

PRODUCT INFORMATION



Quercetin-d₃ (hydrate)

Item No. 26418

Formal Name: 2-(4,5-dihydroxyphenyl-2,3,6-d₃)-3,5,7-trihydroxy-4H-1-benzopyran-4-one, hydrate

MF: C₁₅H₇D₃O₇ • XH₂O

FW: 305.3

Chemical Purity: ≥95% (Quercetin)

Deuterium

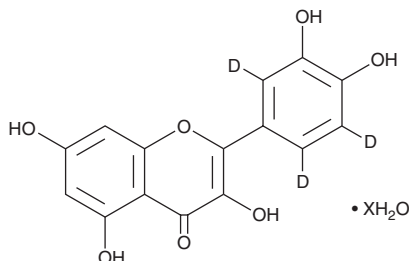
Incorporation: ≥99% deuterated forms (d₁-d₃); ≤1% d₀

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

Item Origin: Synthetic



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

Laboratory Procedures

Quercetin-d₃ (hydrate) is intended for use as an internal standard for the quantification of quercetin (Item No. 10005169) 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).

Quercetin-d₃ (hydrate) is supplied as a solid. A stock solution may be made by dissolving the quercetin-d₃ (hydrate) in the solvent of choice, which should be purged with an inert gas. Quercetin-d₃ (hydrate) is slightly soluble in DMSO and methanol.

Description

Quercetin is an abundant flavonoid that has been isolated from a variety of plants and has diverse biological activities, including antioxidant, anticancer, and anti-inflammatory properties.¹⁻³ Quercetin (5-100 mg/kg) reduces autophagy, decreases the levels of reactive oxygen species (ROS) and malondialdehyde (MDA) content, and increases total antioxidant capacity in the kidney in a mouse model of cadmium-induced autophagy.² It reduces tumor growth, induces apoptosis, and halts the cell cycle at the G₁ phase in an HL60 mouse xenograft model when administered at a dose of 120 mg/kg every four days.¹ Quercetin (30 μM) also inhibits histamine release from antigen-stimulated RBL-2H3 cells and decreases the expression of TNF-α, IL-1β, IL-6, and IL-8 induced by PMACI in HMC-1 cells.³

References

1. Calgarotto, A.K., Maso, V., Junior, G.C.F., *et al.* Antitumor activities of quercetin and green tea in xenografts of human leukemia HL60 cells. *Sci. Rep.* **8**(1), 3459 (2018).
2. Yuan, Y., Ma, S., Qi, Y., *et al.* Quercetin inhibited cadmium-induced autophagy in the mouse kidney via inhibition of oxidative stress. *J. Toxicol. Pathol.* **29**(4), 247-252 (2016).
3. Park, H.H., Lee, S., Son, H.Y., *et al.* Flavonoids inhibit histamine release and expression of proinflammatory cytokines in mast cells. *Arch. Pharm. Res.* **31**(10), 1303-1311 (2008).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM