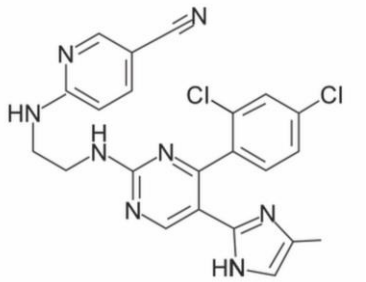
TECHNICAL DATA SHEET



CHIR99021

Catalog Number: ST10004

Size	10 mg
Description	CHIR99021 is the most widely used, potent and selective inhibitor of glycogen synthase kinase 3 (GSK-3), inhibiting GSK-3β (IC_{50} = 6.7 nM) and GSK-3α (IC_{50} = 10 nM). It exhibits greater than 500-fold selectivity for GSK-3 over closely related kinases. CHIR99021 has been shown to enhance the reprogramming of murine and human somatic cells into iPSCs, potently promote expansion of embryonic stem cells and tissue-specific adult stem cells, and induce differentiation of human ESCs/iPSCs toward neural or mesendoderm lineages under appropriate conditions.
Molecular Weight	465.34
Molecular Formula	$C_{22}H_{18}Cl_2N_8$
Chemical Name	6-[2-[4-(2,4-Dichlorophenyl)-5-(4-methyl-1H-imidazol-2-yl)pyrimidin-2-ylamino]ethylamino]pyridine-3-carbonitrile
CAS Number	252917-06-9
PubChem Identifier	9956119
Appearance	Pale yellow solid
Purity	>97% by HPLC analysis
Solubility	Soluble in DMSO at 100 mM
Reconstitution	For a 10 mM concentrated stock solution, reconstitute the compound by adding 2.15 mL of DMSO to the entire contents of vial. If precipitate is observed, warm the solution to 37°C for 2 to 5 minutes.
Recommended Usage	For use in cell culture, warm medium just prior to adding the reconstituted compound. Once the compound is added, mix and filter-sterilize the medium using a 0.2 µM low-protein binding filter. Note: for most cells, the maximum tolerance to DMSO is less than 0.5%.
Storage and Stability	Solid: Shipped at room temperature. Store at -20°C. Stable for 6 months when stored as directed. Solution: Following reconstitution, store aliquots in tightly sealed vials at -20°C. Avoid repeated freeze-thaw cycles.
References	Li, W., et al. (2009) Generation of human-induced pluripotent stem cells in the absence of exogenous Sox2. Stem Cells 27: 2992-3000. PMID: 19839055. Ring, D.B., et al. (2003) Selective glycogen synthase kinase 3 inhibitors potentiate insulin activation of glucose transport and utilization in vitro and in vivo. Diabetes 52: 588-595. PMID: 12606497. Ying, Q., et al. (2008) The ground state of embryonic stem cell self-renewal. Nature 453: 519-523. PMID: 18497825.

PRODUCT WARRANTY

BioTime, Inc. and/or its subsidiaries warrants its products as set forth in the General Terms and Conditions of Sale found on ESI BIO's website at www.esibio.com/termsandconditions.

For support visit www.esibio.com/support or email techsupport@esibio.com