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

Matrine

Catalog No: tcsc1601

Available Sizes

Size: 100mg

Size: 200mg

Size: 500mg

Specifications

CAS No:
519-02-8

Formula:
$C_{15}H_{24}N_2O$

Pathway:
GPCR/G Protein;Neuronal Signaling;Autophagy;Autophagy

Target:
Opioid Receptor;Opioid Receptor;Autophagy;Mitophagy

Purity / Grade:
>98%

Solubility:
10 mM in DMSO

Alternative Names:
Matridin-15-one; Vegard; α-Matrine

Observed Molecular Weight:
248.36

Product Description

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Matrine(Sophocarpidine; α-Matrine) is an alkaloid found in plants from the Sophora genus. It has a variety of pharmacological effects, including anti-cancer effects, and action as a kappa opioid receptor and u-receptor agonist.

IC50 Value: 540 μg/ml (inhibit gastric cancer cell line MNK45, MTT) [1]

Target: u-receptor/kappa opioid

in vitro: MTT assay showed that the matrine was able to inhibit gastric cancer cell line MNK45 in a dose-dependent manner. The concentration required for 50% inhibition (IC50) was found to be 540 μg/ml. This anti-tumor function was achieved through modulation of the NF-κB, XIAP, CIAP, and p-ERK proteins expression in cell line MNK45. Matrine induces apoptosis of human NSCLC cells with anti-apoptotic factors inhibited and dependent on caspase activity. In addition, we found that matrine increases the phosphorylation of p38 but not its total protein, and inhibition of the p38 pathway with SB202190 partially prevents matrine-induced apoptosis. Furthermore, matrine generates reactive oxygen species (ROS) in a dose- and time-dependent manner, which is reversed by pretreatment with N-acetyl-L-cysteine (NAC) [2].

in vivo: Oral administration of matrine (200, 100 and 50 mg/kg) significantly attenuated isoproterenol-induced cardiac necrosis and left ventricular dysfunction [3]. high dose of matrine significantly reduced the mortality rate of mice with LPS administration. Treatment with matrine improved LPS-induced lung histopathologic changes, alleviated pulmonary edema and lung vascular leak, inhibited MPO and MDA activity,and reduced the production of inflammatory mediators including TNF-α, IL-6 and HMGB1 [4].

Toxicity: N/A

Clinical trial: N/A