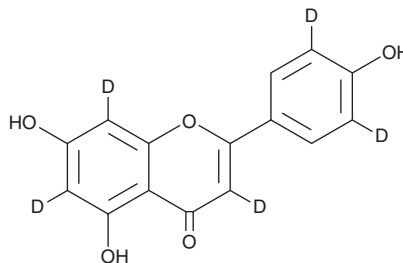


PRODUCT INFORMATION



Apigenin-d₅ Item No. 22106

CAS Registry No.: 263711-74-6
Formal Name: 5,7-dihydroxy-2-(4-hydroxyphenyl)-3,5-d₂-4H-1-benzopyran-4-one-3,6,8-d₃
Synonyms: [3,6,8,3',5'-d₅]-Apigenin, Chamomile-d₅, Flavone-d₅, Versulin-d₅
MF: C₁₅H₅D₅O₅
FW: 275.3
Chemical Purity: ≥98% (Apigenin)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Apigenin-d₅ contains five deuterium atoms at the 3, 6, 8, 3', and 5' positions. It is intended for use as an internal standard for the quantification of apigenin (Item No. 10010275) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Apigenin-d₅ is supplied as a solid. A stock solution may be made by dissolving the apigenin-d₅ in the solvent of choice. Apigenin-d₅ is soluble in organic solvents such as ethanol (hot) and DMSO.

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 IC₅₀ value of 30 μM to improve renal function in a rat model of glomerulonephritis.¹ CK2 inhibition by 20 μM apigenin decreases the degradation of IκBα and down-regulates NF-κB levels in WEHI-231 cells.² Apigenin at 5 μM is a potent inhibitor of the synthesis of the inflammatory mediators nitric oxide and prostaglandin E₂, reducing inducible nitric oxide synthase (iNOS) and cyclooxygenase-2 (COX-2) expression by 56% and 64%, respectively, in the macrophage cell line J774A.1.³

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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