# Y-27632 Dihydrochloride Solution (10 mM)

**Cat. No.: PB180609**

**Size: 1mL**

## General Information

| | |
|---|---|
| **Product Form** | Liquid |
| **Solvent** | Ultrapure water |
| **Concentration** | 10 mmol/L |
| **Storage** | -5~-20°C |
| **Whether to avoid light** | Shading light |
| **Shipping** | Ice bag |
| **Expiration date** | 12 months |

## Background

Y-27632 is a selective, ATP-competitive inhibitor of ROCK (Rho-associated protein kinase) that is highly potent, cell-permeable, reversible, and highly selective. It demonstrates a substantial ATP-competitive inhibition of p160ROCK (Ki=140 nM) and ROCK-II ($IC_{50}$=800 nM), as well as a specific inhibitory effect on PRK2 ($IC_{50}$=600 nM). The addition of Y-27632 to the cell inoculation plate culture is typically made at the initial stage, and it is not required during subsequent medium replacement culture.

In stem cell research, Y-27632 (10 μM) treatment of human embryonic stem cells for one hour considerably increased the efficiency of clone creation, prolonged cell passaging ability, and effectively blocked stem cell apoptosis. Furthermore, by controlling processes similar to the epithelial-mesenchymal transition (EMT), Y-27632 was able to specifically drive the differentiation of human induced pluripotent stem cells (hiPSCs) to the mesodermal lineage, offering a crucial tool for research on stem cell-directed differentiation.

Common working concentration: 10 μM.

## Notes

1. This product is only used for scientific research or further research, not for diagnosis and treatment.
2. This product was sterilized by 0.1 μm filtration and can be used directly after melting.
3. It is necessary to pay attention to the aseptic operation and avoid the contamination.
4. Before using, the product should be thawed at 2-8°C and shaken thoroughly; repeated freeze-thaw cycles are not advised..
5. If precipitation happens after thawing, the contents can be resuspended by pipetting or vortex mixing. After incubating the solution at 37°C for 20 to 30 minutes or letting it stand at room temperature for about an hour, check to see if the precipitate dissolves as intended. If the product dissolves completely, it can be used as usual.
6. This product is a concentrated solution and should be diluted prior to use as required.
7. The product should be used within a month if stored regularly at 2-8°C. Keep in a frozen state at -5~-20°C for extended storage. Long-term storage at room temperature or between 2-8°C is not recommended. When lesser amounts are required, aliquoting is advised to prevent repeated freeze-thaw cycles.
8. Dangerous if ingested, inhaled, or come into contact with the skin. Please take relevant protection when operating.