

## Certificate of Analysis

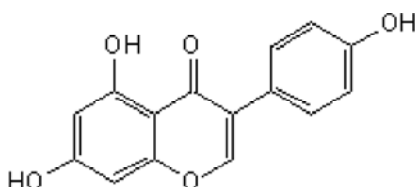
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**Product Name:** Genistein  
**CAS Number:** 446-72-0  
**IUPAC Name:** 5,7-Dihydroxy-3-(4-hydroxyphenyl)-4*H*-1-benzopyran-4-one

**Catalog No.:** 1110      **Batch No.:** 4  
**EC Number:** 207-174-9

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>15</sub>H<sub>10</sub>O<sub>5</sub>  
**Batch Molecular Weight:** 270.24  
**Physical Appearance:** Off White solid  
**Solubility:** DMSO to 100 mM  
**Storage:** Desiccate at -20°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows 98.9% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	66.67	3.73	
Found	66.58	4.01	

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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IUPAC Name: 5,7-Dihydroxy-3-(4-hydroxyphenyl)-4H-1-benzopyran-4-one

**Description:**

Genistein is a phytoestrogen with a wide range of biological actions. Genistein inhibits protein tyrosine kinases including epidermal growth factor receptor kinase, binds to PPAR $\gamma$  and estrogen receptors and acts as an agonist at GPER. Genistein inhibits aggregation and fibrilization of A $\beta$ <sub>42</sub> and amylin<sub>37</sub> (hiAPP). In Huntington's disease fibroblast cells, Genistein reduces intracellular mutant huntingtin (mHTT) aggregates and induces degradation of mHTT; in a cellular model of Huntington's disease, Genistein corrects the mutant phenotype through stimulation of autophagy.

**Physical and Chemical Properties:**

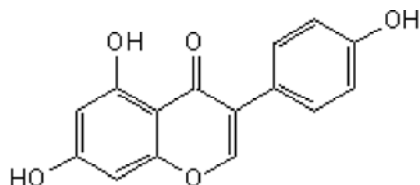
Batch Molecular Formula: C<sub>15</sub>H<sub>10</sub>O<sub>5</sub>

Batch Molecular Weight: 270.24

Physical Appearance: Off White solid

**Minimum Purity:**  $\geq$ 98%

**Batch Molecular Structure:**



**References:**

**Pierzynowska et al** (2019) Genistein induces degradation of mutant huntingtin in fibroblasts from Huntington's disease patients. *Metab.Brain Dis.* **34**. PMID: 30850940.

**Ren et al** (2018) Genistein: A Dual Inhibitor of Both Amyloid  $\beta$  and Human Islet Amylin Peptides. *ACS.Chem.Neurosci.* **9** 1215. PMID: 29432676 .

**Dang et al** (2003) Peroxisome proliferator-activated receptor  $\gamma$  (PPAR $\gamma$ ) as a molecular target for the soy phytoestrogen genistein. *J.Biol.Chem.* **278** 962. PMID: 12421816.

**Storage:** Desiccate at -20°C

**Solubility & Usage Info:**

DMSO to 100 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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