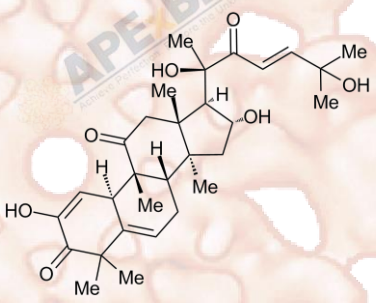
Product Data Sheet

Cucurbitacin I



Cat. No.:	A4512
CAS No.:	2222-07-3
Formula:	C30H42O7
M.Wt:	514.65
Synonyms:	
Target:	Chromatin/Epigenetics
Pathway:	JAK
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

⩾22.45 mg/mL in DMSO; insoluble in EtOH; ⩾51.2 mg/mL in H2O with ultrasonic

Preparing Stock Solutions

Mass / Solvent / Concentration	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

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	STAT3/JAK2 signaling inhibitor
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	COLO205 colon cancer cell line
Preparation method:	The solubility of this compound in DMSO is > 22.45 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	100 nM, 6 h

	Applications:	Cucurbitacin I (100 nM, 6 h) inhibited colon cancer cell COLO205 proliferation, migration and invasion in a dose-dependent manner. Cucurbitacin I sensitized the colon cancer cell line COLO205 to 5-FU treatment. Cucurbitacin (100 nM) decreased the protein level of phospho-STAT3 and MMP-9 expression. Cucurbitacin I (10 μM) suppressed phosphotyrosine levels of STAT3 and JAK2 but not Src in A549 and MDA-MB-468 cells. Cucurbitacin I inhibited cell proliferation and induced apoptosis in A549, MDA-MB-468, v-Src/3T3, H-Ras/3T3, vector/3T3, and Calu-1.
In Vivo	**Animal experiment**	
	Animal models:	Nude mice of A549 tumors, v-Src-transformed NIH 3T3 tumors, and the human breast carcinoma MDA-MB-468; Nude C57 BL-6 mice bearing A549, and MDA-MB-468 cells
	Dosage form:	1 mg/kg/day, 25 days
	Applications:	Cucurbitacin I (1 mg/kg/day) potently inhibited the growth in nude mice of A549 tumors, v-Src-transformed NIH 3T3 tumors, and the human breast carcinoma MDA-MB-468. Cucurbitacin I inhibited tumor growth and significantly increased survival of immunologically competent mice bearing murine melanoma with constitutively activated STAT3. Cucurbitacin I inhibited A549 and MDA-MB-468 tumor growth with no effects on body weight, activity, or food intake.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

[1]. Song J, Liu H, Li Z, et al. Cucurbitacin I inhibits cell migration and invasion and enhances chemosensitivity in colon cancer[J]. Oncology reports, 2015, 33(4): 1867-1871.

[2]. Blaskovich M A, Sun J, Cantor A, et al. 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[J]. Cancer research, 2003, 63(6): 1270-1279.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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