Web: www.taiclone.com
Tel: +886-2-2735-9682
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Biochanin A

Catalog No: tcsc3082

Available Sizes

Size: 200mg

Size: 500mg

Specifications

CAS No:
491-80-5

Formula:
$C_{16}H_{12}O_5$

Pathway:
Neuronal Signaling;Metabolic Enzyme/Protease

Target:
FAAH;FAAH

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 51 mg/mL (179.41 mM)

Alternative Names:
4-Methylgenistein;Olmelin

Observed Molecular Weight:
284.26

Product Description

Biochanin A is a naturally occurring fatty acid amide hydrolase (**FAAH**) inhibitor, which inhibits FAAH with **IC_{50}**s of 1.8, 1.4 and 2.4

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μM for mouse, rat, and human FAAH, respectively.

IC50 & Target: IC50: 1.8 μM (mouse FAAH), 1.4 μM (rat FAAH), 2.4 μM (human FAAH)[1]

In Vitro: Biochanin A inhibits the hydrolysis of 0.5 μM AEA by mouse, rat and human FAAH with IC_{50} s of 1.8, 1.4 and 2.4 μM respectively. FAAH is inhibited by Biochanin A with a pIC_{50} value of 6.21±0.02, corresponding to an IC_{50} value of 0.62 μM. Biochanin A produces significant inhibition of the URB597-sensitive tritium retention at high nanomolar-low micromolar concentrations. Experiments are run with human FAAH and 0.5 μM [^{3}H]AEA with assay conditions giving these higher utilization rates, the activity is still inhibited by Biochanin A, Genistein, Formononetin and Daidzein in the low micromolar range (IC_{50}s of 6.0, 8.4, 12 and 30 μM, respectively)[1].

In Vivo: Biochanin A is tested at doses of 30, 100 and 300 μg. The highest dose also reduced formalin-induced ERK phosphorylation in a manner antagonized by AM251. Thus, Biochanin A behaved like URB597 after local administration to the paw. In anaesthetized mice, URB597 (30 μg i.pl.) and Biochanin A (100 μg i.pl.) both inhibit the spinal phosphorylation of extracellular signal-regulated kinase produced by the intraplantar injection of formalin. The effects of both compounds are significantly reduced by the CB1 receptor antagonist/inverse agonist AM251 (30 μg i.pl.). Biochanin A (15 mg/k i.v.) does not increase brain AEA concentrations, but produces a modest potentiation of the effects of 10 mg/kg i.v. AEA in the tetrad test. Biochanin A (15 mg/kg i.v.) is without effects on its own, but significantly potentiates the effects of AEA (10 mg/kg i.v.)[1].