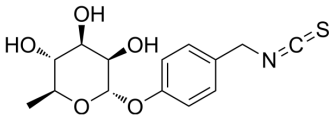
Moringin

Cat. No.:	HY-N8264
CAS No.:	73255-40-0
Molecular Formula:	$C_{14}H_{17}NO_5S$
Molecular Weight:	311.35
Target:	TRP Channel
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



BIOLOGICAL ACTIVITY

Description	Moringin is a potent and selective TRPA1 ion channel natural agonist with an EC_{50} of 3.14 μM. Moringin does not activate or activates very weakly the vanilloids somatosensory channels TRPV1, TRPV2, TRPV3 and TRPV4, and the melastatin cooling receptor TRPM8. Moringin has hypoglycemic, antimicrobial, anti-inflammatory, anticancer and neuroprotection activities[1] [2].
In Vitro	In SH-SY5Y human neuroblastoma cells, Moringin (16.4 μM; 24-72 h) significantly reduces SH-SY5Y cell growth in a time and concentration-dependent manner[2]. Moringin (1.64-8.2 μM; 24 h) increases the expression of p53, p21, and Bax at both the protein and transcriptional level in SH-SY5Y cells. Moringin significantly increases the gene expression of both caspase 3 and 9 and enhanced their cleavage, thereby initiating an intrinsic apoptotic cascade[2]. Moringin inhibits nuclear translocation of NF-κB[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	In experimental autoimmune encephalomyelitis (EAE) mice, Moringin (10 mg/kg; intraperitoneally daily for 5 week) pretreatment normalizes the aberrant Wnt-β-catenin pathway, resulting in GSK3β inhibition and β-catenin upregulation, which regulates T-cell activation (CD4 and FoxP3), suppresses the main inflammatory mediators (IL-1β, IL-6, and COX2), through activation of PPARγ. Moringin increases antioxidant Nrf2 expression in EAE mice[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Gigliola Borgonovo, et al. Moringin, A Stable Isothiocyanate from Moringa oleifera, Activates the Somatosensory and Pain Receptor TRPA1 Channel In Vitro. Molecules. 2020 Feb 22;25(4):976.

[2]. Santa Cirmi, et al. Moringin from Moringa Oleifera Seeds Inhibits Growth, Arrests Cell-Cycle, and Induces Apoptosis of SH-SY5Y Human Neuroblastoma Cells through the Modulation of NF-κB and Apoptotic Related Factors. Int J Mol Sci. 2019 Apr 19;20(8):1930.

[3]. Sabrina Giacoppo, et al. Moringin activates Wnt canonical pathway by inhibiting GSK3β in a mouse model of experimental autoimmune encephalomyelitis. Drug Des Devel Ther. 2016 Oct 4;10:3291-3304.

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

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