

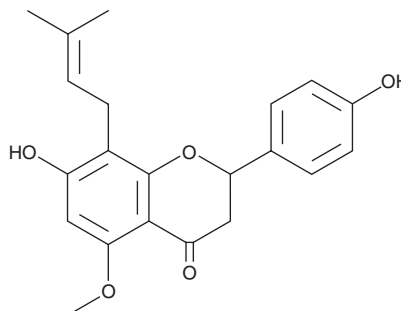
# PRODUCT INFORMATION



## Isoxanthohumol

Item No. 23233

**CAS Registry No.:** 521-48-2  
**Formal Name:** 2,3-dihydro-7-hydroxy-2-(4-hydroxyphenyl)-5-methoxy-8-(3-methyl-2-buten-1-yl)-4H-1-benzopyran-4-one  
**Synonyms:** IX, IXN  
**MF:** C<sub>21</sub>H<sub>22</sub>O<sub>5</sub>  
**FW:** 354.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 289 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Isoxanthohumol is supplied as a crystalline solid. A stock solution may be made by dissolving the isoxanthohumol in the solvent of choice, which should be purged with an inert gas. Isoxanthohumol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of isoxanthohumol in ethanol and DMF is approximately 3 mg/ml and approximately 2.5 mg/ml in DMSO.

Isoxanthohumol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, isoxanthohumol should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Isoxanthohumol has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Isoxanthohumol is a natural, prenylated chalcone isolated from the hop plant, *H. lupulus* (hops). It has diverse biological activities, including antiproliferative, anti-inflammatory, and antiviral properties.<sup>1</sup> In B16 and A375 melanoma cells, isoxanthohumol inhibits proliferation (IC<sub>50</sub>s = 22.15 and 22.9 μM in an MTT assay), slows cell division, and induces apoptosis.<sup>2</sup> Isoxanthohumol reversibly inhibits K<sub>v</sub>1.3 channels with an EC<sub>50</sub> value of 7.8 μM in human Jurkat T cells using patch clamp electrophysiology.<sup>3</sup> It has also been used as a marker of beer consumption.<sup>4</sup> Isoxanthohumol is metabolized in the liver and intestine to 8-prenylnaringenin (Item No. 17462), a potent phytoestrogen.<sup>4</sup>

### References

1. Żołnierczyk, A.K., Mączka, W.K., Grabarczyk, M., et al. Isoxanthohumol--Biologically active hop flavonoid. *Fitoterapia* **103**, 71-82 (2015).
2. Krajnović, T., Kaluderović, G.N., Wessjohann, L.A., et al. Versatile antitumor potential of isoxanthohumol: Enhancement of paclitaxel activity *in vivo*. *Pharmacol. Res.* **105**, 62-73 (2016).
3. Gąsiorowska, J., Teisseyre, A., Uryga, A., et al. Inhibition of K<sub>v</sub>1.3 channels in human jurkat T cells by xanthohumol and isoxanthohumol. *J. Membr. Biol.* **248(4)**, 705-711 (2015).
4. Quifer-Rada, P., Martínez-Huélamo, M., Chiva-Blanch, G., et al. Urinary isoxanthohumol is a specific and accurate biomarker of beer consumption. *J. Nutr.* **144(4)**, 484-488 (2014).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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