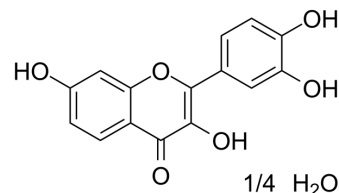


Fisetin quarterhydrate

Cat. No.:	HY-N0182A
Molecular Formula:	C ₁₅ H ₁₀ O ₆ ·1/4H ₂ O
Molecular Weight:	290.75
Target:	Sirtuin; PPAR; TNF Receptor
Pathway:	Cell Cycle/DNA Damage; Epigenetics; Vitamin D Related/Nuclear Receptor; Apoptosis
Storage:	4°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



BIOLOGICAL ACTIVITY

Description	Fisetin quarterhydrate is a natural flavonol found in many fruits and vegetables with various benefits, such as antioxidant, anticancer, neuroprotection effects.
IC₅₀ & Target	Sirtuin, PPAR, TNF-alpha ^{[1][2]}
In Vitro	<p>Fisetin quarterhydrate inhibits lipid accumulation and suppresses the expression of PPARγ in 3T3-L1 cells. Fisetin quarterhydrate suppresses early stages of preadipocyte differentiation, and induces expression of Sirt1. Fisetin quarterhydrate facilitates Sirt1-mediated deacetylation of PPARγ and FoxO1, and enhances the association of Sirt1 with the PPARγ promoter, leading to suppression of PPARγ transcriptional activity, thereby repressing adipogenesis^[1]. Fisetin quarterhydrate binds to tubulin and stabilizes microtubules with binding characteristics far superior than paclitaxel. Fisetin quarterhydrate treatment of human prostate cancer cells results in robust up-regulation of microtubule associated proteins (MAP)-2 and -4. Fisetin quarterhydrate significantly inhibits PCa cell proliferation, migration, and invasion. Nudc, a protein associated with microtubule motor dynein/dynactin complex that regulates microtubule dynamics, is inhibited with Fisetin quarterhydrate treatment^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
In Vivo	<p>Fisetin quarterhydrate treatment to UVB exposed mice results in decreased hyperplasia and reduces infiltration of inflammatory cells. Fisetin quarterhydrate treatment also reduces inflammatory mediators such as COX-2, PGE2 as well as its receptors (EP1- EP4), and MPO activity. Furthermore, Fisetin quarterhydrate reduces the level of inflammatory cytokines TNFα, IL-1β and IL-6 in UVB exposed skin. Fisetin quarterhydrate treatment also reduces cell proliferation markers as well as DNA damage as evidenced by increased expression of p53 and p21 proteins^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

CUSTOMER VALIDATION

- Acta Pharmacol Sin. 2023 May 24.
- Cells. 2022, 11(13), 1992.
- J Mol Liq. 23 November 2021, 118164.
- J Nutr Biochem. 2023 Sep 23;109452.

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- Aging (Albany NY). 2021 Nov 25;13(22):24753-24767.

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REFERENCES

- [1]. Kim SC, et al. Fisetin induces Sirt1 expression while inhibiting early adipogenesis in 3T3-L1 cells. Biochem Biophys Res Commun. 2015 Nov 27;467(4):638-44.
- [2]. Mukhtar E, et al. Dietary flavonoid fisetin binds to β -tubulin and disrupts microtubule dynamics in prostate cancer cells. Cancer Lett. 2015 Oct 28;367(2):173-83.
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Caution: Product has not been fully validated for medical applications. For research use only.

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