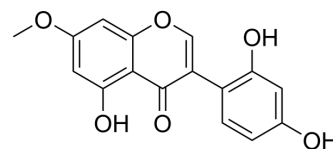


Cajanin

Cat. No.:	HY-N2983
CAS No.:	32884-36-9
Molecular Formula:	C ₁₆ H ₁₂ O ₆
Molecular Weight:	300.26
Target:	Tyrosinase
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Cajanin is a potent and orally active anti-melanogenic agent. Cajanin shows antiproliferative activity in MNT1 Cells. Cajanin efficiently decreases the melanin content. Cajanin down-regulates the mRNA and protein expression levels of MITF, tyrosinase, TRP-1 and Dct (TRP-2). Cajanin induces cell cycle arrest at G2/M and S phase. Cajanin stimulates osteoblast proliferation. Cajanin has the potential for the research of human hyperpigmented disorders and menopausal osteoporosis [1][2].
In Vitro	Cajanin shows strong mitogenic as well as differentiation-promoting effects on osteoblasts[2]. Cajanin induces the phosphorylation of both Erk1/2 and Akt[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Cajanin (10 mg/kg, p.o.; daily for 30 consecutive days) increases the BMD levels in all anatomical regions of the skeleton studied in Sprague Dawley rats[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Netcharoensirisuk P, et al. Cajanin Suppresses Melanin Synthesis through Modulating MITF in Human Melanin-Producing Cells. *Molecules*. 2021 Oct 5;26(19):6040.
- [2]. Bhargavan B, et al. Methoxylated isoflavones, cajanin and isoformononetin, have non-estrogenic bone forming effect via differential mitogen activated protein kinase (MAPK) signaling. *J Cell Biochem*. 2009 Oct 1;108(2):388-99.
- [3]. Wensaas AJ, et al. Fatty acid incubation of myotubes from humans with type 2 diabetes leads to enhanced release of beta-oxidation products because of impaired fatty acid oxidation: effects of tetradecylthioacetic acid and eicosapentaenoic acid. *Diabetes*. 2009 Mar;58(3):527-35.

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

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