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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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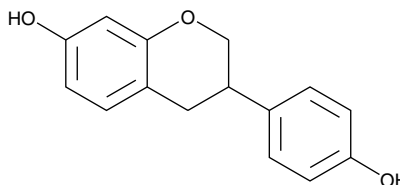
Product Information



(±)-Equol

Item No. 13184

CAS Registry No.: 94105-90-5
Formal Name: 3,4-dihydro-3-(4-hydroxyphenyl)-2H-1-benzopyran-7-ol
MF: C₁₅H₁₄O₃
FW: 242.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 206, 225, 281 nm



Laboratory Procedures

For long term storage, we suggest that (±)-equol be stored as supplied at -20°C. It should be stable for at least two years.

(±)-Equol is supplied as a crystalline solid. A stock solution may be made by dissolving the (±)-equol in an organic solvent purged with an inert gas. (±)-Equol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of (±)-equol in these solvents is approximately 10 mg/ml.

(±)-Equol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (±)-equol should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. (±)-Equol has a solubility of approximately 0.1 mg/ml in a 1:10 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Equol is a nonsteroidal estrogen produced from the metabolism of the isoflavonoid phytoestrogen daidzein by human intestinal microflora.^{1,2} The estrogen receptor (ER) binding activity of the naturally occurring (S)-enantiomer demonstrates greater affinity toward ERβ while the (R)-enantiomer demonstrates greater affinity towards ERα.^{1,2} Synthesized as a racemic mixture, (±)-equol exhibits EC₅₀ values of 200 and 74 nM for human ERα and ERβ, respectively and induces breast cancer cell proliferation *in vitro* at concentrations as low as 100 nM.^{2,3}

References

1. Setchell, K.D.R., Clerici, C., Lephart, E.D., *et al.* S-equol, a potent ligand for estrogen receptor β, is the exclusive enantiomeric form of the soy isoflavone metabolite produced by human intestinal bacterial flora. *Am. J. Clin. Nutr.* **81**, 1072-1079 (2005).
2. Muthyala, R.S., Ju, Y.H., Sheng, S., *et al.* Equol, a natural estrogenic metabolite from soy isoflavones: Convenient preparation and resolution of R- and S-equols and their differing binding and biological activity through estrogen receptors alpha and beta. *Bioorg. Med. Chem.* **12**, 1559-1567 (2004).
3. Liu, H., Du, J., Hu, C., *et al.* Delayed activation of extracellular-signal-regulated kinase 1/2 is involved in genistein- and equol-induced cell proliferation and estrogen-receptor-α-mediated transcription in MCF-7 breast cancer cells. *J. Nutr. Biochem.* (2009).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/13184

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery.**

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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