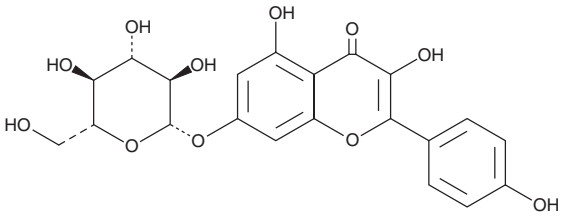
PRODUCT INFORMATION

Kaempferol 7-O-glucoside

Item No. 34347

CAS Registry No.:	16290-07-6
Formal Name:	7-(β-D-glucopyranosyloxy)-3,5-dihydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
Synonym:	Kaempferol 7-O-β-d-glucoside
MF:	$C_{21}H_{20}O_{11}$
FW:	448.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 229, 256, 268, 368 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Ginkgo biloba*



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

Laboratory Procedures

Kaempferol 7-O-glucoside is supplied as a solid. A stock solution may be made by dissolving the kaempferol 7-O-glucoside in the solvent of choice, which should be purged with an inert gas. Kaempferol 7-O-glucoside is soluble in DMSO.

Description

Kaempferol 7-O-glucoside is a flavonol glycoside that has been found in *C. tricuspidata* and *A. pilosa* and has diverse biological activities.[1-4] It scavenges DPPH (Item No. 14805) radicals (IC_{50} = 51.09 µM) and inhibits acetylcholinesterase (AChE) activity (IC_{50} = 63.94 µM) in cell-free assays.[1,2] Kaempferol 7-O-glucoside inhibits LPS-induced IL-1β, IL-6, and TNF-α production in mouse RAW 264.7 macrophages in a concentration-dependent manner.[3] It also inhibits the proliferation of human HeLa cervical, K562 leukemia, and A431 epidermoid carcinoma cells (EC_{50}s = 3.9, 3.9, and 14.8 µg/ml, respectively).[4]

References

1. Wang, J., Fang, X., Ge, L., *et al.* Antitumor, antioxidant and anti-inflammatory activities of kaempferol and its corresponding glycosides and the enzymatic preparation of kaempferol. *PLoS One* **13(5)**, e0197563 (2018).
2. Nguyen, D.H., Seo, U.M., Zhao, B.T., *et al.* Ellagitannin and flavonoid constituents from *Agrimonia pilosa* ledeb. with their protein tyrosine phosphatase and acetylcholinesterase inhibitory activities. *Bioorg. Chem.* **72**, 293-300 (2017).
3. Lee, S.-B., Shin, J.-S., Han, H.-S., *et al.* Kaempferol 7-O-*β*-D-glucoside isolated from the leaves of *Cudrania tricuspidata* inhibits LPS-induced expression of pro-inflammatory mediators through inactivation of NF-κB, AP-1, and JAK-STAT in RAW 264.7 macrophages. *Chem. Biol. Interact.* **284**, 101-111 (2018).
4. Xu, W., Liu, J., Li, C., *et al.* Kaempferol-7-O-β-*D*-glucoside (KG) isolated from *Smilax china* L. rhizome induces G_2/M phase arrest and apoptosis on HeLa cells in a p53-independent manner. *Cancer Lett.* **264(2)**, 229-240 (2008).

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