



Product Information

Product ID I4961

CAS No. 482-44-0

Chemical Name 9-(3-methylbut-2-enoxy)furo[3,2-g]chromen-7-one

Synonym Ammidin, Marmelosin, Pentosalen

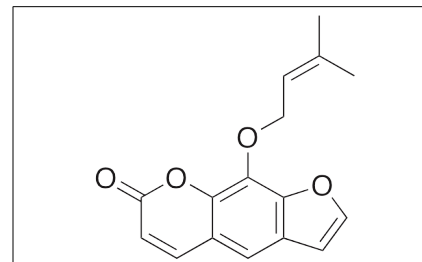
Formula C₁₆H₁₄O₄

Formula Wt. 270.28

Melting Point

Purity ≥98%

Solubility DMSO 10 mM. <0.3 mg/mL hot H₂O.



Pricing and Availability

Bulk quantities available upon request

Product ID	Size	List Price
I4961	5 mg	\$101.00
I4961	25 mg	\$404.30
I4961	100 mg	\$1123.00

Store Temp Ambient

Ship Temp Ambient

Description Imperatorin is a furocoumarin that displays a wide variety of beneficial properties, including antihypertensive, vasodilatory, antioxidative, antibacterial, anti-parasitic, cognition enhancing, and neuroprotective activities. Imperatorin increases levels of catalase, xanthine oxidase, glutathione, NO, and NOS and decreases levels of angiotensin II in hypertensive rats. In vitro, imperatorin induces NO-regulated vasodilation in mouse thoracic aortic tissue. This compound is active against both gram positive and gram negative bacteria and also shows toxicity against *Culex* and *Aedes* mosquito larvae, indicating insecticide potential as well. In vitro, imperatorin inhibits caspase-3 and Bax expression and upregulates Bcl-2 and BDNF expression. In animal models of cerebral ischemia, imperatorin decreases infarct volume. Additionally, this compound inhibits voltage-gated Na⁺ channels in rat hippocampal neurons and displays inhibitory activity against both butyrylcholinesterase (BChE) and acetylcholinesterase (AChE). In animal models of Alzheimer's disease, imperatorin improves memory acquisition and consolidation processes.

References Granica S, Kiss AK, Jarończyk M, et al. Synthesis of Imperatorin Analogs and Their Evaluation as Acetylcholinesterase and Butyrylcholinesterase Inhibitors. Arch Pharm (Weinheim). 2013 Oct 14. [Epub ahead of print]. PMID: 24123207.

Wu KC, Chen YH, Cheng KS, et al. Suppression of voltage-gated Na(+) channels and neuronal excitability by imperatorin. Eur J Pharmacol. 2013 Dec 5;721(1-3):49-55. PMID: 24113522.

Budzynska B, Boguszevska-Czubara A, Kruk-Slomka M, et al. Effects of imperatorin on nicotine-induced anxiety- and memory-related responses and oxidative stress in mice. Physiol Behav. 2013 Oct 2;122:46-55. PMID: 23999469.

Wang N, Wu L, Cao Y, et al. The protective activity of imperatorin in cultured neural cells exposed to hypoxia re-oxygenation injury via anti-apoptosis. Fitoterapia. 2013 Oct;90:38-43. PMID: 23856091.

Kimura Y, Sumiyoshi M, Sakanaka M, et al. In vitro and in vivo antiproliferative effect of a combination of ultraviolet-A and alkoxy furocoumarins isolated from Umbelliferae medicinal plants, in melanoma cells. Photochem Photobiol. 2013 Sep-Oct;89(5):1216-25. PMID: 23802687.

Cao YJ, He X, Wang N, et al. Effects of imperatorin, the active component from Radix Angelicae (Baizhi), on the blood pressure and oxidative stress in 2K,1C hypertensive rats. Phytomedicine. 2013 Sep 15;20(12):1048-54. PMID: 23746952.

Wang Z, Kim JR, Wang M, et al. Larvicidal activity of Cnidium monnieri fruit coumarins and structurally related compounds

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.