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

AR-A014418

Catalog No: tcsc1469

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Specifications

CAS No:
487021-52-3

Formula:
$C_{12}H_{12}N_4O_4S$

Pathway:
Stem Cell/Wnt;PI3K/Akt/mTOR

Target:
GSK-3;GSK-3

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 100 mg/mL (324.35 mM)

Alternative Names:
AR 0133418;GSK 3β inhibitor VIII;AR 014418

Observed Molecular Weight:
308.31

Product Description

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

AR-A014418 is a potent, selective and ATP-competitive **GSK3β** inhibitor with an **IC_{50}** of 104 nM.

IC50 & Target: IC50: 104 nM (GSK3β)[1]

In Vitro: AR-A014418 blocks the phosphorylation of tau at a GSK3-specific site (Ser-396) in 3T3 fibroblasts expressing human four-repeat tau protein, with an IC_{50} of 2.7 μM, and protects cultured N2A cells from death cuased by PI3K/PKB pathway blockage. AR-A014418 also shows inhibitory effect on neurodegeneration mediated by beta-amyloid peptide in hippocampal slices[1]. AR-A014418 decreases neuroendocrine markers and suppresses neuroblastoma cell growth in NGP and SH-5Y-SY cells[2].

In Vivo: AR-A014418 (0-4 mg/kg, i.p.) delays the onset of symptoms, enhances motor activity, blocks disease progression, and postpons the endpoint of the disease in ALS mouse model with the G93A mutant human SOD1[3]. Furthermore, AR-A014418 suppresses acetic acid- and formalin-induced nociception in mice via modulating NMDA and metabotropic receptor signaling as well as TNF-α and IL-1β transmission in the spinal cord[4].