SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

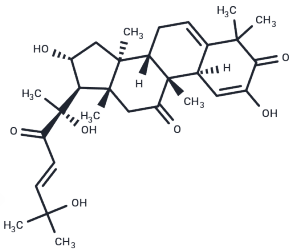
linkedin.com/company/szaboscandic

Data Sheet (Cat.No.TQ0196)

TargetMol

Cucurbitacin I

Chemical Properties



CAS No. : 2222-07-3

Formula: C30H42O7

Molecular Weight: 514.65

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Cucurbitacin I (JSI-124), a natural compound, is a selective inhibitor of JAK2/STAT3 with anti-cancer activity.
Targets(IC50)	JAK,STAT
In vitro	The anticancer activity of Cucurbitacin I is accomplished by downregulating p-STAT3 and MMP-9 expression [1]. Incubation of the Seax cell line with the Jak/Stat3 inhibitor Cucurbitacin I result in a time- and concentration-dependent decrease of P-Stat3 and Stat3. Incubation of freshly isolated Sz cells with 30 μM Cucurbitacin I for 6 hours induces apoptosis in the large majority (73-91%) of tumor cells [2]. PE-induced cell enlargement and upregulation of ANF and β-MHC are significantly suppressed by pretreatment of the cardiomyocytes with Cucurbitacin I. Cucurbitacin I also impaired connective tissue growth factor (CTGF) and MAPK signaling, pro-hypertrophic factors, as well as TGF-β/Smad signaling, the important contributing factors to fibrosis [3].
In vivo	The differences in tumor volume between the Cucurbitacin I and control, combination and control, and combination and Cucurbitacin I arms are significant. Furthermore, combination-treated tumors exhibit a significantly lower average tumor weight at study termination than control. Moreover, there was no effect on the body weights of mice [4].
Animal Research	BALB/c nude (nu/nu) female mice are used. U251 cells (5×10^6 cells in 50 μL of serum-free DMEM) are inoculated subcutaneously into the right flank of 5-week-old female mice after acclimatization for a week. Tumor growth is measured daily with calipers. When the tumors reach a mean volume of 90-120 mm3, animals are randomized into groups. In the first experiment, 16 mice are randomly assigned to Cucurbitacin I (1 mg/kg/day in 20% DMSO in PBS) or drug vehicle control (20% DMSO in PBS) and dosed intraperitoneally with 100 μL of vehicle or drug once daily for 18 days, whereas, in the second, 20 mice are assigned to four groups. Control animals receive 20% DMSO in PBS vehicle, whereas treated animals are injected with Cucurbitacin I (1 mg/kg/day) in 20% DMSO in PBS, CQ (25 mg/kg/day) in 20% DMSO in PBS, and Cucurbitacin I (1 mg/kg/day) plus CQ (25 mg/kg/day) in 20% DMSO in PBS and dosed intraperitoneally with 100 μL of vehicle or drug once daily for 15 days [4].

Solubility Information

Solubility	DMSO: 95 mg/mL (184.59 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.9431 mL	9.7153 mL	19.4307 mL
5 mM	0.3886 mL	1.9431 mL	3.8861 mL
10 mM	0.1943 mL	0.9715 mL	1.9431 mL
50 mM	0.0389 mL	0.1943 mL	0.3886 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.

Reference

Gong X, Liu Y, Liang K, et al.Cucurbitacin I Reverses Tumor-Associated Macrophage Polarization to Affect Cancer Cell Metastasis.International Journal of Molecular Sciences.2023, 24(21): 15920.