

# Certificate of Analysis

**www.tocris.com**

**Product Name:** CHIR 99021 in solution

**Catalog No.:** 8170

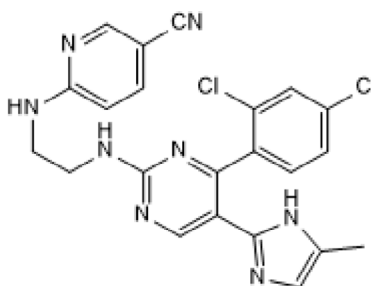
**Batch No.:** 2

CAS Number: 252917-06-9

IUPAC Name: 6-[[2-[[4-(2,4-Dichlorophenyl)-5-(5-methyl-1*H*-imidazol-2-yl)-2-pyrimidinyl]amino]ethyl]amino]-3-pyridinecarbonitrile

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>22</sub>H<sub>18</sub>Cl<sub>2</sub>N<sub>8</sub>  
**Batch Molecular Weight:** 465.34  
**Physical Appearance:** Colourless liquid  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 99.6% purity

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

**bio-techne.com**  
info@bio-techne.com  
techsupport@bio-techne.com

**North America**  
Tel: (800) 343 7475

**China**  
info.cn@bio-techne.com  
Tel: +86 (21) 52380373

**Europe Middle East Africa**  
Tel: +44 (0)1235 529449

**Rest of World**  
www.tocris.com/distributors  
Tel: +1 612 379 2956

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**Description:**

CHIR 99021 in solution is a convenient and ready-to-use 10 mM sterile-filtered solution of CHIR 99021 (Cat. No. 4423) pre-dissolved in DMSO. A potent and highly selective inhibitor of glycogen synthase kinase 3 (GSK-3) (IC<sub>50</sub> values are 6.7 and 10 nM for GSK-3β and GSK-3α respectively). Acts as Wnt activator. In combination with the irreversible inhibitor of LSD1, Tranylcypromine (Cat. No. 3852), CHIR 99021 enables reprogramming of mouse embryonic fibroblasts into iPSCs. Enhances mouse and human ESC self-renewal when used in combination with PD 0325901 (Cat. No. 4192); promotes differentiation of hPSCs in cardiomyocytes and allows fo... Please see product specific page on [www.tocris.com](http://www.tocris.com) for full description.

**Physical and Chemical Properties:**

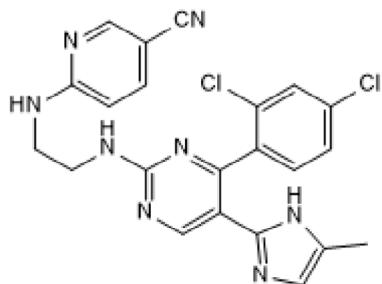
Batch Molecular Formula: C<sub>22</sub>H<sub>18</sub>Cl<sub>2</sub>N<sub>8</sub>

Batch Molecular Weight: 465.34

Physical Appearance: Pale yellow liquid

**Minimum Purity:** ≥97%

**Batch Molecular Structure:**



**References:**

**Ye *et al*** (2012) Pleiotropy of glycogen synthase kinase-3 inhibition by CHIR99021 promotes self-renewal of embryonic stem cells from refractory mouse strains. *PLoS One* **7** e35892. PMID: 22540008.

**Solubility & Usage Info:**

DMSO (supplied pre-dissolved at a concentration of 10mM)

This product is supplied as a 10mM sterile-filtered solution in DMSO. Standard retail vials are 6mg of CHIR 99021 in at least 1.2ml of DMSO.

**Stability and Storage Advice:**

For long-term storage, it is recommended to store this product at -20°C or below, away from light. The product can be stored for up to 6 months from date of receipt.

We recommend that stock solutions are stored in single-use aliquots in tightly sealed vials at -20°C, away from light.

The product can also be stored for up to 4 weeks at +4°C away from light.

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