Web: www.taiclone.com
Tel: +886-2-2735-9682
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Methyllycaconitine citrate

Catalog No: tcsc0021211

Available Sizes

Size: 5mg

Size: 10mg

Size: 25mg

Size: 50mg

Specifications

CAS No:
112825-05-5

Formula:
$C_{43}H_{58}N_2O_{17}$

Pathway:
Neuronal Signaling;Membrane Transporter/Ion Channel

Target:
nAChR;nAChR

Purity / Grade:
>98%

Solubility:
DMSO : 250 mg/mL (285.74 mM; Need ultrasonic and warming); H2O : 2.18 mg/mL (2.49 mM; Need ultrasonic and warming)

Alternative Names:
MLA

Observed Molecular Weight:
874.92

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Product Description

Methyllycaconitine citrate is a specific antagonist of **α7 neuronal nicotinic acetylcholine receptor** (**α7nAChR**).

IC50 & Target: α7nAChR[1]

In Vitro: Pretreatment with 5 and 10 μM Methyllycaconitine citrate (MLA) inhibits the decreased cell viability induced by $A\beta_{25-35}$. Cell viability does not decrease after exposure to Methyllycaconitine citrate (2.5, 5, 10, 20 μM). $A\beta_{25-35}$ treatment increases LC3-II levels, which is inhibited by administration of Methyllycaconitine citrate. Methyllycaconitine citrate also inhibits Aβ-induced autophagosome accumulation in SH-SY5Y cells. Flow cytometry also demonstrates decreased MDC-labeled vacuoles with Methyllycaconitine citrate treatment[1].

In Vivo: Methyllycaconitine citrate (MLA) (6 mg/kg) given alone intraperitoneally does not cause climbing behavior when compare with the saline group. Pretreatment with Methyllycaconitine citrate significantly inhibits methamphetamine (METH)-induced climbing behavior, by about 50%. Methyllycaconitine citrate does not modify either basal locomotor activity or METH-induced hyperlocomotion. The METH-induced depletion of dopamine neuron terminals is attenuated in mice pretreated with Methyllycaconitine citrate (250±43 fmol/mg, n=7). A direct effect of Methyllycaconitine citrate on body temperature is ruled out because Methyllycaconitine citrate does not affect basal body temperature (37.0±0.5°C, n=5) or reduce the METH-induced hyperthermia (38.2±0.4°C, n=6, MLA+METH group, n.s. versus METH group)[1].