

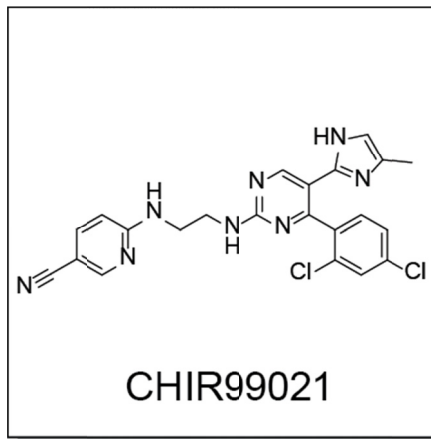


Product Specification Sheet

Product Name: CHIR99021
Catalog Number: C2447-2 (powder)
C2447-2s (10 mM in DMSO)
Package Size: 2 mg

Technical information:

Chemical Formula: C₂₂H₁₈Cl₂N₈
CAS #: 252917-06-9
Molecular Weight: 465.34
Purity: >98%
Formulation: Pale solid
Solubility: Soluble in DMSO up to 100 mM
Chemical Name: 6-((2-((4-(2,4-Dichlorophenyl)-5-(4-methyl-1H-imidazol-2-yl)pyrimidin-2-yl)amino)ethyl)amino)nicotinonitrile
Storage: Store solid powder at 4°C desiccated;
Store DMSO solution at -20°C.



- Handling:**
- For C2447-2 (powder), add 430 µL of DMSO to make 10 mM solution.
 - For C2447-2s, before open the vial, centrifuge the vial at 500rpm x 1 min in a 50 mL conical tube to ensure full recovery of sample.

Biological Activity: CHIR99021 is the most selective inhibitor of glycogen synthase kinase 3β (GSK3β, IC₅₀ 7nM) reported so far and it does not inhibit cyclin-dependent kinases (CDKs). CHIR99021 has been shown in long term expansion of murine embryonic stem cells in conjunction with MEK/MAPK inhibitor PD184352 and fibroblast growth factor receptor (FGFR) inhibitor SU5402.

- Reference:**
1. Ring D et al. (2003). Selective Glycogen Synthase Kinase 3 Inhibitors Potentiate Insulin Activation of Glucose Transport and Utilization In Vitro and In Vivo. *Diabetes*. 52: 3, 588-595.
 2. Finley D et al. (2004). Glycogen Synthase Kinase-3 regulates IGF1BP-1 gene transcription through the Thymine-rich Insulin Response Element. *BMC Mol. Biol.* 5:15.
 3. Ying Q. et al. (2008) The ground state of embryonic stem cell self renewal. *Nature*. 453: 519-523.

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