5-OH-HxMF

Cat. No.: HY-121711

CAS No.: 1176-88-1

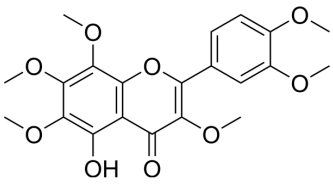
Molecular Formula: $C_{21}H_{22}O_9$

Molecular Weight: 418.39

Target: Apoptosis

Pathway: Apoptosis

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

5-OH-HxMF is a hydroxylated polymethoxyflavone that has anti-inflammatory, anticancer, neurotrophic and neuroprotective activities[1][2][3].

In Vitro

5-OH-HxMF (5-20 μM; 48 h) effectively induces PC12 neurite outgrowth accompanied with the expression of neuronal differentiation marker protein growth-associated protein-43(GAP-43)[1].

5-OH-HxMF (20 μM; 0-120 min) causes the enhancement of cyclic AMP response element binding protein (CREB) phosphorylation, c-fos gene expression and CRE-mediated transcription[1].

5-OH-HxMF significantly reduces the production of nitric oxide and prostaglandin E2 and downregulates inducible nitric oxide synthase (iNOS) and COX-2 expression in lipopolysaccharide (LPS)-stimulated RAW 264.7 cells. 5-OH-HxMF inhibits the release of pro-inflammatory cytokines, such as tumor necrosis factor-α and IL-1β, and decreases the transcriptional levels.

5-OH-HxMF significantly inhibits the LPS-induced NF-κB translocation from the cytosol to the nucleus, which is associated with the abrogation of inhibitory IκBα degradation and subsequent decreases in nuclear p65 levels[2].

5-OH-HxMF inhibits cell growth and induces apoptosis in human leukemia cells[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	PC12 cells
Concentration:	5 μM, 10 μM, 20 μM
Incubation Time:	48 h
Result:	Significantly evoked a dose-dependent increase on neurite outgrowth.

Western Blot Analysis[1]

Cell Line:	PC12 cells
Concentration:	5 μM, 10 μM, 20 μM
Incubation Time:	24 h
Result:	Promoted GAP-43 expression in PC12 cells.

Western Blot Analysis[1]

Cell Line:	PC12 cells
Concentration:	20 μM
Incubation Time:	0 min, 30 min, 60 min or 120 min
Result:	Stimulated phosphorylation of CREB in PC12 cells.

In Vivo

5-OH-HxMF (topically treated; twice a week; for 20 weeks; 1 and 3 μmol in 200 μL acetone) is an effective antitumor agent and its inhibitory effect is through the down-regulation of inflammatory iNOS and COX-2 gene expression in mouse skin[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female ICR mice treated with 12-O-tetradecanoylphorbol-13-acetate (TPA)[3].
Dosage:	1 and 3 μmol in 200 μL acetone
Administration:	Topically treated; twice a week; for 20 weeks
Result:	Significantly inhibited TPA-induced mouse skin inflammation by decreasing inflammatory parameters.

REFERENCES

[1]. Hui-Chi Lai, et al. Neurotrophic effect of citrus 5-hydroxy-3,6,7,8,3',4'-hexamethoxyflavone: promotion of neurite outgrowth via cAMP/PKA/CREB pathway in PC12 cells. PLoS One. 2011;6(11):e28280.

[2]. Min Jeong Kim, et al. Anti-inflammatory effects of 5-hydroxy-3,6,7,8,3',4'-hexamethoxyflavone via NF-κB inactivation in lipopolysaccharide-stimulated RAW 264.7 macrophage. Mol Med Rep. 2014 Apr;9(4):1197-203.

[3]. Ching-Shu Lai, et al. Inhibitory effect of citrus 5-hydroxy-3,6,7,8,3',4'-hexamethoxyflavone on 12-O-tetradecanoylphorbol 13-acetate-induced skin inflammation and tumor promotion in mice. Carcinogenesis. 2007 Dec;28(12):2581-8.

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