

Product data sheet



MedKoo Cat#: 540134 Name: Fisetin CAS#: 528-48-3 Chemical Formula: C ₁₅ H ₁₀ O ₆ Exact Mass: 286.0477 Molecular Weight: 286.23		
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:

Fisetin is an inhibitor of MMPs and topoisomerase I and II found in various plant sources. It displays many biological activities, including limiting the development of learning and memory deficits in Alzheimer's disease models, decreasing levels of H₂O₂-generated superoxide anions, hydroxyl radicals and ROS, inhibiting Th1/Th2 cytokine production.

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	35.16	122.84
DMSO:PBS (pH 7.2) (1:1)	0.5	1.75
DMF	30.0	107.81
Ethanol	5.0	17.47

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.49 mL	17.47 mL	34.94 mL
5 mM	0.70 mL	3.49 mL	6.99 mL
10 mM	0.35 mL	1.75 mL	3.49 mL
50 mM	0.07 mL	0.35 mL	0.70 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. Molagoda IMN, Kang CH, Lee MH, Choi YH, Lee CM, Lee S, Kim GY. Fisetin promotes osteoblast differentiation and osteogenesis through GSK-3 β phosphorylation at Ser9 and consequent β -catenin activation, inhibiting osteoporosis. *Biochem Pharmacol.* 2021 Jul 10;192:114676. doi: 10.1016/j.bcp.2021.114676. Epub ahead of print. PMID: 34256044.
2. Lorthongpanich C, Charoenwongpaiboon T, Supakun P, Klaewkla M, Kheolamai P, Issaragrisil S. Fisetin Inhibits Osteogenic Differentiation of Mesenchymal Stem Cells via the Inhibition of YAP. *Antioxidants (Basel).* 2021 May 30;10(6):879. doi: 10.3390/antiox10060879. PMID: 34070903; PMCID: PMC8226865.

In vivo study

1. Pirani M, Novin MG, Abdollahifar MA, Piryaei A, Kuroshli Z, Mofarahe ZS. Protective Effects of Fisetin in the Mice Induced by Long-Term Scrotal Hyperthermia. *Reprod Sci.* 2021 Jul 6. doi: 10.1007/s43032-021-00615-1. Epub ahead of print. PMID: 34231174.
2. Jiang K, Yang J, Xue G, Dai A, Wu H. Fisetin Ameliorates the Inflammation and Oxidative Stress in Lipopolysaccharide-Induced Endometritis. *J Inflamm Res.* 2021 Jul 5;14:2963-2978. doi: 10.2147/JIR.S314130. PMID: 34262322; PMCID: PMC8275103.

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7. Bioactivity

Biological target:

Fisetin is a natural flavonol found in many fruits and vegetables with various benefits, such as antioxidant, anticancer, neuroprotection effects.

In vitro activity

The results from wound healing assay showed that fisetin, at doses above 10 μ M, inhibited wound closure and significantly reduced overall MSC migration in a dose-dependent manner (Figure 1A–C).

Reference: Antioxidants (Basel). 2021 Jun; 10(6): 879. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8226865/>

In vivo activity

The testicular volume; the density of spermatogonia, primary spermatocyte, round spermatid, and Sertoli and Leydig cells; and sperm parameters, as well biochemical properties of the testis tissue, were remarkably higher in both Preventive and Curative groups compared to the other hyperthermia-induced groups and were highest in Preventive ones. Overall, Fisetin exerts preventive and curative effects against spermatogenic disorders induced by long-term scrotal hyperthermia.

Reference: Reprod Sci. 2021 Jul 6. <https://pubmed.ncbi.nlm.nih.gov/34231174/>

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.