

Product data sheet



MedKoo Cat#: 598232 Name: Maclurin CAS: 519-34-6 Chemical Formula: C ₁₃ H ₁₀ O ₆ Exact Mass: 262.0477 Molecular Weight: 262.217	
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:

Maclurin is isolated from *Maclura pomifera*. Maclurin is composed of two isoforms (isoelectins); some sequence similarity to jacalin; potent non-specific blood-group hemagglutinin.

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
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.81 mL	19.07 mL	38.14 mL
5 mM	0.76 mL	3.81 mL	7.63 mL
10 mM	0.38 mL	1.91 mL	3.81 mL
50 mM	0.08 mL	0.38 mL	0.76 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. Moon KM, Yang JH, Lee MK, Kwon EB, Baek J, Hwang T, Kim JI, Lee B. Maclurin Exhibits Antioxidant and Anti-Tyrosinase Activities, Suppressing Melanogenesis. *Antioxidants (Basel)*. 2022 Jun 14;11(6):1164. doi: 10.3390/antiox11061164. PMID: 35740060; PMCID: PMC9220237.
2. Kong J, Zhou X, Lu J, Han Q, Ouyang X, Chen D, Liu A. Maclurin Promotes the Chondrogenic Differentiation of Bone Marrow Mesenchymal Stem Cells by Regulating miR-203a-3p/Smad1. *Cell Reprogram*. 2022 Feb;24(1):9-20. doi: 10.1089/cell.2021.0122. PMID: 35180001.

In vivo study

TBD

7. Bioactivity

Biological target:

Maclurin is composed of two isoforms (isoelectins); some sequence similarity to jacalin; potent non-specific blood-group hemagglutinin.

In vitro activity

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Maclurin suppressed UVB-mediated tyrosinase activation and melanin accumulation in B16F10 cells without changes in mRNA levels of melanogenesis-related genes including tyrosinase, TRP1, TRP2, CREB, and MITF. Moreover, maclurin reduced melanin contents in melan-a cells, a cell line for normal melanocytes. When applied to a human skin model consisting of the epidermis and melanocytes, maclurin significantly reduced UVB-induced melanin accumulation (~47%) in a concentration-dependent manner based on microscopic observation and Fontana-Masson staining.

Reference: Antioxidants (Basel). 2022 Jun 14;11(6):1164. <https://pubmed.ncbi.nlm.nih.gov/35740060/>

In vivo activity

TBD

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.