Data Sheet (Cat.No.TN3587)

TargetMol
A DRUG SCREENING EXPERT

Capillarisin

Chemical Properties

CAS No.:	56365-38-9
Formula:	C16H12O7
Molecular Weight:	316.26
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Capillarisin is a novel blocker of STAT3 activation and thus may have a potential in negative regulation of growth, metastasis, and chemoresistance of tumor cells, it inhibits cancer cell growth of osteosarcoma cells by inducing apoptosis accompanied with G0/G1-phase cell cycle arrest and loss in mitochondrial membrane potential.Capillarisin has anti-inflammatory activity, can inhibit LPS-induced inflammation by blocking TLR4-mediated NF-ÎºB and MAPKs activation in BV2 microglia. Capillarisin possesses promising anti-hyperalgesic and anti-allodynic effects through the inhibition of various inflammatory pain signaling.
Targets(IC_{50})	AP-1: None Bcl-2: None COX: None ERK: None IL Receptor: None JNK: None MAPK: None MMP: None NF-κB: None NO: None NOS: None PGE: None STAT: None TLR: None TNF-α: None VEGFR: None

In vitro	Capillarisin, one of the major bioactive compounds derived from Artemisia capillaries Thunb, has been reported to have extensive pharmacological properties, such as ant-inflammatory and anti-nociceptive activities. However, the molecular mechanisms responsible for the anti-inflammatory activity of Capillarisin have not been elucidated in microglia. METHODS AND RESULTS:In the present study, we investigated the anti-inflammatory effects and molecular mechanisms of Capillarisin on LPS-stimulated BV2 microglial cells. The effects of Capillarisin on inflammatory mediators TNF-α, IL-6, IL-1β, NO and PGE2 were detected. The effects of Capillarisin on NF-ÎºB and MAPK activation were detected by western blotting. The results showed that Capillarisin suppressed LPS-induced TNF-α, IL-6, IL-1β, NO and PGE2 production in a dose-dependent manner. Capillarisin also inhibited LPS-induced TLR4 expression, NF-ÎºB and MAPKs activation in BV2 microglia.CONCLUSIONS: In conclusion, Capillarisin inhibited LPS-induced inflammation by blocking TLR4-mediated NF-ÎºB and MAPKs activation in BV2 microglia.

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.162 mL	15.810 mL	31.620 mL
5 mM	0.632 mL	3.162 mL	6.324 mL
10 mM	0.316 mL	1.581 mL	3.162 mL
50 mM	0.063 mL	0.316 mL	0.632 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 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Capillarisin Suppresses Lipopolysaccharide-Induced Inflammatory Mediators in BV2 Microglial Cells by Suppressing TLR4-Mediated NF-ÎºB and MAPKs Signaling Pathway. Neurochem Res. 2015 Jun;40(6):1095-101.

2. Capillarisin inhibits iNOS, COX-2 expression, and proinflammatory cytokines in LPS-induced RAW 264.7 macrophages via the suppression of ERK, JNK, and NF-ÎºB activation. Immunopharmacol Immunotoxicol. 2013 Feb;35(1):34-42.

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