

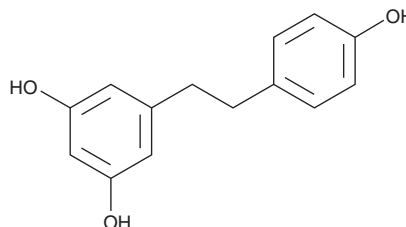
# PRODUCT INFORMATION



## Dihydroresveratrol

Item No. 19651

**CAS Registry No.:** 58436-28-5  
**Formal Name:** 5-[2-(4-hydroxyphenyl)ethyl]-1,3-benzenediol  
**Synonyms:** 3,4',5-Trihydroxybibenzyl,  
 $\alpha,\beta$ -Dihydro-3,4',5-trihydroxystilbene  
**MF:** C<sub>14</sub>H<sub>14</sub>O<sub>3</sub>  
**FW:** 230.3  
**Purity:**  $\geq$ 98%  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 226, 281 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years



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

### Laboratory Procedures

Dihydroresveratrol is supplied as a crystalline solid. A stock solution may be made by dissolving the dihydroresveratrol in the solvent of choice, which should be purged with an inert gas. Dihydroresveratrol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of dihydroresveratrol in ethanol and DMSO is approximately 50 mg/ml and approximately 100 mg/ml in DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of dihydroresveratrol can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of dihydroresveratrol in PBS (pH 7.2) is approximately 100  $\mu$ g/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Dihydroresveratrol is a polyketide synthase-derived bibenzyl that has been found in *C. sativa* and has diverse biological activities.<sup>1-4</sup> It is also an active metabolite of resveratrol (Item Nos. 70675 | 10004235) that is formed by gut microbiota.<sup>5</sup> Dihydroresveratrol inhibits DNA polymerase  $\alpha$  but not DNA polymerase  $\delta$  ( $K_{i,s}$  = 29.3 and  $>100$   $\mu$ M, respectively) and the formation of thiobarbituric acid reactive substances (TBARS) in rat liver microsomes ( $EC_{50}$  = 1.57  $\mu$ M).<sup>2</sup> It stimulates the proliferation of hormone-sensitive MCF-7 breast cancer cells but not hormone-resistant MDA-MB-231 and BT474 breast cancer cells when used at concentrations ranging from 0.01 pM to 100 nM.<sup>3</sup> Dihydroresveratrol decreases interalveolar septal thickness and alveolar hemorrhage in a rat model of lung injury induced by cerulein- and LPS-stimulated pancreatitis when administered at a dose of 50 mg/kg.<sup>4</sup>

### References

1. Boddington, K.F., Soubeyrand, E., Van Gelder, K., *et al.* *Plant J.* **109**(3), 693-707 (2022).
2. Stivala, L.A., Savio, M., Carafoli, F., *et al.* *J. Biol. Chem.* **276**(25), 22586-22594 (2001).
3. Gakh, A.A., Anisimova, N.Y., Kiselevsky, M.V., *et al.* *Bioorg. Med. Chem. Lett.* **20**(20), 6149-6151 (2010).
4. Lin, Z.-S., Ku, C.F., Guan, Y.-F., *et al.* *Phytother. Res.* **30**(4), 663-670 (2016).
5. Bode, L.M., Bunzel, B., Huch, M., *et al.* *Am. J. Clin. Nutr.* **97**(2), 295-309 (2013).

#### 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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