

Product data sheet



MedKoo Cat#: 584649 Name: Magnoflorine CAS: 2141-09-5 Chemical Formula: C ₂₀ H ₂₄ NO ₄ ⁺ Exact Mass: 342.17 Molecular Weight: 342.4145		
Product supplied as:	Powder	
Purity (by HPLC):	≥ 98%	
Shipping conditions	Ambient temperature	
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.	

1. Product description:

Magnoflorine is an alkaloid and a major constituent of *S. acutum* that has diverse biological activities.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.92 mL	14.60 mL	29.20 mL
5 mM	0.58 mL	2.92 mL	5.84 mL
10 mM	0.29 mL	1.46 mL	2.92 mL
50 mM	0.06 mL	0.29 mL	0.58 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Haque MA, Jantan I, Harikrishnan H, Abdul Wahab SM. Magnoflorine Enhances LPS-Activated Pro-Inflammatory Responses via MyD88-Dependent Pathways in U937 Macrophages. *Planta Med.* 2018 Nov;84(17):1255-1264. doi: 10.1055/a-0637-9936. Epub 2018 Jun 15. PMID: 29906814.
2. Kim J, Ha Quang Bao T, Shin YK, Kim KY. Antifungal activity of magnoflorine against *Candida* strains. *World J Microbiol Biotechnol.* 2018 Oct 31;34(11):167. doi: 10.1007/s11274-018-2549-x. PMID: 30382403.

In vivo study

1. Liang H, Chang X, Xia R, Wu W, Guo H, Yang M. Magnoflorine Attenuates Cerebral Ischemia-Induced Neuronal Injury via Autophagy/Sirt1/AMPK Signaling Pathway. *Evid Based Complement Alternat Med.* 2022 Sep 10;2022:2131561. doi: 10.1155/2022/2131561. PMID: 36124014; PMCID: PMC9482485.
2. Ahmad W, Jantan I, Haque MA, Arsyad L. Magnoflorine from *Tinospora crispa* upregulates innate and adaptive immune responses in Balb/c mice. *Int Immunopharmacol.* 2022 Oct;111:109081. doi: 10.1016/j.intimp.2022.109081. Epub 2022 Jul 27. PMID: 35907339.

7. Bioactivity

Biological target:

(+)-Magnoflorine has anti-fungal, anti-antidiabetic and anti-oxidative activity.

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In vitro activity

Differentiated U937 macrophages were treated with magnoflorine and the release of pro-inflammatory mediators was evaluated through ELISA, while the relative mRNA expression of the respective mediators was quantified through qRT-PCR. Magnoflorine significantly enhanced the upregulation of TNF- α , IL-1 β , and PGE2 production as well as COX-2 protein expression. Successively, magnoflorine prompted the mRNA transcription level of these pro-inflammatory mediators.

Reference: Planta Med. 2018 Nov;84(17):1255-1264. <https://pubmed.ncbi.nlm.nih.gov/29906814/>

In vivo activity

Magnoflorine treatment significantly reduced the cerebral infarct volume and brain water content and improved the neurological deficit scores in the rat MCAO model. In addition, magnoflorine ameliorated neuronal injury and neuron density in the cortex of rats. Magnoflorine also prevented oxidative damage following ischemia, reflected by the decrement of nitric oxide and malondialdehyde and the increase of glutathione (GSH) and GSH peroxidase.

Reference: Evid Based Complement Alternat Med. 2022 Sep 10;2022:2131561. <https://pubmed.ncbi.nlm.nih.gov/36124014/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.