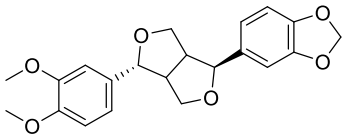


# Product data sheet



MedKoo Cat#: 330106 Name: Fargesin CAS#: 31008-19-2 Chemical Formula: C <sub>21</sub> H <sub>22</sub> O <sub>6</sub> Exact Mass: 370.1416 Molecular Weight: 370.401	
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:

Fargesin is a lignan from *Magnolia fargesii*, an oriental medicine used in the treatment of nasal congestion and sinusitis. Fargesin exhibits anti-inflammation effects on THP-1 cells via suppression of PKC pathway including downstream JNK, nuclear factors AP-1 and NF-κB. Fargesin as a potential β<sub>1</sub> adrenergic receptor antagonist protects the hearts against ischemia/reperfusion injury in rats via attenuating oxidative stress and apoptosis.

## 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	80.5	217.33

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.70 mL	13.50 mL	27.00 mL
5 mM	0.54 mL	2.70 mL	5.40 mL
10 mM	0.27 mL	1.35 mL	2.70 mL
50 mM	0.05 mL	0.27 mL	0.54 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

- Hong PTL, Kim HJ, Kim WK, Nam JH. Flos magnoliae constituent fargesin has an anti-allergic effect via ORAI1 channel inhibition. *Korean J Physiol Pharmacol*. 2021 May 1;25(3):251-258. doi: 10.4196/kjpp.2021.25.3.251. PMID: 33859065; PMCID: PMC8050608.
- Lee GE, Lee CJ, An HJ, Kang HC, Lee HS, Lee JY, Oh SR, Cho SJ, Kim DJ, Cho YY. Fargesin Inhibits EGF-Induced Cell Transformation and Colon Cancer Cell Growth by Suppression of CDK2/Cyclin E Signaling Pathway. *Int J Mol Sci*. 2021 Feb 19;22(4):2073. doi: 10.3390/ijms22042073. PMID: 33669811; PMCID: PMC7922630.

### In vivo study

- Lu J, Zhang H, Pan J, Hu Z, Liu L, Liu Y, Yu X, Bai X, Cai D, Zhang H. Fargesin ameliorates osteoarthritis via macrophage reprogramming by downregulating MAPK and NF-κB pathways. *Arthritis Res Ther*. 2021 May 14;23(1):142. doi: 10.1186/s13075-021-02512-z. PMID: 33990219; PMCID: PMC8120707.
- Wang G, Gao JH, He LH, Yu XH, Zhao ZW, Zou J, Wen FJ, Zhou L, Wan XJ, Tang CK. Fargesin alleviates atherosclerosis by promoting reverse cholesterol transport and reducing inflammatory response. *Biochim Biophys Acta Mol Cell Biol Lipids*. 2020 May;1865(5):158633. doi: 10.1016/j.bbalip.2020.158633. Epub 2020 Jan 25. PMID: 31988050.

# Product data sheet



## 7. Bioactivity

### Biological target:

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Fargesin is a bioactive neolignan isolated from magnolia plants, with antihypertensive and anti-inflammatory effects.

### In vitro activity

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Fargesin suppressed cell proliferation of JB6 Cl41 and HaCaT cells in a dose-dependent manner (Figure 1a). Both JB6 Cl41 and HaCaT cells showed a 50% inhibitory effect of cell proliferation at approximately 22–23  $\mu$ M fargesin concentration (Figure 1a).

Reference: Int J Mol Sci. 2021 Feb; 22(4): 2073. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7922630/>

### In vivo activity

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Although fargesin treatment demonstrated a slight decrease in synovial hyperplasia, no significant differences in the knee synovitis score were present between fargesin and control mice 3 weeks after intra-articular injection (Fig. 1d, i). However, the synovitis score was significantly reduced in fargesin-treated mice 6 weeks after intra-articular injection (Fig. 1e, j). These findings demonstrated that fargesin prevented OA progression to cartilage damage and synovial inflammation.

Reference: Arthritis Res Ther. 2021; 23: 142. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8120707/>

*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.*