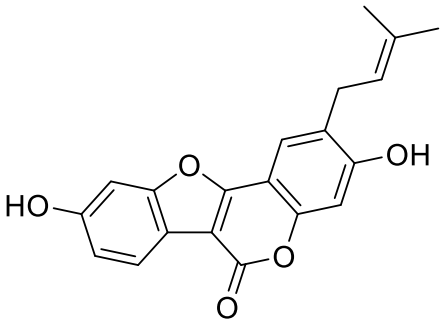
Product data sheet

MedKoo Cat#: 561383 Name: Psoralidin CAS: 18642-23-4 Chemical Formula: $C_{20}H_{16}O_5$ Exact Mass: 336.0998 Molecular Weight: 336.34	
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:
Psoralidin is a metabolic product from the seed of psoraleacorylifolia, possessing anti-inflammatory and immunomodulatory effects. Psoralidin inhibits lipopolysaccharide induced bone resorption by suppressing the inflammatory cytokines: TNF-α and IL-6 expression, as well as the ratio of RNAKL : OPG.

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	14	41.62
DMSO	14	41.62

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.97 mL	14.87 mL	29.73 mL
5 mM	0.59 mL	2.97 mL	5.95 mL
10 mM	0.30 mL	1.49 mL	2.97 mL
50 mM	0.06 mL	0.30 mL	0.59 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. Boulebd H, Pereira DM. Examination of the Antioxidant Activity of Psoralidin: Computational Mechanistic Study and Impact on the ROS Level in Human Keratinocytes. J Org Chem. 2023 May 5;88(9):5745-5751. doi: 10.1021/acs.joc.3c00193. Epub 2023 Apr 19. PMID: 37074959.
2. Li S, Liu X, Nie Y, Yang L, Zhang C, Guo Y, Yang S, Li Z. Psoralidin Induced Differentiation from Adipose-derived Stem Cells to Nucleus Pulposus-like Cells by TGF-β/Smad Signaling. Curr Mol Med. 2023 May 30;23(7):688-697. doi: 10.2174/1566524022666220816165135. PMID: 35975860.

In vivo study

1. Yang Y, Lei W, Qian L, Zhang S, Yang W, Lu C, Song Y, Liang Z, Deng C, Chen Y, Tian Y, Zhao H. Activation of NR1H3 signaling pathways by psoralidin attenuates septic myocardial injury. Free Radic Biol Med. 2023 Aug 1;204:8-19. doi: 10.1016/j.freeradbiomed.2023.04.006. Epub 2023 Apr 20. PMID: 37085126.
2. Liang Z, Chen Y, Wang Z, Wu X, Deng C, Wang C, Yang W, Tian Y, Zhang S, Lu C, Yang Y. Protective effects and mechanisms of psoralidin against adriamycin-induced cardiotoxicity. J Adv Res. 2022 Sep;40:249-261. doi: 10.1016/j.jare.2021.12.007. Epub 2021 Dec 28. PMID: 36100330; PMCID: PMC9481943.

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7. Bioactivity

Biological target:

Psoralidin induces cytotoxicity against various cancer cells. At 50 μM, psoralidin can induce the death of HeLa cancer cells through TNF-related apoptosis-inducing ligand-mediated events. Psoralidin can induce apoptosis of androgen-dependent (LNCaP, C4-2B) and androgen-independent (DU-145, PC-3) prostate cancer cells.

In vitro activity

Psoralidin is a potent radical scavenger in physiological polar media.However, psoralidin is a moderate radical scavenger in lipid media. Psoralidin moderately reduces the basal ROS level in human keratinocytes at non-toxic concentrations,

Reference: J Org Chem. 2023 May 5;88(9):5745-5751. https://pubmed.ncbi.nlm.nih.gov/37074959/

In vivo activity

In a murine model of septic myocardial injury model, psoralidin improved cardiac function, attenuated inflammation, inhibited oxidative stress, improved mitochondrial function, regulated ERS, suppressed apoptosis, and increased NR1H3 and p-AMPK levels.

Reference: Free Radic Biol Med. 2023 Aug 1;204:8-19. https://pubmed.ncbi.nlm.nih.gov/37085126/

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.