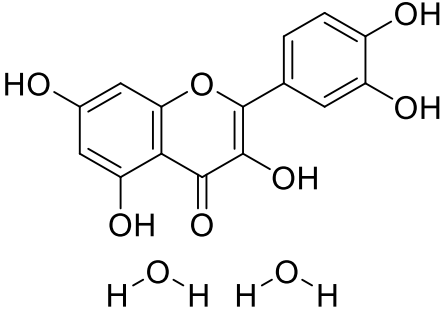


Product data sheet



MedKoo Cat#: 561651 Name: Quercetin Dihydrate CAS#: 6151-25-3 Chemical Formula: C ₁₅ H ₁₀ O ₇ * 2H ₂ O Exact Mass: 338.0638 Molecular Weight: 338.2680	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C > 4 years In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

Quercetin Dihydrate is a mitochondrial ATPase and phosphodiesterase inhibitor that also inhibits PI3-kinase activity and displays antiproliferative effects on cancer cell lines.

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	67.00	198.06
Ethanol	17.00	50.25

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.96 mL	14.78 mL	29.5622 mL
5 mM	0.59 mL	2.96 mL	5.9124 mL
10 mM	0.30 mL	1.48 mL	2.9562 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

- Albegova DZ, Kamkina OV, Pavlova SI, Albegova ZhK, Laptev OS, Kozlov IG. Antiproliferative Effects of Modified Bioflavonoid in Ex Vivo Model. Bull Exp Biol Med. 2016 Jul;161(3):381-3. doi: 10.1007/s10517-016-3419-x. Epub 2016 Aug 6. PMID: 27496028.
- Vandegraaff N, Kumar R, Hocking H, Burke TR Jr, Mills J, Rhodes D, Burrell CJ, Li P. Specific inhibition of human immunodeficiency virus type 1 (HIV-1) integration in cell culture: putative inhibitors of HIV-1 integrase. Antimicrob Agents Chemother. 2001 Sep;45(9):2510-6. doi: 10.1128/AAC.45.9.2510-2516.2001. PMID: 11502522; PMCID: PMC90685.

In vivo study

- Wang L, Tan A, An X, Xia Y, Xie Y. Quercetin Dihydrate inhibition of cardiac fibrosis induced by angiotensin II in vivo and in vitro. Biomed Pharmacother. 2020 Jul;127:110205. doi: 10.1016/j.biopha.2020.110205. Epub 2020 May 8. PMID: 32403046.
- Apichart V, Wong R, Rabie B, Lei S. The effect of quercetin on expression of SOX9 and subsequent release of type II collagen in sphenoid-occipital synchondroses of organ-cultured mice. Angle Orthod. 2012 Mar;82(2):247-53. doi: 10.2319/042111-278.1. Epub 2011 Sep 20. PMID: 21932938; PMCID: PMC8867954.

7. Bioactivity

Biological target:

Product data sheet



Quercetin Dihydrate is a mitochondrial ATPase and phosphodiesterase inhibitor that reduces cancer cell growth via type II estrogen receptors, and arrests human leukemic T cells in the late G1 phase of the cell cycle.

In vitro activity

Quercetin dihydrate produced a dose-dependent inhibition of proliferation on mononuclears triggered by T- and B-cell mitogens. Lymphocytes were in vivo pretreated with the examined agents followed by their explantation and in vitro activation with T- and B-cell mitogens in cell culture; modified bioflavonoid demonstrated higher antiproliferative activity.

Reference: Bull Exp Biol Med. 2016 Jul;161(3):381-3. <https://pubmed.ncbi.nlm.nih.gov/27496028/>

In vivo activity

In mice, quercetin dihydrate significantly reduced cardiac contractile function, fibrosis, inflammation and myocardial hypertrophy induced by Ang II. Quercetin dihydrate could inhibit the expression of Collagen I and Collagen III, which are the markers of fibroblast differentiation. It has an inhibitory effect on the proliferation and differentiation of fibroblasts induced by angiotensin II in vitro. Quercetin dihydrate plays a key role in the progression of myocardial fibrosis and it may be a promising drug for the treatment of myocardial fibrosis.

Reference: Biomed Pharmacother. 2020 Jul;127:110205. <https://pubmed.ncbi.nlm.nih.gov/32403046/>

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.