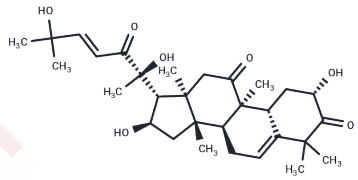
Data Sheet (Cat.No.TN1013)

TargetMol

Cucurbitacin D

Chemical Properties



CAS No. : 3877-86-9

Formula: C30H44O7

Molecular Weight: 516.67

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Cucurbitacin D, a triterpenoid isolated from Ecballium elaterium (L.), exhibits anticancer and antitumor activity, inhibits glucose uptake and lactate production in metastatic PrC, and induces inflammasome activation independent of ERK1/2 activation. Cucurbitacin D, a novel inflammasome activator in macrophages, inhibits HepG2 cell proliferation and induces apoptosis by modulating the JAK/STAT3, PI3K/Akt/mTOR and MAPK signaling pathways, and can be used in the study of cervical cancer, leukemia, and prostate cancer.
Targets(IC50)	Apoptosis,HSP
In vitro	Immunomodulating activities of Cucurbitacin D were investigated in macrophages. Cucurbitacin D could increase LPS-induced interleukin (IL)-1β production in culture supernatant of THP-1 cells, peritoneal exudate cells (PECs), bone marrow derived macrophages (BMDMs), and RAW264 cells. At the transcriptional level, Cucurbitacin D enhanced LPS-induced IL-1β mRNA expression through activation of ERK1/2 mitogen-activated protein kinases (MAPKs). At the posttranscriptional level, the activation of caspase-1 induced by Cucurbitacin D has also been demonstrated following treatment with a caspase-1 inhibitor and siRNA. Importantly, Cucurbitacin D has further been shown to induce inflammasome activation independent of ERK1/2 activation. Western blotting showed interaction of NOD-like receptor family, pyrin domain containing 3 (NALP3) and apoptosis-associated speck-like protein containing a caspase-activating and recruitment domain (ASC), suggesting activation of the inflammasome and a possible reason for activation of caspase-1[1]

Solubility Information

Solubility	DMSO: 80 mg/mL (154.84 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (6.39 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.9355 mL	9.6774 mL	19.3547 mL
5 mM	0.3871 mL	1.9355 mL	3.8709 mL
10 mM	0.1935 mL	0.9677 mL	1.9355 mL
50 mM	0.0387 mL	0.1935 mL	0.3871 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Hall JA, et al. Cucurbitacin D Is a Disruptor of the HSP90 Chaperone Machinery. J Nat Prod. 2015 Apr 24;78(4):873-9.