



Methyllycaconitine citrate

Catalog No: tcsc0021211

Available Sizes
Size: 5mg
Size: 10mg
Size: 25mg
Size: 50mg
Specifications
CAS No: 112825-05-5
Formula: $C_{43}^{H}_{58}^{N}_{2}^{O}_{17}$
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





Product Description

Methyllycaconitine citrate is a specific antagonist of $\alpha 7$ neuronal nicotinic acetylcholine receptor ($\alpha 7$ nAChR).

IC50 & Target: α7nAChR^[1]

In Vitro: Pretreatment with 5 and 10 μ M Methyllycaconitine citrate (MLA) inhibits the decreased cell viability induced by A β_{25-35} . Cell viability does not decrease after exposure to Methyllycaconitine citrate (2.5, 5, 10, 20 μ M). A β_{25-35} treatment increases LC3-II levels, which is inhibited by administration of Methyllycaconitine citrate. Methyllycaconitine citrate also inhibits A β -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].

All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!