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

Tetrandrine

Catalog No: tcsc0007782

Available Sizes

Size: 100mg

Size: 250mg

Specifications

CAS No:
518-34-3

Formula:
$C_{38}H_{42}N_2O_6$

Pathway:
Membrane Transporter/Ion Channel;Membrane Transporter/Ion Channel

Target:
Calcium Channel;Potassium Channel

Purity / Grade:
>98%

Solubility:
DMSO : 5 mg/mL (8.03 mM; Need ultrasonic and warming)

Alternative Names:
NSC-77037□d-Tetrandrine

Observed Molecular Weight:
622.75

Product Description

Tetrandrine (NSC-77037) is a bis-benzyl-isoquinoline alkaloid, which inhibits voltage-gated **Ca^{2+} current** (ICa) and Ca^{2+}-activated **K^+ current**.

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IC50 & Target: Ca^{2+} current[1]

K^+ current[1]

In Vitro: The effects of Tetrandrine (NSC-77037), a bis-benzyl-isoquinoline alkaloid, on voltage-gated Ca^{2+} currents (ICa) and on Ca^{2+}-activated K^+ current (IK(Ca)) and channels in isolated nerve terminals of the rat neurohypophysis are investigated using patch-clamp techniques. The non-inactivating component of ICa is inhibited by external Tetrandrine (NSC-77037) in a voltage- and dose-dependent manner, with an IC_{50}=10.1μM. Tetrandrine (NSC-77037) decreases the channel-open probability, within bursts, with an IC_{50}=0.21 μM[1]. To evaluate the effects of Tetrandrine on HCC cells, Huh7, HCCLM9 and Hep3B cells are treated with 0 (DMSO), 0.5, 1, 2 or 4 μM of Tetrandrine for 24 h. The cell proliferation assay indicates that Tetrandrine exhibits almost no effect on the inhibition of HCC cell proliferation at 0.5-2 μM. However, Tetrandrine (NSC-77037) inhibits HCC cell migration in a dose-dependent manner. Furthermore, a wound-healing and transwell assay shows that 2 μM Tetrandrine significantly inhibits HCC cell migration and invasion [2].

In Vivo: To evaluate the effect of Tetrandrine (NSC-77037) on the inhibition of tumor metastasis in vivo, HCCLM9 subcutaneous tumor xenograft models is established with athymic nude mice. When the tumor volume reach approximately 50 mm^3, nude mice are orally administered vehicle or Tetrandrine (NSC-77037) (30 mg/kg) every other day for 37 days. Tetrandrine (NSC-77037) treatment inhibits tumor growth by reducing the tumor volume and weight[2].