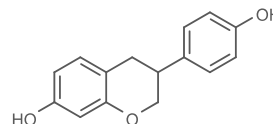


## (±)-Equol

### Chemical Properties

|                   |                                                          |
|-------------------|----------------------------------------------------------|
| CAS No. :         | 94105-90-5                                               |
| Formula:          | C <sub>15</sub> H <sub>14</sub> O <sub>3</sub>           |
| Molecular Weight: | 242.3                                                    |
| Appearance:       | no data available                                        |
| Storage:          | Powder: -20°C for 3 years   In solvent: -80°C for 1 year |



### Biological Description

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description                | (±)-Equol ((R,S)-Equol) is a non-steroidal estrogen produced from the metabolism of the isoflavonoid phytoestrogen daidzen by human intestinal microflora. The estrogen receptor (ER) agonist activity of the naturally occurring (S)-enantiomer (EC <sub>50</sub> = 85 and 65 nM for human ERα and ERβ, respectively) is similar to that of genistein but exceeds that of daidzein. (±)-Equol ((R,S)-Equol) preferentially binds ERβ (K <sub>i</sub> = 0.73 nM) and demonstrates approximately 9-fold lower affinity for ERα (K <sub>i</sub> = 6.41 nM). (±)-Equol ((R,S)-Equol) is also a potent antagonist of dihydrotestosterone, which has important implications for prostate cancer and other androgen-mediated pathologies. |
| Targets(IC <sub>50</sub> ) | Estrogen Receptor/ERR, Estrogen/progestogen Receptor, Drug Metabolite                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

### Solubility Information

|            |                                                                                                    |
|------------|----------------------------------------------------------------------------------------------------|
| Solubility | DMSO: 100 mg/mL (412.76 mM),<br>( $< 1$ mg/ml refers to the product slightly soluble or insoluble) |
|------------|----------------------------------------------------------------------------------------------------|

### Preparing Stock Solutions

|       | 1mg       | 5mg        | 10mg       |
|-------|-----------|------------|------------|
| 1 mM  | 4.1271 mL | 20.6356 mL | 41.2712 mL |
| 5 mM  | 0.8254 mL | 4.1271 mL  | 8.2542 mL  |
| 10 mM | 0.4127 mL | 2.0636 mL  | 4.1271 mL  |
| 50 mM | 0.0825 mL | 0.4127 mL  | 0.8254 mL  |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

### Reference

- Mahalingam S, Gao L, Gonnering M, Helferich W, et al. Toxicol Appl Pharmacol. 2016 Mar 15;295:47-55.  
 Hazim S, Curtis PJ, Schär MY, et al. Am J Clin Nutr. 2016 Mar;103(3):694-702.

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