Web: www.taiclone.com
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Aloe emodin

Catalog No: tcsc3709

Available Sizes

Size: 100mg

Size: 500mg

Specifications

CAS No:
481-72-1

Formula:
$C_{15}H_{10}O_5$

Pathway:
Others

Target:
Others

Purity / Grade:
>98%

Solubility:
10 mM in DMSO

Alternative Names:
Rhabarberone;3-Hydroxymethylchrysazine

Observed Molecular Weight:
270.24

Product Description

Aloe emodin is a hydroxyanthraquinone present in Aloe vera leaves, has a specific in vitro and in vivo antitumor activity.

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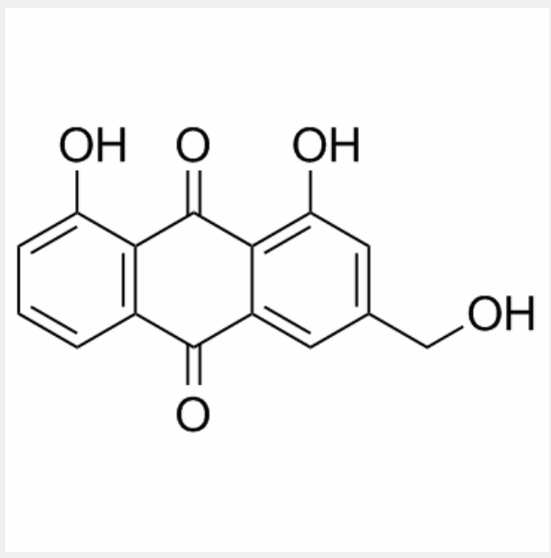
IC50 value:

Target:

in vitro: aloe-emodin treatment led to the dissociation of heat shock protein 90 (HSP90) and ER α and increased ER α ubiquitination. Protein fractionation results suggest that aloe-emodin tended to induce cytosolic ER α degradation [1]. Aloe-emodin, a natural compound found in aloe, inhibited both proliferation and anchorage-independent growth of PC3 cells. Protein content analysis suggested that activation of the downstream substrates of mTORC2, Akt and PKCα, was inhibited by aloe-emodin treatment. Pull-down assay and in vitro kinase assay results indicated that aloe-emodin could bind with mTORC2 in cells and inhibit its kinase activity [2]. Of three anthraquinone derivatives, aloe-emodin, with a lower cytotoxicity showed concentration-dependently reducing virus-induced cytopathic effect and inhibiting replication of influenza A in MDCK cells. Galectin-3 also inhibited influenza A virus replication. Proteomic analysis of treated cells indicated galectin-3 up-regulation as one anti-influenza A virus action by aloe-emodin. Since galectin-3 exhibited cytokine-like regulatory actions via JAK/STAT pathways, aloe-emodin also restored NS1-inhibited STAT1-mediated antiviral responses in transfected cells: e.g., STAT1 phosphorylation of interferon (IFN) stimulation response element (ISRE)-driven promoter, RNA-dependent protein kinase (PKR) and 2\'5\',-oligoadenylate synthetase (2\'5\',-OAS) expression [3]. AE downregulated mRNA expression and promoter/gelatinolytic activity of Matrix Metalloproteinase (MMP)-2/9, as well as the RhoB expression at gene and protein level. AE suppressed the nuclear translocation and DNA binding of NF-κB [4].

in vivo: Aloe-emodin also exhibited tumor suppression effects in vivo in an athymic nude mouse model [2].



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