

Store at
-20°C**CHIR-99021****#54290**

5 mg


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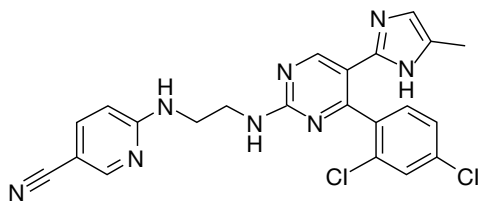
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New 04/20

For Research Use Only. Not For Use In Diagnostic Procedures.

Background: CHIR-99021, also known as CT-99021, is a potent and selective inhibitor of glycogen synthase kinase-3 β (GSK-3 β) and GSK-3 α with IC₅₀ values of 6.7 and 10 nM, respectively. This small compound has been shown to have >500-fold selectivity for GSK-3 when tested against 20 different protein kinases (1). Studies have shown that treating isolated rat islets with CHIR-99021 can increase beta cell replication 2-3-fold, making this an important compound when studying type 1 and type 2 diabetes (2).

Molecular Formula: C₂₂H₁₈Cl₂N₈

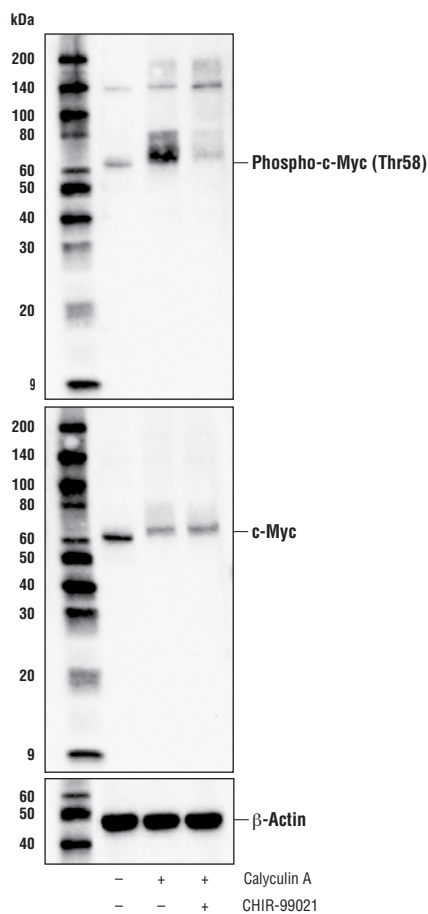


Molecular Weight: 465.3 g/mol

Purity: >98%

CAS: 252917-06-9

Solubility: Soluble in DMSO at 25 mg/ml with slight warming.



Western blot analysis of extracts from 293 cells, untreated (-) or treated with Calyculin A #9902 (50 nM, 1 hr, +) with or without pretreating the cells with CHIR-99021 (10 μ M, 1 hr, +), using Phospho-c-Myc (Thr58) (E4Z2K) Rabbit mAb #46650 (upper), c-Myc (E5Q6W) Rabbit mAb #18583 (middle), or β -Actin (D6A8) Rabbit mAb #8457 (lower).

Storage: Store lyophilized at -20°C, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, store at -20°C and use within 3 months to prevent loss of potency. *Aliquot to avoid multiple freeze/thaw cycles.*

Directions for Use: CHIR-99021 is supplied as a lyophilized powder. For a 10 mM stock, reconstitute 5 mg of powder in 1.07 ml of DMSO. Working concentrations and length of treatment can vary depending on the desired effect.

Background References:

- (1) Ring, D.B. et al. (2003) *Diabetes* 52, 588-95.
- (2) Mussmann, R. et al. (2007) *J Biol Chem* 282, 12030-7.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.