Avenanthramide-C methyl ester

Cat. No.: HY-138284

CAS No.: 955382-52-2

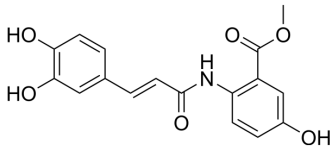
Molecular Formula: $C_{17}H_{15}NO_6$

Molecular Weight: 329.3

Target: NF-κB

Pathway: NF-κB

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



BIOLOGICAL ACTIVITY

Description

Avenanthramide-C methyl ester is an anti-inflammatory agent and NF-κB inhibitor that inhibits the secretion of pro-inflammatory factors. Avenanthramide-C methyl ester inhibits NF-κB activation by inhibiting IKK and IκB phosphorylation and inhibiting proteasome activity[1].

In Vitro

Avenanthramide-C methyl ester dose-dependently reduces mRNA expression and secretion of IL-6, IL-8, and MCP-1[1].
Inhibits IL-1β and TNFα-stimulated NF-κB activation[1].
Inhibits NFκB-dependent reporter gene expression activated by TNFR-associated factors 2 and 6 (TRAF2, TRAF6) and NFκB-inducing kinase (NIK)[1].
Avenanthramide-C methyl ester also dose-dependently reduces the phosphorylation levels of IκB kinase (IKK) and IκB and prevents IκB degradation as measured by Western blotting[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	WB HAEC and HUVEC cells
Concentration:	1, 10, 40, and 100 μM
Incubation Time:	24 h
Result:	Inhibited NF-κB p50 and p65 DNA binding activity of nuclear. Suppresseed IL-1β-stimulated secretion of IL-6, IL-8, and MCP-1 by HAEC in a concentration-dependent manner. Inhibited the phosphorylation of IKKα/IKKβ and IκB and degradation of IκB induced by IL-1 β.

RT-PCR[1]

Cell Line:	WB HAEC and HUVEC cells
Concentration:	40, and 100 μM
Incubation Time:	24 h
Result:	Suppressed IL-1β-stimulated mRNA expression of IL-6, IL-8, and MCP-1 by HAEC in a concentration-dependent manner.

REFERENCES

[1]. Guo W, et al. Avenanthramides, polyphenols from oats, inhibit IL-1beta-induced NF-kappaB activation in endothelial cells. Free Radic Biol Med. 2008 Feb 1;44(3):415-29.

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