

Concanavalin A

Chemical Properties

CAS No. : 11028-71-0

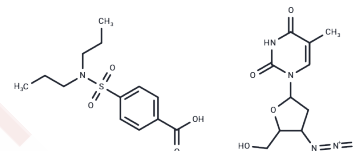
Formula: C₂₃H₃₂N₆O₈S

Molecular Weight:

Store at low temperature

Storage: 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	Concanavalin A is a natural product, a phytoalexin (glycan-binding protein). Concanavalin A has antitumor activity and can also induce acute liver injury.
Targets(IC50)	Apoptosis, Antibiotic
In vitro	<p>METHODS: Human hepatocellular carcinoma cells HuH-7 and Hep G2 were treated with Concanavalin A (1-40 μM) for 3-48 h, and the expression levels of target proteins were detected by Western Blot.</p> <p>RESULTS: After Concanavalin A stimulation, LC3-II in both human hepatocellular carcinoma cell lines increased in a dose- and time-dependent manner. [1]</p> <p>METHODS: HUVECs and EA.hy926 cells were treated with Concanavalin A (0.3-1 μg/mL) for 6-24 h. The pro-angiogenic activity was detected by Matrigel tube formation and ELISA assay.</p> <p>RESULTS: Different concentrations of Concanavalin A, especially at 1 or 3 μg/mL, significantly promoted angiogenesis in HUVEC and Ea.hy926 cells. The total primary fragment length in HUVEC and Ea.hy926 cells was significantly higher in Concanavalin A-treated cells compared to the negative control. [2]</p>
In vivo	<p>METHODS: To assay antitumor activity in vivo, Concanavalin A (10 mg/kg, intravenously) and ISO-1 (10 mg/kg, intraperitoneally) were administered to BALB/c mice bearing ML-1 liver tumor nodules twice every three days for 30 days.</p> <p>RESULTS: Concanavalin A treatment significantly reduced the number and size of hepatic tumor nodules and, in the presence of ISO-1, the therapeutic effect of Concanavalin A was abolished. MIF does play an important role in Concanavalin A-induced autophagy and antitumor activity in vivo. [1]</p>

Solubility Information

Solubility	H ₂ O: soluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	<p>PBS: 5 mg/mL, Solution.</p> <p>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</p>

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In vivo Formulation	<i>vary and should be modified based on specific experimental conditions.</i>
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Reference

Lai YC, et al. Macrophage migration inhibitory factor has a permissive role in concanavalin A-induced cell death of human hepatoma cells through autophagy. *Cell Death Dis.* 2015 Dec 3;6(12):e2008.

Zhao G, Qi H, Liu M, et al. Rhoifolin Attenuates Concanavalin A-Induced Autoimmune Hepatitis in Mice via JAKs/STATs Mediated Immune and Apoptotic Processes. *ACS Omega.* 2024

Type I and II interferons, transcription factors and major histocompatibility complexes were enhanced by knocking down the PRRSV-induced transforming growth factor beta in monocytes co-cultured with peripheral blood lymphocytes

Li JZ, et al. Concanavalin A promotes angiogenesis and proliferation in endothelial cells through the Akt/ERK/Cyclin D1 axis. *Pharm Biol.* 2022 Dec;60(1):65-74.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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