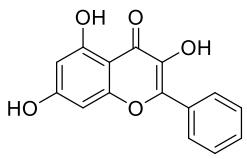
Product data sheet

MedKoo Cat#: 584446 Name: Galangin CAS#: 548-83-4 Chemical Formula: $C_{15}H_{10}O_5$ Exact Mass: 270.0528 Molecular Weight: 270.24	
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:
Galangin inhibits Ca2+ entry into TRPC5 expressing cells and also induces autophagy.

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
DMSO	36.76	136.03
DMF	30.0	111.01
Ethanol	21.76	80.52
Ethanol:PBS (pH 7.2) (1:3)	0.25	0.93

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.70 mL	18.50 mL	37.00 mL
5 mM	0.74 mL	3.70 mL	7.40 mL
10 mM	0.37 mL	1.85 mL	3.70 mL
50 mM	0.07 mL	0.37 mL	0.74 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. Liao J, Liu B, Chen K, Hu S, Liu ZY, Li YX, Yang ZM, Zhang M, Chen X. Galangin attenuates oxidative stress-mediated apoptosis in high glucose-induced renal tubular epithelial cells through modulating renin-angiotensin system and PI3K/AKT/mTOR pathway. Toxicol Res (Camb). 2021 May 17;10(3):551-560. doi: 10.1093/toxres/tfab009. PMID: 34141169; PMCID: PMC8201591.
2. Li X, Jiang J, Yang Z, Jin S, Lu X, Qian Y. Galangin suppresses RANKL-induced osteoclastogenesis via inhibiting MAPK and NF-κB signalling pathways. J Cell Mol Med. 2021 Jun;25(11):4988-5000. doi: 10.1111/jcmm.16430. Epub 2021 May 3. PMID: 33939240; PMCID: PMC8178255.

In vivo study

1. Salama SA, Elshafey MM. Galangin mitigates iron overload-triggered liver injury: Up-regulation of PPARγ and Nrf2 signaling, and abrogation of the inflammatory responses. Life Sci. 2021 Jul 27;283:119856. doi: 10.1016/j.lfs.2021.119856. Epub ahead of print. PMID: 34329667.
2. Sangaraju R, Alavala S, Nalban N, Jerald MK, Sistla R. Galangin ameliorates Imiquimod-Induced psoriasis-like skin inflammation in BALB/c mice via down regulating NF-κB and activation of Nrf2 signaling pathways. Int Immunopharmacol. 2021 Jul;96:107754. doi: 10.1016/j.intimp.2021.107754. Epub 2021 May 24. PMID: 34162135.

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7. Bioactivity

Biological target:

Galangin (Norizalpinin) is an agonist/antagonist of the arylhydrocarbon receptor. Galangin (Norizalpinin) also shows inhibition of CYP1A1 activity.

In vitro activity

HG induced RAS activation, oxidative stress, while inhibited cell viability. Gal (galangin) suppressed oxidative stress-mediated apoptosis of HK-2 cells under the stimulation of HG via inhibiting RAS activation.

Reference: Toxicol Res (Camb). 2021 May 17;10(3):551-560. https://pubmed.ncbi.nlm.nih.gov/34141169/

In vivo activity

Iron overload model was established in male Wistar rats via intraperitoneal injection of 150 mg/kg iron-dextran subdivided over a ten-day experimental period. Galangin was administered in a daily oral dose of 15 mg/kg throughout the experimental period. Galangin significantly reduced liver iron content and serum ferritin level, and alleviated the iron-evoked oxidative stress. It enhanced the liver cell integrity as reflected by decreased serum activity of the liver enzymes. Mechanistically, galangin up-regulated the redox-regulating transcription factor Nrf2 and its responsive proteins HO-1 and NQO1. Interestingly, galangin up-regulated the antioxidant and anti-inflammatory protein PPARγ and serum hepcidin levels under the iron overload conditions.

Reference: Life Sci. 2021 Jul 27;283:119856. https://pubmed.ncbi.nlm.nih.gov/34329667/

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.