

Cucurbitacin D

Chemical Properties

CAS No.:	3877-86-9
Formula:	C ₃₂ H ₄₄ O ₇
Molecular Weight:	516.67
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

Biological Description

Description	Cucurbitacin D has anticancer effects, it induces apoptosis through caspase-3 and phosphorylation of JNK in hepatocellular carcinoma cells.
Targets(IC ₅₀)	IL Receptor: None JNK: None STAT: None
In vitro	Immunomodulating activities of Cucurbitacin D were investigated in macrophages. Cucurbitacin D could increase LPS-induced interleukin (IL)-1 β 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-1 β 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	< 1 mg/ml refers to the product slightly soluble or insoluble
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.935 mL	9.677 mL	19.355 mL
5 mM	0.387 mL	1.935 mL	3.871 mL
10 mM	0.194 mL	0.968 mL	1.935 mL
50 mM	0.039 mL	0.194 mL	0.387 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Cucurbitacin D is a new inflammasome activator in macrophages. *Int Immunopharmacol.* 2013 Dec;17(4):1044-50.

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