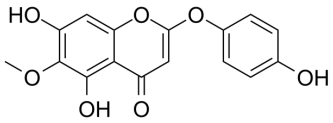
Capillarisin

Cat. No.:	HY-121192
CAS No.:	56365-38-9
Molecular Formula:	$C_{16}H_{12}O_7$
Molecular Weight:	316.26
Target:	Reactive Oxygen Species
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description

Capillarisin, as a constituent from Artemisiae Capillaris herba, is found to exert anti-inflammatory and antioxidant properties. Capillarisin can be used for the research of asthma-mediated complications and can be a potential neuroprotectant against bupivacaine-induced neurotoxicity[1][2][3].

In Vitro

Capillarisin (0~40 μM; 24 hours; SH-SY5Y cells) does not produce any significant changes on the viability of SH-SY5Y cells[3].
.Capillarisin (40 μM; 24 hours; SH-SY5Y cells) induces PI3K/PKB pathway inactivation, which inhibiting apoptosis in bupivacaine-challenged SH-SY5Y cells is overturned by LY294002 treatment and counteracts bupivacaine-induced injury via activating the PI3K/PKB pathway[3].
.Capillarisin antagonizes bupivacaine-induced oxidative stress via activating the PI3K/PKB pathway in SH-SY5Y cells. Capillarisin inhibits bupivacaine-induced mitochondrial injury and endoplasmic reticulum stress via activating PI3K/PKB pathway[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[3]

Cell Line:	SH-SY5Y cells
Concentration:	0~40 μM
Incubation Time:	24 hours
Result:	Did not produce any significant changes on the viability of SH-SY5Y cells.

Western Blot Analysis[3]

Cell Line:	SH-SY5Y cells
Concentration:	40 μM
Incubation Time:	24 hours
Result:	Induced PI3K/PKB pathway inactivation in SH-SY5Y cells.

Apoptosis Analysis[3]

Cell Line:	SH-SY5Y cells
Concentration:	40 μM
Incubation Time:	24 hours
Result:	Induced inhibition of apoptosis in bupivacaine-challenged SH-SY5Y cells was overturned by LY294002 treatment.

In Vivo

Capillarisin (20 and 80 mg/kg; i.p.; 1 hour) pretreatment strongly inhibits NF-κB mediated genes (iNOS, COX-2)[4]. Capillarisin significantly reduces the plasma leading nitrite production. Capillarisin markedly suppresses the adenosine 5'-triphosphate (ATP) in plasma and substance P in CFA-induced paw tissue[4].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	ICR mice[4]
Dosage:	20 and 80 mg/kg
Administration:	I.p.; 1 hour
Result:	Pretreatment strongly inhibited NF-κB mediated genes (iNOS, COX-2).

REFERENCES

[1]. Peng G, et al. Capillarisin exerts antiasthmatic activity in neonatal rats via modulating the matrix remodeling. Pak J Pharm Sci. 2020;33(4(Supplementary)):1907-1915.

[2]. Komiya T, et al. Capillarisin, a Constituent from Artemisiae Capillaris Herba. Chemical and Pharmaceutical Bulletin, 1975

[3]. Zhao T, Wang Q. Capillarisin protects SH-SY5Y cells against bupivacaine-induced apoptosis via ROS-mediated PI3K/PKB pathway. Life Sci. 2020;259:118279.

[4]. Khan S, et al. Anti-hyperalgesic and anti-allodynic activities of capillarisin via suppression of inflammatory signaling in animal model. J Ethnopharmacol. 2014;152(3):478-486.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA