



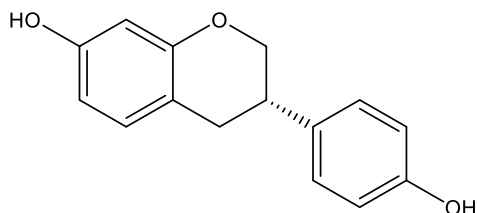
Catalog # 10-3718

(S)-Equol

(S)-3,4-Dihydro-3-(4-hydroxyphenyl)-2H-1-benzopyran-7-ol; (S)-4',7-Isoflavandiol;

CAS# 531-95-3

Lot # E104547



(S)-Equol is a phytoestrogen produced via metabolic transformation of the isoflavonoid daidzein by human intestinal microflora.¹ The estrogen receptor (ER) binding activity of the naturally occurring (S)-enantiomer demonstrates greater affinity toward ER β while the (R)-enantiomer demonstrates greater affinity towards ER α .^{2,3} It displays protective effects in various cellular systems^{4,5} and may be useful in treatment of menopausal symptoms⁶.

- 1) Kim *et al.* (2026), *Microbial Production and Industrial Applications of (S)-Equol for Precision Health and Functional Food Innovation*; J. Agric. Food Chem. **74** 1938
- 2) Setchell *et al.*, (2005), *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
- 3) Muthyala *et al.* (2004), *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
- 4) Richardson and Simpkins (2012), *R- and S-equol have equivalent cytoprotective effects in Friedreich's ataxia*; BMC Pharmacol. Toxicol. **13** 12
- 5) Lephart *et al.* (2013), *Protective effects of equol and their polyphenolic isomers against dermal aging: microarray/protein evidence with clinical implications and unique delivery into human skin*; Pharm. Biol. **51** 1393
- 6) Chen and Chen. (2021), *Utilization of Isoflavones in Soybeans for Women with Menopausal Syndrome: An Overview*; Int. J. Mol. Sci. **22** 3212

PHYSICAL DATA

Molecular Weight: 242.27

Molecular Formula: C₁₅H₁₄O₃

Purity: >98% by HPLC

NMR: Conforms

Solubility: DMSO (200 mg/mL)

Physical Description: White to off-white solid

Storage and Stability: Store as supplied desiccated at -20°C for up to 2 years from the date of purchase.

Solutions in DMSO may be stored at -20°C for up to 1 month.

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.