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

CHIR-98014

Catalog No: tcsc3122

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Specifications

CAS No:
252935-94-7

Formula:
$C_{20}H_{17}Cl_2N_9O_2$

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

Target:
GSK-3;GSK-3

Purity / Grade:
>98%

Solubility:
DMSO : 11 mg/mL (22.62 mM; Need ultrasonic and warming)

Observed Molecular Weight:
486.31

Product Description

CHIR-98014 is a potent, cell-permeable **GSK-3** inhibitor with **IC_{50}**s of 0.65 and 0.58 nM for **GSK-3α** and **GSK-3β**, respectively; it shows less potent activities against cdc2 and erk2.

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IC50 & Target: IC50: 0.65 nM (GSK-3α), 0.58 nM (GSK-3β)[1]

In Vitro: CHIR 98014 inhibits human GSK-3β with K_i value of 0.87 nM. CHIR 98014 causes GS stimulation in CHO-IR cells and rat hepatocytes, with EC_{50}s of 106 nM and 107 nM, respectively[1]. CHIR-98014 (1 μM) reduces the viability of ES-CCE cells by 52%, with IC_{50} of 1.1 μM. Moreover, CHIR-98014 in combination with CHIR-99021 results in a significant activation of the Wnt/beta-catenin pathway in ES-D3 cells. In CHIR-98014 treated cells, the T gene expression is induced up to 2,500-fold. CHIR-98014 (1 μM) also yields around 50% Brachyury-positive cells, with EC_{50} of 0.32 μM[2]. CHIR98014 (10 μM) prevents loss of neurites caused by 20 μM PrP1-30 in cortical and hippocampal neurons, and substantially decreases the amount of dead cells[3].

In Vivo: CHIR 98014 (30 mg/kg, i.p.) exhibits a significant reduction in fasting hyperglycemia within 4 h of treatment and shows improved glucose disposal during an ipGTT in markedly diabetic and insulin-resistant db/db mice[1].