522-17-8

Formula:
$C_{23}H_{22}O_6$

Pathway:
PI3K/Akt/mTOR

Target:
Akt

Purity / Grade:
>98%

Solubility:
DMSO : 50 mg/mL (126.77 mM; Need ultrasonic); H2O :

Alternative Names:
(-)-Deguelin;(-)-cis-Deguelin

Observed Molecular Weight:
394.42

Product Description

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Deguelin, a naturally occurring rotenoid, is a potent **PI3K/AKT** inhibitor.

In Vitro: Deguelin (0-500 nM) in a dose and time dependent manner inhibits the growth of MDA-MB-231, MDA-MB-468, BT-549 and BT-20 cells. Deguelin at all concentrations fails to reduce cell numbers in the presence of 1 ng EGF but in the presence of EGF 20 ng reinstated deguelin mediated growth inhibition. Deguelin treated cells show reduced expression of Survivin as determined by western blot and immunofluorescence examinations. Deguelin inhibits p-ERK and its downstream target p-STAT-3 and c-Myc expression in a dose dependent manner[1]. Deguelin down-regulates Akt signaling probably by disrupting its association with Hsp 90 in cultured HNSCC cells. Deguelin deguelin disrupts the association between Hsp 90 with survivin and Cdk4. Deguelin deguelin treatment increases cellular ceramide level through de novo synthase pathway to mediate HNSCC cell death and apoptosis[2]. Deguelin inhibits the proliferation of MPC-11 cells in a concentration- and time-dependent manner and causes the apoptotic death of MPC-11 cells. Following exposure to deguelin, the phosphorylation of Akt is decreased. Deguelin-induced apoptosis is characterized by the upregulation of Bax, downregulation of Bcl-2 and activation of caspase-3[3].

In Vivo: Deguelin (2 or 4 mg/kg, i.p.) reduces the in vivo tumor growth of MDA-MB-231 cells transplanted subcutaneously in athymic mice[1]. Deguelin (4 mg/kg, p.o.) treatment shows a great inhibition in tumor growth, which is demonstrated by reduced tumor size and improved mice survival and, indicating a significant anti-tumor ability by deguelin in vivo[2]. In the colon cancer xenograft model, the volume of the tumor treated with deguelin is significantly lower than that of the control, and the apoptotic index for deguelin-treated mice is much higher[4].