

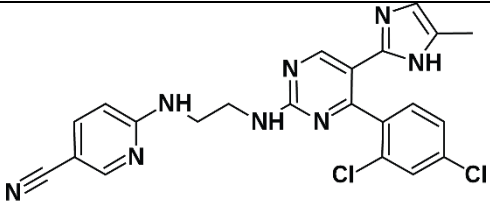


TrailBio® CHIR-99021 Monohydrochloride User Instructions

Product Configurations

Catalog Number	Size	Quantity
TB59771	5 mg	1 vial
TB54925	10 mg	1 vial

Product Description

Category	Specification
Product	CHIR-99021 monohydrochloride
Synonyms	Laduviglusib monohydrochloride; CT99021 monohydrochloride
CAS Number	1797989-42-4
MDL Number	MFCD30489757
Formula	$C_{22}H_{19}Cl_3N_8$
Molecular Weight	501.80 g/mol
Storage (Solid)	4 °C, for up to 3 years, sealed storage, away from moisture
Storage (Solution)	-80 °C for up to 2 years or -20 °C for up to 1 year, sealed storage, away from moisture
Shipping	Ambient temperature
Chemical Structure	 HCl

Quality & Analytical Specifications

Test Parameter	Specification
Solid Appearance (Color)	White to yellow
Purity	≥98%

Solubility

Solvent	Solubility	Notes
DMSO	≤50 mg/ml (99 mM)	may require sonication
H ₂ O	≤5 mg/ml (9 mM)	may require sonication

Solution Preparation Guide

Amount	1 mM	5 mM	10 mM
5 mg	9.964 ml	1.993 ml	0.996 ml
10 mg	19.928 ml	3.985 ml	1.993 ml

Biological Description

CHIR-99021 monohydrochloride is a potent and selective inhibitor of GSK-3 α/β , thereby activating Wnt/ β -catenin signaling. It is commonly used to support stem cell self-renewal or directed differentiation.

Associated Pathways & Applications

Category	Description
Associated Pathways	Stem Cell/Wnt, GSK-3, Wnt, β -catenin, PI3K/Akt/mTOR
Applications	Stem cell culture; directed differentiation; organoid culture; Wnt pathway activation studies; autophagy-related research

IC₅₀ & Targets

Target	IC ₅₀
GSK-3 β	6.7 nM
GSK-3 α	10 nM
Cdc2	8800 nM

Notes

- When using DMSO-based stock solutions, maintain a final DMSO concentration of <0.5% in cell culture applications to minimize potential cellular toxicity, unless a higher concentration has been validated for the specific cell type.
 - Avoid repeated freeze-thaw cycles. Prepare single-use aliquots when possible.
 - Compound may collect on the vial cap or neck during shipping; centrifuge briefly before opening to bring contents to the bottom.
 - Certificate of Analysis (CoA) available upon request. Please contact support@trailbio.com.
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Also available from Trailhead Biosystems®

Cells

- TrailBio® Vascular Leptomeningeal Cells (Cat No. EC040003010)
- TrailBio® Hematopoietic Progenitor Cells (Cat No. ME060001020)
- TrailBio® Endothelial Cells (Cat No. ME010101021)

Small Molecules

- TrailBio® Y-27632 dihydrochloride (Cat No. TB 28056)
- TrailBio® Cytarabine (Ara-C) (Cat No. TB 47622)
- TrailBio® SB-431542 (Cat No. TB 46416)
- TrailBio® LDN-193189 dihydrochloride (Cat No. TB 86388)
- TrailBio® CHIR-99021 monohydrochloride (Cat No. TB 54925)

Services

- Custom iPSC Differentiation

For details of the above products and services, visit www.trailbio.com.



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