

## Certificate of Analysis

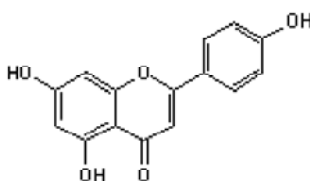
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**Product Name:** Apigenin  
**CAS Number:** 520-36-5  
**IUPAC Name:** 5,7-Dihydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one

**Catalog No.:** 1227      **Batch No.:** 1  
**EC Number:** 208-292-3

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>15</sub>H<sub>10</sub>O<sub>5</sub>.H<sub>2</sub>O  
**Batch Molecular Weight:** 288.2152  
**Physical Appearance:** Yellow solid  
**Solubility:** DMSO to 50 mM  
**Storage:** Desiccate at +4°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**Melting Point:** Between 274 - 276°C  
**HPLC:** Shows 97.1% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen	
Theoretical	62.5	4.2	0	0.00
Found	62.36	3.53	0	0.00

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

**bio-techne.com**  
 info@bio-techne.com  
 techsupport@bio-techne.com

**North America**  
 Tel: (800) 343 7475

**China**  
 info.cn@bio-techne.com  
 Tel: +86 (21) 52380373

**Europe Middle East Africa**  
 Tel: +44 (0)1235 529449

**Rest of World**  
[www.tocris.com/distributors](http://www.tocris.com/distributors)  
 Tel:+1 612 379 2956

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**Catalog No.:** 1227

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IUPAC Name: 5,7-Dihydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one

**Description:**

Protein kinase inhibitor. Suppresses tumor-promoting effects of TPA and exhibits antiproliferative activity in human breast cancer cells (IC<sub>50</sub> values are 59.44 and 31.15 μM at 24 and 72 hrs respectively). Activates both the intrinsic and extrinsic apoptotic pathways and displays anti-inflammatory, hypotensive, antispasmodic and antioxidant properties in vivo.

**Physical and Chemical Properties:**

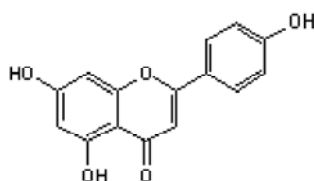
Batch Molecular Formula: C<sub>15</sub>H<sub>10</sub>O<sub>5</sub>.H<sub>2</sub>O

Batch Molecular Weight: 288.2152

Physical Appearance: Yellow solid

**Minimum Purity:** >97%

**Batch Molecular Structure:**



**Storage:** Desiccate at +4°C

**CAUTION** - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

**Solubility & Usage Info:**

DMSO to 50 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.

**References:**

**Choi et al** (2009) Apigenin induces apoptosis through a mitochondria/caspase-pathway in human breast cancer MDA-MB-453 cells. *J.Clin.Biochem.Nutr.* **44** 260. PMID: 19430615.

**Jin et al** (2009) Apigenin protects endothelium-dependent relaxation of rat aorta against oxidative stress. *Eur.J.Pharmacol.* **616** 200. PMID: 19549516.

**Lin et al** (1997) Suppression of protein kinase C and nuclear oncogene expression as possible molecular mechanisms of cancer chemoprevention by apigenin and curcumin. *J.Cell.Biochem.Suppl.* **28-29** 39. PMID: 9589348.

**Kuo and Yang** (1995) Reversion of v-H-ras-transformed NIH3T3 cells by apigenin through inhibiting mitogen activated protein kinase and its downstream oncogenes. *Biochem.Biophys.Res.Commun.* **212** 767. PMID: 7626110.

**Sato et al** (1994) Apigenin induces morphological differentiation and G2-M arrest in rat neuronal cells. *Biochem.Biophys.Res.Commun.* **204** 578. PMID: 7980517.

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Tel:+1 612 379 2956