Catechin 7-O-β-D-glucopyranoside

Cat. No.: HY-N10587

CAS No.: 65597-47-9

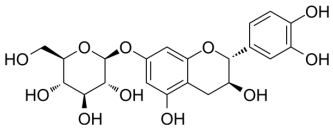
Molecular Formula: $C_{21}H_{24}O_{11}$

Molecular Weight: 452.41

Target: Others

Pathway: Others

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Catechin 7-O-beta-D-glucopyranoside is an orally active natural product found in Ulmus davidiana and Paeonia obovata. Catechin 7-O-β-D-glucopyranoside shows antioxidant and anti-inflammatory activities, and attenuates mitochondrial dysfunction. Catechin 7-O-beta-D-glucopyranoside can be used in intestinal inflammatory disease research[1][2][3].

In Vitro

Catechin 7-O-β-D-glucopyranoside (10 μg/mL; 24 h) shows protective effect against Streptozotocin-induced cell damage by its antioxidant effects and the attenuation of mitochondrial dysfunction[3].

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

Western Blot Analysis[3]

Cell Line:	RINm5F rat pancreatic β-cells
Concentration:	10 μg/mL
Incubation Time:	24 hours
Result:	Increased the MnSOD level attenuated by Streptozotocin treatment. Restored the Streptozotocin-induced reduction in mitochondrial CAT level.

In Vivo

Catechin 7-O-β-D-glucopyranoside (intraperitoneal injection; 10 mg/kg; once) treatment shows mild protective effect against lethality induced by LPS/D-GalN[1].

Catechin 7-O-β-D-glucopyranoside (oral administration; 10 mg/kg; once daily; 7 d) treatment prevents intestinal inflammatory damages in TNBS model of rat colitis[2].

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

Animal Model:	Mice injected with LPS/D-GalN[1]
Dosage:	10 mg/kg
Administration:	Intraperitoneal injection; 10 mg/kg; once
Result:	Showed 80% LPS/DGalN-induced lethality in mice.

Animal Model:	Rat model of trinitrobenzenesulfonic acid (TNBS)-induced colitis [2]
Dosage:	10 mg/kg
Administration:	Oral administration; 10 mg/kg; once daily; 7 days
Result:	Suppressed body weight loss and intestinal inflammatory damages in TNBS-induced colitic rats. Reduced myeloperoxidase activity and malondialdehyde level, but increased glutathione level in the TNBS colitic rats.

REFERENCES

[1]. Zheng MS, et al. Protective constituents against sepsis in mice from the root barks of Ulmus davidiana var. japonica. Arch Pharm Res. 2011 Sep;34(9):1443-50.

[2]. Kook SH, et al. Catechin-7-O-β-D-glucopyranoside isolated from the seed of Phaseolus calcaratus Roxburgh ameliorates experimental colitis in rats. Int Immunopharmacol. 2015 Dec;29(2):521-527.

[3]. Kim KC, et al. Cytoprotective effects of catechin 7-O-β-D glucopyranoside against mitochondrial dysfunction damaged by streptozotocin in RINm5F cells. Cell Biochem Funct. 2010 Dec 2;28(8):651-60.

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