

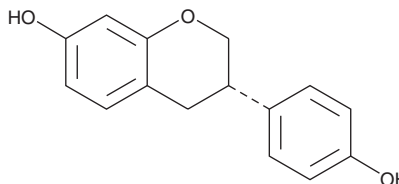
# PRODUCT INFORMATION



## (S)-Equol

Item No. 10010173

**CAS Registry No.:** 531-95-3  
**Formal Name:** (S)-3,4-dihydro-3-(4-hydroxyphenyl)-2H-1-benzopyran-7-ol  
**Synonyms:** 4',7-Dihydroxyisoflavan, (-)-Equol, 4',7-Isolavandiol  
**MF:** C<sub>15</sub>H<sub>14</sub>O<sub>3</sub>  
**FW:** 242.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 225, 283 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

(S)-Equol is supplied as a crystalline solid. A stock solution may be made by dissolving the (S)-equol in the solvent of choice, which should be purged with an inert gas. (S)-Equol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of (S)-equol in ethanol and DMSO is approximately 20 mg/ml and approximately 15 mg/ml in DMF.

(S)-Equol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (S)-equol should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. (S)-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.

### Description

(S)-Equol is an agonist of estrogen receptor  $\alpha$  (ER $\alpha$ ) and ER $\beta$  and an active metabolite of the polyketide isoflavone daidzein (Item No. 10005166).<sup>1,2</sup> It is formed from daidzein by gut microbiota.<sup>1</sup> (S)-Equol induces ER $\alpha$ - and ER $\beta$ -mediated gene transcription in HEC-1 cells expressing the human receptors in a reporter assay (EC<sub>50</sub>s = 85 and 65 nM, respectively).<sup>2</sup>

### References

1. Setchell, K.D.R., Clerici, C., Lephart, E.D., *et al.* S-equol, a potent ligand for estrogen receptor  $\beta$ , is the exclusive enantiomeric form of the soy isoflavone metabolite produced by human intestinal bacterial flora. *Am. J. Clin. Nutr.* **81(5)**, 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(6)**, 1559-1567 (2004).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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