

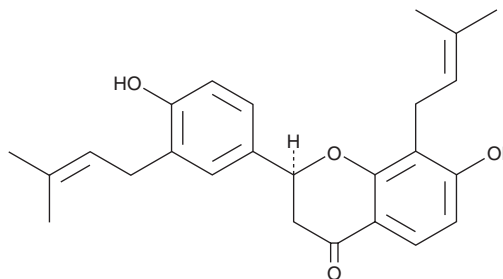
# PRODUCT INFORMATION



## Glabrol

Item No. 37367

**CAS Registry No.:** 59870-65-4  
**Formal Name:** (2S)-2,3-dihydro-7-hydroxy-2-[4-hydroxy-3-(3-methyl-2-buten-1-yl)phenyl]-8-(3-methyl-2-buten-1-yl)-4H-1-benzopyran-4-one  
**MF:** C<sub>25</sub>H<sub>28</sub>O<sub>4</sub>  
**FW:** 392.5  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 218, 286 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Plant/*Glycyrrhiza uralensis* Fisch



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

### Laboratory Procedures

Glabrol is supplied as a solid. A stock solution may be made by dissolving the glabrol in the solvent of choice, which should be purged with an inert gas. Glabrol is soluble in DMSO.

### Description

Glabrol is a flavonoid that has been found in *G. glabra* and has diverse biological activities.<sup>1-6</sup> It inhibits neuraminidase (NA) activity in oseltamivir-sensitive and -resistant H1N1 influenza strains (IC<sub>50</sub>s = 0.51 and 14.1 μM, respectively), as well as protein tyrosine phosphatase 1B (PTP1B), acyl-coenzyme A:cholesterol acyltransferase (ACAT), and diacylglycerol acyltransferase (DGAT; IC<sub>50</sub>s = 0.31, 24.6, and 8 μM, respectively).<sup>1-4</sup> Glabrol is cytotoxic to MCF-7 breast, SW480 colon, and HepG2 liver cancer cells (IC<sub>50</sub>s = 7.62, 5.15, and 2.83 μM, respectively) and is active against methicillin-resistant *S. aureus* (MRSA; MIC<sub>50</sub> = 2 μg/ml).<sup>2,5</sup> It binds to the benzodiazepine receptor (K<sub>i</sub> = 1.63 μM) and increases pentobarbital-induced sleep duration in mice when administered at a dose of 50 mg/kg, an effect that can be reversed by the GABA<sub>A</sub> receptor antagonist flumazenil (Item No. 14252).<sup>6</sup>

### References

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2. Lin, Y., Kuang, Y., Li, K., *et al.* Screening for bioactive natural products from a 67-compound library of *Glycyrrhiza inflata*. *Bioorg. Med. Chem.* **25**(14), 3706-3713 (2017).
3. Choi, J.H., Rho, M.-C., Lee, S.W., *et al.* Glabrol, an acyl-coenzyme A: Cholesterol acyltransferase inhibitor from licorice roots. *J. Ethnopharmacol.* **110**(3), 563-566 (2007).
4. Choi, J.H., Choi, J.N., Lee, S.Y., *et al.* Inhibitory activity of diacylglycerol acyltransferase by glabrol isolated from the roots of licorice. *Arch. Pharm. Res.* **33**(2), 237-242 (2010).
5. Wu, S.-C., Yang, Z.-Q., Liu, F., *et al.* Antibacterial effect and mode of action of flavonoids from licorice against methicillin-resistant *Staphylococcus aureus*. *Front. Microbiol.* **10**, 2489 (2019).
6. Cho, S., Park, J.-H., Pae, A.N., *et al.* Hypnotic effects and GABAergic mechanism of licorice (*Glycyrrhiza glabra*) ethanol extract and its major flavonoid constituent glabrol. *Bioorg. Med. Chem.* **20**(11), 3493-3501 (2012).

#### 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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