

Product data sheet



MedKoo Cat#: 584955 Name: Isoorientin CAS: 4261-42-1 Chemical Formula: C ₂₁ H ₂₀ O ₁₁ Exact Mass: 448.1006 Molecular Weight: 448.38		
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:

Isoorientin is a flavonoid that has been found in *G. olivieri* and induces apoptosis in and reduces cell viability of PATU-8988 and PANC-1 pancreatic cancer cells in a concentration-dependent manner.

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	25.0	55.76
DMSO	71.67	159.83

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.23 mL	11.15 mL	22.30 mL
5 mM	0.45 mL	2.23 mL	4.46 mL
10 mM	0.22 mL	1.12 mL	2.23 mL
50 mM	0.05 mL	0.22 mL	0.45 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

- Kim B, Lee KY, Park B. Isoorientin Inhibits Amyloid β₂₅₋₃₅-Induced Neuronal Inflammation in BV2 Cells by Blocking the NF-κB Signaling Pathway. *Molecules*. 2021 Nov 22;26(22):7056. doi: 10.3390/molecules26227056. PMID: 34834150; PMCID: PMC8623752.
- Li H, Yuan L, Li X, Luo Y, Zhang Z, Li J. Isoorientin Attenuated the Pyroptotic Hepatocyte Damage Induced by Benzo[a]pyrene via ROS/NF-κB/NLRP3/Caspase-1 Signaling Pathway. *Antioxidants (Basel)*. 2021 Aug 11;10(8):1275. doi: 10.3390/antiox10081275. PMID: 34439523; PMCID: PMC8389279.

In vivo study

- Huang S, Li Z, Jiang S, Xu M. Metabolomic study on the protective effect of isoorientin against myocardial infarction. *Biochem Biophys Res Commun*. 2022 Apr 2;598:81-88. doi: 10.1016/j.bbrc.2022.02.008. Epub 2022 Feb 5. PMID: 35151208.
- Li Y, Zhao Y, Tan X, Liu J, Zhi Y, Yi L, Bai S, Du Q, Li QX, Dong Y. Isoorientin Inhibits Inflammation in Macrophages and Endotoxemia Mice by Regulating Glycogen Synthase Kinase 3β. *Mediators Inflamm*. 2020 Oct 27;2020:8704146. doi: 10.1155/2020/8704146. PMID: 33192176; PMCID: PMC7641714.

7. Bioactivity

Biological target:

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Isoorientin is a potent inhibitor of COX-2 with an IC₅₀ value of 39 μ M.

In vitro activity

The results showed that 20 μ M ISO (isoorientin) restored cell viability to control levels in BV2 cells (Figure 1B). These results suggest that ISO can reverse the cytotoxic effects of A β 25–35.

Reference: Molecules. 2021 Nov 22;26(22):7056. <https://pubmed.ncbi.nlm.nih.gov/34834150/>

In vivo activity

This study investigated the effects of ISO (isoorientin) administration on cardiac function in mice after myocardial infarction, on ROS levels in H9C2 myocardial cells after hypoxia in vitro, and on metabolomic changes in mice after myocardial infarction. ISO improved cardiac function in mice after myocardial infarction and inhibited hypoxia-induced oxidative stress injury in H9C2 cells in vitro.

Reference: Biochem Biophys Res Commun. 2022 Apr 2;598:81-88. <https://pubmed.ncbi.nlm.nih.gov/35151208/>

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.