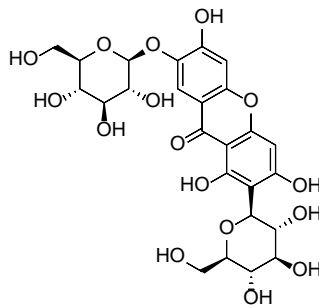


# Product data sheet



MedKoo Cat#: 584855 Name: Neomangiferin CAS: 64809-67-2 Chemical Formula: C <sub>25</sub> H <sub>28</sub> O <sub>16</sub> Exact Mass: 584.1377 Molecular Weight: 584.483		
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:

Neomangiferin is the main active constituent of *Anemarrhena asphodeloides* that has been used to treat inflammation, asthma, and pain.

## 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	100.0	171.09

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.71 mL	8.55 mL	17.11 mL
5 mM	0.34 mL	1.71 mL	3.42 mL
10 mM	0.17 mL	0.86 mL	1.71 mL
50 mM	0.03 mL	0.17 mL	0.34 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. Uzunhisarcıklı E, Çelik İ, Yerer MB. Detection of natural compounds by virtual screening, molecular docking and dynamics studies and evaluation of their effects on tau level in vitro Alzheimer's model. *J Biomol Struct Dyn*. 2023 Mar 22;1-9. doi: 10.1080/07391102.2023.2192806. Epub ahead of print. PMID: 36946204.
2. Lim SM, Kang GD, Jeong JJ, Choi HS, Kim DH. Neomangiferin modulates the Th17/Treg balance and ameliorates colitis in mice. *Phytomedicine*. 2016 Feb 15;23(2):131-40. doi: 10.1016/j.phymed.2016.01.002. Epub 2016 Jan 22. PMID: 26926174.

### In vivo study

1. Lim SM, Kang GD, Jeong JJ, Choi HS, Kim DH. Neomangiferin modulates the Th17/Treg balance and ameliorates colitis in mice. *Phytomedicine*. 2016 Feb 15;23(2):131-40. doi: 10.1016/j.phymed.2016.01.002. Epub 2016 Jan 22. PMID: 26926174.
2. Zhou C, Zhou J, Han N, Liu Z, Xiao B, Yin J. Beneficial effects of neomangiferin on high fat diet-induced nonalcoholic fatty liver disease in rats. *Int Immunopharmacol*. 2015 Mar;25(1):218-28. doi: 10.1016/j.intimp.2015.01.027. Epub 2015 Feb 7. PMID: 25661699.

## 7. Bioactivity

### Biological target:

Neomangiferin is the main active constituent of *Anemarrhena asphodeloides* that has been used to treat inflammation, asthma, and pain.

# Product data sheet



## In vitro activity

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Neomangiferin was determined as the most effective molecule according to the results of studies with potential compounds determined by virtual screening and molecular docking to be GSK-3 $\beta$  inhibitors in the in vitro Alzheimer's model created by neuronal differentiation studies. Neomangiferin has been shown to have a protective role in induced neurodegeneration by the MTT method and Real Time Cell Analysis. It has been determined that Neomangiferin inhibits GSK-3 $\beta$  and reduces the level of phosphorylated tau.

Reference: J Biomol Struct Dyn. 2023 Mar 22;1-9. <https://pubmed.ncbi.nlm.nih.gov/36946204/>

## In vivo activity

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This study was carried out to determine the effect and mechanism of action of neomangiferin (NG) on high-fat diet-induced nonalcoholic fatty liver disease (NAFLD) in rats. NG administration significantly reduced the final body weight, liver fat accumulation, and serum triglyceride (TG), total cholesterol (TC) concentrations, low-density lipoprotein cholesterol (LDL-C), glucose (GLU) levels, and hepatic TG, TC, malondialdehyde (MDA) levels, but increased serum high-density lipoprotein cholesterol (HDL-C) and hepatic superoxide dismutase (SOD) levels.

Reference: Int Immunopharmacol. 2015 Mar;25(1):218-28. <https://pubmed.ncbi.nlm.nih.gov/25661699/>

*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.*