

Product Name: Cucurbitacin I

Catalog No.: 1571

Batch No.: 12

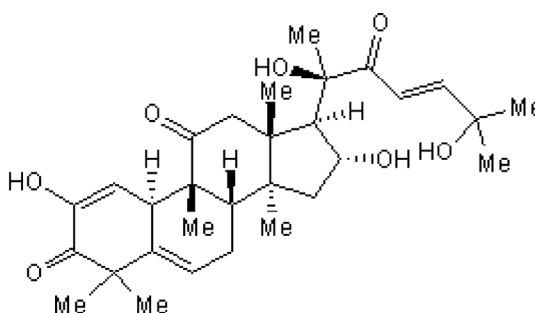
CAS Number: 2222-07-3

EC Number: 218-736-8

IUPAC Name: (9 β ,10 α ,16 α ,23E)-2,16,20,25-Tetrahydroxy-9-methyl-19-norlanosta-1,5,23-triene-3,11,22-trione

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₃₀H₄₂O₇
Batch Molecular Weight: 514.65
Physical Appearance: White solid
Solubility: DMSO to 10 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.3% purity
Mass Spectrum: Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Cucurbitacin I is a selective inhibitor of STAT3/JAK2 signaling. Inhibits the activation of STAT3 and JAK2 and displays no activity on Src, Akt, ERK and JNK. Suppresses phosphotyrosine levels of STAT3, inhibits STAT3 DNA binding and STAT3-mediated gene expression. Induces apoptosis in cell lines expressing constitutively active tyrosine-phosphorylated STAT3.

Physical and Chemical Properties:

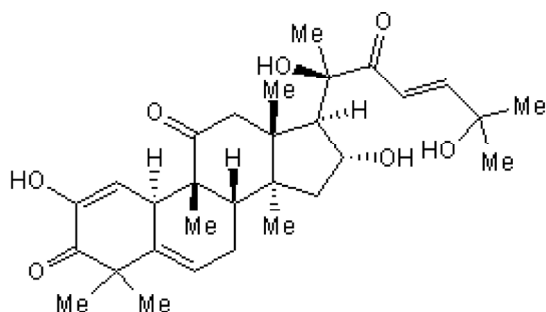
Batch Molecular Formula: C₃₀H₄₂O₇

Batch Molecular Weight: 514.65

Physical Appearance: White solid

Minimum Purity: ≥95%

Batch Molecular Structure:



Storage: Store at -20°C. This product is packaged under an inert atmosphere.

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 10 mM

This product is supplied in lyophilized form. It may appear as a solid, gel or film and be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Dziennis et al (2007) Role of signal transducer and activator of transcription-3 in OE-mediated neuroprotection. *J.Neurosci.* **27** 7268. PMID: 17611279.

Nefedova et al (2005) Regulation of dendritic cell differentiation and antitumor immune response in cancer by pharmacologic-selective inhibition of the janus-activated kinase 2/signal transducers and activators of transcription 3 pathway. *Cancer Res.* **65** 9525. PMID: 16230418.

Blaskovich et al (2003) Discovery of JSI-124 (cucurbitacin I), a selective janus kinase/signal transducer and activator of transcription 3 signaling pathway inhibitor with potent antitumor activity against human and murine cancer cells in mice. *Cancer Res.* **63** 1270. PMID: 12649187.

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bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel:+1 612 379 2956