Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Apamin

Catalog No: tcsc7096

Available Sizes

Size: 500ug

Size: 1mg

Size: 500µg

Specifications

CAS No:
24345-16-2

Formula:
$C_{79}H_{131}N_{31}O_{24}S_4$

Pathway:
Membrane Transporter/Ion Channel

Target:
Potassium Channel

Purity / Grade:
>98%

Solubility:
10 mM in H2O

Alternative Names:
Apamin (reduced), cyclic (1→11),(3→15)-bis(disulfide);Apamine

Observed Molecular Weight:
2027.34

Product Description

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Apamin, an 18 amino acid peptide neurotoxin found in apitoxin (bee venom), is known to block Ca^{2+}-activated **K^+ channel**s and prevent carbon tetrachloride-induced liver fibrosis.

IC50 & Target: K^+ channel[1]

In Vitro: Apamin is an 18 amino acid peptide neurotoxin found in apitoxin (bee venom). It has long been known as a specifically selective blocker of Ca^{2+}-activated K^+ (SK) channels. Apamin inhibits liver fibrosis in a 3,5-diethoxycarbonyl-1,4-dihydrocollidine (DDC)-induced mouse model as determined by hematoxylin and eosin staining. Apamin treatment attenuates inflammatory cytokine expression, including IL-6, IFN-γ, TNF-α and IL-1β compared with expression levels in the DDC-fed group[1]. Apamin is an 18 amino acid peptide neurotoxin found in apitoxin (bee venom). Apamin, a neurotoxin extracted from bee venom, specifically binds to a particular class of Ca^{2+}-activated K^+ channels which are involved in the slow afterhyperpolarization (S-AHP) that follows action potentials in many excitable cell[2].

In Vivo: To investigate the anti-fibrotic effect of Apamin on ECM deposition in the DDC-fed mice, Liver fibrosis induced by DDC is confirmed by induction of fibrogenic genes, FSP-1, α-smooth muscle actin (α-SMA) and collagen I expression. Expression of α-SMA is strongly expressed in the myofibroblasts and HSCs around the proliferated bile duct in the DDC-fed group and clearly with the Apamin treatment. Moreover, expression of collagen I in the DDC-fed group is significantly increased, especially in the portal tracts[1]
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