

2 mg
5×2 mg

130-103-922
130-104-169

Contents

1. Description

1.1 Background information

2. Protocol

2.1 Preparation of stock solution

2.2 Use in cell culture

1. Description

Components StemMACS™ Y27632. A selective small molecule ROCK inhibitor.

Size 2 mg; 5×2 mg

Product format Off-white solid

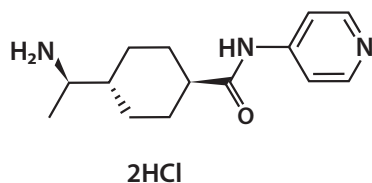
Molecular weight 320.26

CAS number 129830-38-2

Systematic name (1*R*,4*R*)-4-((*R*)-1-aminoethyl)-*N*-(pyridine-4-yl)cyclohexanecarboxamide dihydrochloride

Molecular formula C₁₄H₂₃Cl₂N₃O

Structure



Purity >97%

Solubility Soluble in water and DMSO

Storage Store powder at -20 °C. After reconstitution, store aliquots at -20 °C. Protect from light.

1.1 Background information

StemMACS™ Y27632 is a selective, cell-permeable inhibitor of Rho-associated kinase (ROCK). Rho-associated kinase is found in two isoforms, ROCK I (p160ROCK, ROCK β) and ROCK II (ROCK α), both of which are inhibited by Y27632. The inhibition is reversible and competitive with respect to ATP. The ROCK inhibitor Y27632 is commonly used to increase the survival and cloning efficiency of human pluripotent stem cells after dissociation into single cells.

2. Protocol

2.1 Preparation of stock solution

The effective concentration of StemMACS Y27632 for cell culture applications is 10 μ M. A 10 mM stock solution in DMSO (1000 \times) can be prepared as follows:

1. Reconstitute the entire vial contents by adding 624.4 μ L of pure DMSO. Warm to 37 °C for 3–5 minutes to facilitate solubilization.

▲ Note: The vial may have turned upside down during transportation. Gently tap prior to reconstitution to collect all powder at the bottom of the vial.

2. Prepare appropriate aliquots and store at -20 °C. Avoid repeated freeze-thaw cycles.

▲ Note: The DMSO concentration in culture should not exceed 0.5%. Stock solutions of alternate concentration can be prepared using the following table. Add the solvent directly to the vial, it will hold up to 4 mL.

Desired stock	1 mM	2 mM	5 mM	10 mM	20 mM
Volume of DMSO to add	Dilute 1:10 from a 10 mM stock	3122 μ L	1249 μ L	624.4 μ L	312.2 μ L

2.2 Use in cell culture

1. Thaw aliquots at 37 °C as needed.
2. To avoid precipitation, prewarm the cell culture media prior to adding the reconstituted compound.
3. Mix and filter the supplemented media through a 0.2 μ M low-protein binding filter.

Refer to www.miltenyibiotec.com for all data sheets and protocols. Miltenyi Biotec provides technical support worldwide. Visit www.miltenyibiotec.com/local to find your nearest Miltenyi Biotec contact.

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