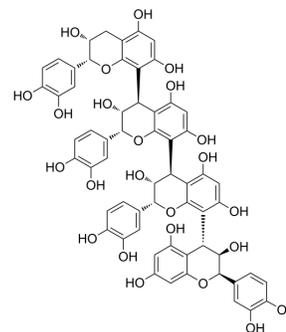


Cinnamtannin A2

Cat. No.:	HY-N9536
CAS No.:	86631-38-1
Molecular Formula:	C ₆₀ H ₅₀ O ₂₄
Molecular Weight:	1155.02
Target:	GLP Receptor
Pathway:	GPCR/G Protein
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Cinnamtannin A2, a tetrameric procyanidin, can increase GLP-1 and insulin secretion in mice. Cinnamtannin A2 could upregulate the expression of corticotrophin releasing hormone. Cinnamtannin A2 exhibits antioxidant, anti-diabetic and nephroprotective effect ^{[1][2]} .								
In Vitro	Cinnamtannin A2 (0.125-2.0 µg/mL) inhibits LDL oxidation induced by copper ions or MeO-AMVN ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.								
In Vivo	<p>Cinnamtannin A2 (10 mg/kg; i.p. for 30 days) ameliorates the level of KIM1 and NAGL in 5/6 nephrectomized rats by regulating Nrf2-Keap1 pathway^[2].</p> <p>Cinnamtannin A2 (10 µg/kg; p.o.) increases the secretion of insulin and glucagon-like peptide-1 (GLP-1) in plasma of mice^[1].</p> <p>Cinnamtannin A2 (10 µg/kg; p.o.) significantly promotes phosphorylation of both IRB and IRS-1 in mice^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Male Sprague-Dawley rats (250-300 g) were induced chronic renal failure (CRF) by removing the kidneys^[2]</td> </tr> <tr> <td>Dosage:</td> <td>10 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>i.p. for 30 days</td> </tr> <tr> <td>Result:</td> <td> Ameliorated the altered level of creatinine, blood urea nitrogen, Neutrophil gelatinase-associated lipocalin, Kidney Injury Molecule-1 and cytokines in the serum and microalbuminuria. Reduced the oxidative stress level. Attenuated the altered expression of proteins involved in Nrf2-Keap1 pathway in the kidney tissue. Reduced the tubular injury score in the kidney tissue. </td> </tr> </table>	Animal Model:	Male Sprague-Dawley rats (250-300 g) were induced chronic renal failure (CRF) by removing the kidneys ^[2]	Dosage:	10 mg/kg	Administration:	i.p. for 30 days	Result:	Ameliorated the altered level of creatinine, blood urea nitrogen, Neutrophil gelatinase-associated lipocalin, Kidney Injury Molecule-1 and cytokines in the serum and microalbuminuria. Reduced the oxidative stress level. Attenuated the altered expression of proteins involved in Nrf2-Keap1 pathway in the kidney tissue. Reduced the tubular injury score in the kidney tissue.
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REFERENCES

[1]. Yamashita Y, et, al. Cinnamtannin A2, a tetrameric procyanidin, increases GLP-1 and insulin secretion in mice. *Biosci Biotechnol Biochem.* 2013;77(4):888-91.

[2]. Li N, et, al. Cinnamtannin A2 protects the renal injury by attenuates the altered expression of kidney injury molecule 1 (KIM-1) and neutrophil gelatinase-associated lipocalin (NGAL) expression in 5/6 nephrectomized rat model. *AMB Express*. 2020 May 8;10(1):87.

[3]. Osakabe N, et, al. Catechins and their oligomers linked by C4 --> C8 bonds are major cacao polyphenols and protect low-density lipoprotein from oxidation in vitro. *Exp Biol Med (Maywood)*. 2002 Jan;227(1):51-6.

Caution: Product has not been fully validated for medical applications. For research use only.

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