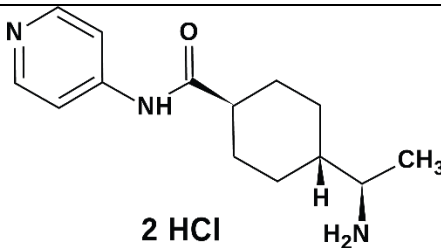


TrailBio® Y-27632 Dihydrochloride User Instructions

Product Configurations

Catalog Number	Size	Quantity
TB37849	5 mg	1 vial
TB87523	10 mg	1 vial
TB28056	50 mg	1 vial

Product Description

Category	Specification
Product	Y-27632 dihydrochloride
Synonyms	ROCK inhibitor Y27632; Y27632 2HCl
CAS Number	129830-38-2
MDL Number	MFCD03490488
Formula	C ₁₄ H ₂₃ Cl ₂ N ₃ O
Molecular Weight	320.26 g/mol
Storage (Solid)	4 °C, for up to 3 years, sealed storage, away from moisture
Storage (Solution)	-80 °C for up to 6 months or -20 °C for up to 1 month, sealed storage, away from moisture
Shipping	Ambient temperature
Chemical Structure	 2 HCl

Quality & Analytical Specifications

Test Parameter	Specification
Solid Appearance (Color)	White to off-white
Purity	≥98%

Solubility

Solvent	Solubility	Notes
DMSO	≤50 mg/ml (156 mM)	may require sonication
H ₂ O	≤100 mg/ml (312 mM)	may require sonication

Solution Preparation Guide

Amount	1 mM	5 mM	10 mM
5 mg	15.612 ml	3.122 ml	1.561 ml
10 mg	31.224 ml	6.245 ml	3.122 ml
50 mg	156.123 ml	31.225 ml	15.612 ml

Biological Description

Y-27632 is a selective ATP-competitive inhibitor of ROCK I/II that enhances cell survival by reducing apoptosis and supporting proliferation. It has also been shown to modulate cytoskeletal dynamics, delay cell cycle progression, and promote differentiation toward specific lineages.

Associated Pathways & Applications

Category	Description
Associated Pathways	Cytoskeleton regulation; cell cycle/DNA damage; Wnt signaling; TGF-β/Smad; apoptosis
Applications	Stem cell culture; post-thaw recovery; single-cell passaging; organoid culture; differentiation workflows; apoptosis/survival studies

Ki & Targets

Target	Value (Ki)
ROCK-I	220 nM
ROCK-II	300 nM
PKN	3.1 μ M
Citron Kinase	5.3 μ M
PKC α	73 μ M
PKA	25 μ M

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.

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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