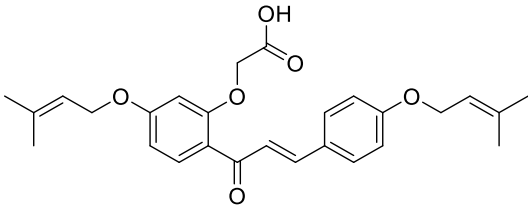


Product data sheet



MedKoo Cat#: 526345 Name: Sofalcone CAS#: 64506-49-6 Chemical Formula: C ₂₇ H ₃₀ O ₆ Exact Mass: 450.2042 Molecular Weight: 450.53		
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:

Sofalcone is an oral gastroprotective, gastrointestinal medication. It is a synthetic analog of sophoradin.

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
DMF	12	26.64
DMSO	16	35.51

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.22 mL	11.10 mL	22.20 mL
5 mM	0.44 mL	2.22 mL	4.44 mL
10 mM	0.22 mL	1.11 mL	2.22 mL
50 mM	0.04 mL	0.22 mL	0.44 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

- Onda K, Tong S, Nakahara A, Kondo M, Monchusho H, Hirano T, Kaitu'u-Lino T, Beard S, Binder N, Tuohey L, Brownfoot F, Hannan NJ. Sofalcone upregulates the nuclear factor (erythroid-derived 2)-like 2/heme oxygenase-1 pathway, reduces soluble fms-like tyrosine kinase-1, and quenches endothelial dysfunction: potential therapeutic for preeclampsia. Hypertension. 2015 Apr;65(4):855-62. doi: 10.1161/HYPERTENSIONAHA.114.04781. Epub 2015 Feb 9. PMID: 25667213.
- Shibuya A, Onda K, Kawahara H, Uchiyama Y, Nakayama H, Omi T, Nagaoka M, Matsui H, Hirano T. Sofalcone, a gastric mucosa protective agent, increases vascular endothelial growth factor via the Nrf2-heme-oxygenase-1 dependent pathway in gastric epithelial cells. Biochem Biophys Res Commun. 2010 Jul 30;398(3):581-4. doi: 10.1016/j.bbrc.2010.06.124. Epub 2010 Jul 3. PMID: 20599750.

In vivo study

- Kim W, Lee H, Kim S, Joo S, Jeong S, Yoo JW, Jung Y. Sofalcone, a gastroprotective drug, covalently binds to KEAP1 to activate Nrf2 resulting in anti-colic activity. Eur J Pharmacol. 2019 Dec 15;865:172722. doi: 10.1016/j.ejphar.2019.172722. Epub 2019 Oct 12. PMID: 31614142.
- Kabir AM, Shimizu K, Aiba Y, Igarashi M, Takagi A, Koga Y. The effect of sofalcone on indomethacin-induced gastric ulcers in a Helicobacter pylori-infected gnotobiotic murine model. Aliment Pharmacol Ther. 2000 Apr;14 Suppl 1:223-9. doi: 10.1046/j.1365-2036.2000.014s1223.x. PMID: 10807428.

Product data sheet



7. Bioactivity

Biological target:

Sofalcone induces the expression of Heme oxygenase-1 (HO-1) in gastric epithelium.

In vitro activity

This study suggests that sofalcone could be a promising therapy for preeclampsia. Sofalcone demonstrated potent activation of the antioxidant pathway (Nrf2/HO-1) in primary trophoblasts and endothelial cells, leading to decreased sFlt-1 secretion from trophoblasts. Sofalcone alleviated endothelial dysfunction by reducing monocyte adhesion and vascular cell adhesion molecule 1 expression in human umbilical vein endothelial cells.

Reference: Hypertension. 2015 Apr;65(4):855-62. <https://pubmed.ncbi.nlm.nih.gov/25667213/>

In vivo activity

This study suggests that sofalcone can improve ulcer healing. Sofalcone produced a significant improvement in ulcer size as well as a substantial reduction in the number of H. pylori colonies in H. pylori-infected gnotobiotic mice.

Reference: Aliment Pharmacol Ther. 2000 Apr;14 Suppl 1:223-9. <https://pubmed.ncbi.nlm.nih.gov/10807428/>

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.