

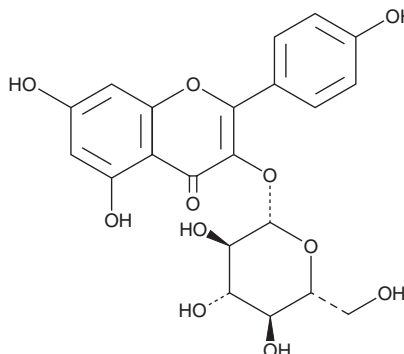
PRODUCT INFORMATION



Kaempferol-3-glucoside

Item No. 25060

CAS Registry No.: 480-10-4
Formal Name: 3-(β -D-glucopyranosyloxy)-5,7-dihydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
Synonyms: Astragalin, Kaempferol 3- β -D-glucopyranoside
MF: $C_{21}H_{20}O_{11}$
FW: 448.4
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 268, 352 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

Kaempferol-3-glucoside is supplied as a crystalline solid. A stock solution may be made by dissolving the kaempferol-3-glucoside in the solvent of choice, which should be purged with an inert gas. Kaempferol-3-glucoside is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of kaempferol-3-glucoside in these solvents is approximately 30 mg/ml.

Kaempferol-3-glucoside is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, kaempferol-3-glucoside should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Kaempferol-3-glucoside has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Kaempferol-3-glucoside is an orally bioavailable flavonoid that has been isolated from the leaves of *D. kaki* and *R. agrestis* and has anti-inflammatory activity.^{1,2} Kaempferol-3-glucoside (20-80 $\mu\text{g/ml}$) dose-dependently inhibits IL-1 β -stimulated nitric oxide and prostaglandin E_2 (PGE₂; Item No. 14010) production in patient-derived osteoarthritis chondrocytes, an effect that is blocked by the PPAR- γ inhibitor GW 9662 (Item No. 70785).² It also inhibits IL-1 β -stimulated expression of nitric oxide synthase (NOS) and COX-2 and activation of MAPK and NF- κ B signaling. Kaempferol-3-glucoside (1-20 μM) dose-dependently prevents the loss of E-cadherin, expression of vimentin, and production of collagen type-1 in hydrogen peroxide-exposed human bronchial epithelial cells *in vitro*.³ Kaempferol-3-glucoside (1.5 mg/kg, p.o.) inhibits ear swelling and the production of IL-2 and IL-4 as well as reduces serum IgE levels in a mouse model of atopic dermatitis.¹ Kaempferol-3-glucoside (10-20 mg/kg, p.o.) also reduces reactive oxygen species (ROS) production, collagen fiber deposition, and autophagosome formation in the epithelial lung tissue of ovalbumin-challenged mice.³

References

1. Kotani, M., Matsumoto, M., Fujita, A., et al. *J. Allergy Clin. Immunol.* **106**(1 Pt 1), 159-166 (2000).
2. Ma, Z., Piao, T., Wang, Y., et al. *Int. Immunopharmacol.* **25**(1), 83-87 (2015).
3. Cho, I.-H., Choi, Y.-J., Gong, J.-H., et al. *Respir. Res.* **16**:51, (2015).

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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