

# PRODUCT INFORMATION



## Apigenin

Item No. 10010275

**CAS Registry No.:** 520-36-5  
**Formal Name:** 5,7-dihydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one

**Synonyms:** Chamomile, Flavone, NSC 83244, Versulin

**MF:** C<sub>15</sub>H<sub>10</sub>O<sub>5</sub>

**FW:** 270.2

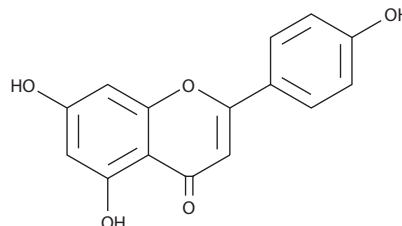
**Purity:** ≥98%

**UV/Vis.:** λ<sub>max</sub>: 212, 269, 334 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

Apigenin is supplied as a crystalline solid. A stock solution may be made by dissolving the apigenin in the solvent of choice. Apigenin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of apigenin in these solvents is approximately 0.3, 15, and 25 mg/ml.

Apigenin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, apigenin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Apigenin has a solubility of approximately 0.1 mg/ml in a 1:8 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Apigenin is a flavonoid compound found in many fruits and vegetables that selectively inhibits casein kinase 2 (CK2). Apigenin inhibits CK2 activity in the renal cortex with an IC<sub>50</sub> value of 30 μM to improve renal function in a rat model of glomerulonephritis.<sup>1</sup> CK2 inhibition by 20 μM apigenin decreases the degradation of IκBα and down-regulates NF-κB levels in WEHI-231 cells.<sup>2</sup> Apigenin at 5 μM is a potent inhibitor of the synthesis of the inflammatory mediators nitric oxide and prostaglandin E<sub>2</sub>, reducing inducible nitric oxide synthase (iNOS) and cyclooxygenase-2 (COX-2) expression by 56% and 64%, respectively, in the macrophage cell line J774A.1.<sup>3</sup>

### References

1. Yamada, M., Katsuma, S., Adachi, T., *et al.* Inhibition of protein kinase CK2 prevents the progression of glomerulonephritis. *Proc. Natl. Acad. Sci. USA* **102**(21), 7736-7741 (2005).
2. Shen, J., Channavajhala, P., Seldin, D.C., *et al.* Phosphorylation by the protein kinase CK2 promotes calpain-mediated degradation of IκBα.1. *J. Immunol.* **167**(9), 4919-4925 (2001).
3. Raso, G.M., Meli, R., Di Carlo, G., *et al.* Inhibition of inducible nitric oxide synthase and cyclooxygenase-2 expression by flavonoids in macrophage J774A.1. *Life Sci.* **68**(8), 921-931 (2001).

#### 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.

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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM