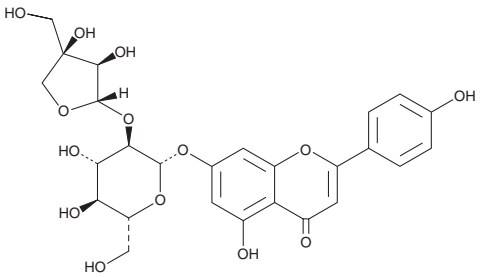
PRODUCT INFORMATION

Apiin

Item No. 34596

CAS Registry No.:	26544-34-3
Formal Name:	7-[(2-O-D-apio-β-D-furanosyl-β-D-glucopyranosyl)oxy]-5-hydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
Synonyms:	Apigenin 7-apisoylglucoside, Apigenin 7-O-apioglucoside
MF:	$C_{26}H_{28}O_{14}$
FW:	564.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 269, 338 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Apium graveolens*



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

Laboratory Procedures

Apiin is supplied as a solid. A stock solution may be made by dissolving the apiin in the solvent of choice, which should be purged with an inert gas. Apiin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of apiin in these solvents is approximately 30 mg/ml.

Apiin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, apiin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Apiin has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Apiin is a polyketide synthase-derived flavonoid glycoside that has been found in *A. graveolens* and has diverse biological activities.[1-4] It inhibits Aurora B kinase in a cell-free assay using the human enzyme (IC_{50} = 12.14 µM).[2] Apiin (10 and 50 µg/ml) inhibits LPS-induced increases in nitric oxide (NO) release and inducible nitric oxide synthase (iNOS) levels in J774.A1 macrophages.[3] It scavenges DPPH (Item No. 14805), superoxide, and hydroxyl radicals (IC_{50}s = 68, 390, and 48 µg/ml, respectively), as well as increases the levels of superoxide dismutase (SOD) and catalase in mouse serum, brain, heart, liver, and kidney when administered at a dose of 50 mg/kg.[4]

References

1. Cheung, V.W.N., Xue, B., Hernandez-Valladares, M., *et al.* Identification of polyketide inhibitors targeting 3-dehydroquinate dehydratase in the shikimate pathway of *Enterococcus faecalis*. *PLoS One* **9(7)**, e103598 (2014).
2. Jung, Y., Shin, S.Y., Yong, Y., *et al.* Plant-derived flavones as inhibitors of aurora B kinase and their quantitative structure-activity relationships. *Chem. Biol. Drug Des.* **85(5)**, 574-585 (2015).
3. Mencherini, T., Cau, A., Bianco, G., *et al.* An extract of *Apium graveolens* var. dulce leaves: Structure of the major constituent, apiin, and its anti-inflammatory properties. *J. Pharm. Pharmacol.* **59(6)**, 891-897 (2007).
4. Li, P., Jia, J., Zhang, D., *et al. In vitro* and *in vivo* antioxidant activities of a flavonoid isolated from celery (*Apium graveolens* L. var. dulce). *Food Funct.* **5(1)**, 50-56 (2014).

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