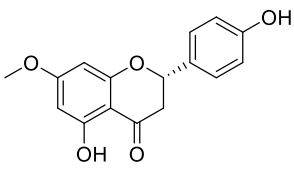


Product data sheet



MedKoo Cat#: 461709 Name: Sakuranetin CAS#: 2957-21-3 Chemical Formula: C ₁₆ H ₁₄ O ₅ Exact Mass: 286.0841 Molecular Weight: 286.28	
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:

Sakuranetin is flavonoid phytoalexin that serves as a plant antibiotic and exists in Prunus and several other plant species.

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	57	199.11

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.49 mL	17.47 mL	34.93 mL
5 mM	0.70 mL	3.49 mL	6.99 mL
10 mM	0.35 mL	1.75 mL	3.49 mL
50 mM	0.07 mL	0.35 mL	0.70 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. Kwon DH, Ji JH, Yim SH, Kim BS, Choi HJ. Suppression of influenza B virus replication by sakuranetin and mode of its action. *Phytother Res.* 2018 Dec;32(12):2475-2479. doi: 10.1002/ptr.6186. Epub 2018 Sep 5. PMID: 30187587.
2. Saito T, Abe D, Sekiya K. Sakuranetin induces adipogenesis of 3T3-L1 cells through enhanced expression of PPARgamma2. *Biochem Biophys Res Commun.* 2008 Aug 8;372(4):835-9. doi: 10.1016/j.bbrc.2008.05.146. Epub 2008 Jun 2. PMID: 18522800.

In vivo study

1. Liu M, Hong G, Li H, Bing X, Chen Y, Jing X, Gershenson J, Lou Y, Baldwin IT, Li R. Sakuranetin protects rice from brown planthopper attack by depleting its beneficial endosymbionts. *Proc Natl Acad Sci U S A.* 2023 Jun 6;120(23):e2305007120. doi: 10.1073/pnas.2305007120. Epub 2023 May 31. PMID: 37256931; PMCID: PMC10266023.
2. Vicente-Silva W, Silva-Freitas FR, Beserra-Filho JIA, Cardoso GN, Silva-Martins S, Sarno TA, Silva SP, Soares-Silva B, Dos Santos JR, da Silva RH, Prado CM, Ueno AK, Lago JHG, Ribeiro AM. Sakuranetin exerts anticonvulsant effect in bicuculline-induced seizures. *Fundam Clin Pharmacol.* 2022 Aug;36(4):663-673. doi: 10.1111/fcp.12768. Epub 2022 Feb 21. PMID: 35156229.

7. Bioactivity

Biological target:

Sakuranetin is a cherry flavonoid phytoalexin that shows strong antifungal activity. Sakuranetin has anti-inflammatory and antioxidative activities. Sakuranetin ameliorates LPS-induced acute lung injury.

Product data sheet



In vitro activity

Sakuranetin is a good candidate for a chemopreventive agent for influenza virus-related diseases. Sakuranetin exhibited potent antiviral activity against influenza B/Lee/40 virus, reducing the formation of a visible cytopathic effect, with an IC50 value of 7.21 µg/ml and no cytotoxicity at a concentration of 100 µg/ml, and the derived therapeutic index was >13.87.

Reference: Phytother Res. 2018 Dec;32(12):2475-2479. <https://pubmed.ncbi.nlm.nih.gov/30187587/>

In vivo activity

Sakuranetin serves as a defense mechanism in rice by targeting the beneficial endosymbionts of the herbivore brown planthopper (BPH). Sakuranetin played a defensive role against BPH when incorporated into artificial diets of rice plants, reducing BPH survivorship. Sakuranetin was found to directly inhibit the growth of beneficial yeast-like symbionts within BPH. BPH feeding on sakuranetin-deficient rice lines accumulated higher cholesterol levels.

Reference: Proc Natl Acad Sci U S A. 2023 Jun 6;120(23):e2305007120. <https://pubmed.ncbi.nlm.nih.gov/37256931/>

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.