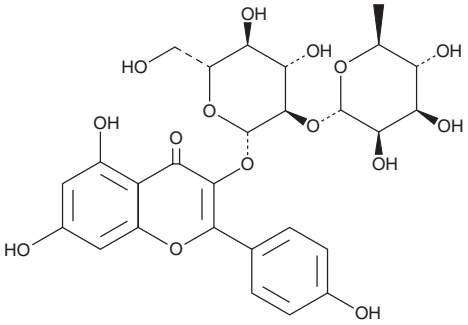
PRODUCT INFORMATION

Kaempferol 3-neohesperidoside

Item No. 34533

CAS Registry No.:	32602-81-6
Formal Name:	3-[[2-O-(6-deoxy-α-L-mannopyranosyl)-β-D-glucopyranosyl]oxy]-5,7-dihydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
Synonym:	Kaempferol 3-O-β-neohesperidoside
MF:	$C_{27}H_{30}O_{15}$
FW:	594.5
Purity:	≥95%
UV/Vis.:	λ_{max}: 267, 350 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Thesium chinense* Turcz



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

Laboratory Procedures

Kaempferol 3-neohesperidoside is supplied as a solid. A stock solution may be made by dissolving the kaempferol 3-neohesperidoside in the solvent of choice, which should be purged with an inert gas. Kaempferol 3-neohesperidoside is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of kaempferol 3-neohesperidoside in these solvents is approximately 1 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of kaempferol 3-neohesperidoside can be prepared by directly dissolving the solid in aqueous buffers. The solubility of kaempferol 3-neohesperidoside in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Kaempferol 3-neohesperidoside is a flavonoid that has been found in *D. calycinum* and has antioxidant and antidiabetic activities.[1-4] It scavenges DPPH (Item No. 14805) radicals in a cell-free assay (IC_{50} = 79.6 µg/ml).[1] Kaempferol 3-neohesperidoside (1 and 100 nM) increases glucose uptake in isolated rat soleus muscle.[2] It also increases glycogen synthesis in isolated rat soleus muscle, an effect that can be blocked by the PI3K inhibitor wortmannin (Item No. 10010591) and the MEK inhibitor PD 98059 (Item No. 10006726), when used at a concentration of 1 µM.[3] Kaempferol 3-neohesperidoside (100 mg/kg) reduces serum glucose levels in a rat model of diabetes induced by alloxan (Item No. 9002196).[4]

References

1. Gamez, E.J.C., Luyengi, L., Lee, S.K., *et al.* Antioxidant flavonoid glycosides from Daphniphyllum calycinum. *J. Nat. Prod.* **61(5)**, 706-708 (1998).
2. Zanatta, L., Rosso, Â., Folador, P., *et al.* Insulinomimetic effect of kaempferol 3-neohesperidoside on the rat soleus muscle. *J. Nat. Prod.* **71(4)**, 532-535 (2008).
3. Cazarolli, L.H., Folador, P., Pizzolatti, M.G., *et al.* Signaling pathways of kaempferol-3-neohesperidoside in glycogen synthesis in rat soleus muscle. *Biochimie* **91(7)**, 843-849 (2009).
4. Cazarolli, L.H., Zanatta, L., Jorge, A.P., *et al.* Follow-up studies on glycosylated flavonoids and their complexes with vanadium: Their anti-hyperglycemic potential role in diabetes. *Chem. Biol. Interact.* **163(3)**, 177-191 (2006).

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