

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

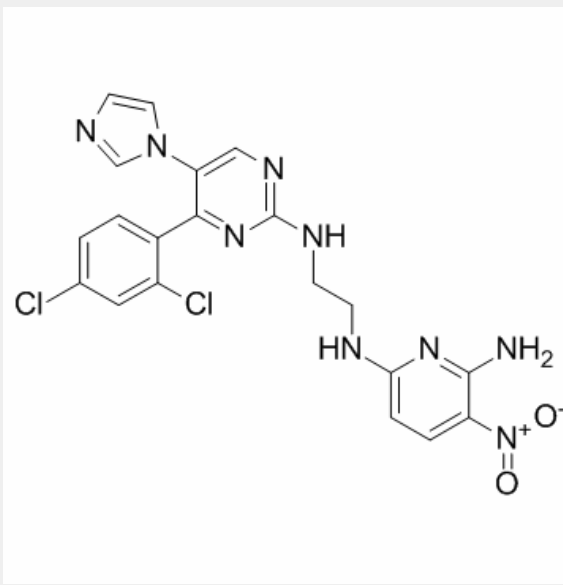
Product Description

CHIR-98014 is a potent, cell-permeable **GSK-3** inhibitor with **IC₅₀**s of 0.65 and 0.58 nM for **GSK-3α** and **GSK-3β**, respectively; it shows less potent activities against cdc2 and erk2.

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

In Vitro: CHIR 98014 inhibits human GSK-3 β with K_i value of 0.87 nM. CHIR 98014 causes GS stimulation in CHO-IR cells and rat hepatocytes, with EC₅₀s of 106 nM and 107 nM, respectively^[1]. CHIR-98014 (1 μ M) reduces the viability of ES-CCE cells by 52%, with IC₅₀ of 1.1 μ M. 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 μ M) also yields around 50% Brachyury-positive cells, with EC₅₀ of 0.32 μ M^[2]. CHIR98014 (10 μ M) prevents loss of neurites caused by 20 μ M 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].



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