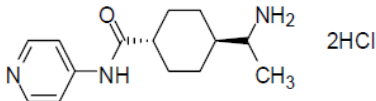




## Product Specification Sheet

|                              |  |
|------------------------------|--|
| <b>Product Name</b>          | Stemolecule™ Y27632  |
| <b>Description</b>           | Stemolecule Y27632 is a cell-permeable small molecule Rho-associated kinase ROCK inhibitor <sup>1</sup> . Y27632 has been found to prevent apoptosis as well as enhance the survival and cloning efficiency of dissociated human embryonic stem (ES) cells without affecting their self-renewal properties or pluripotency <sup>2</sup> . This molecule has also been shown to enhance survival during the transplantation of ES cell-derived neural precursors <sup>3</sup> . Y27632 in combination with Pifithrin-μ significantly improves cell recovery after cryopreservation <sup>4</sup> . |
| <b>Catalog Number</b>        | 04-0012  |
| <b>Size</b>                  | 2 mg   |
| <b>Alternate Name</b>        | (1R,4r)-4-((R)-1-aminoethyl)-N-(pyridine-4-yl)cyclohexanecarboxamide dihydrochloride   |
| <b>Chemical Formula</b>      | C <sub>14</sub> H <sub>23</sub> Cl <sub>2</sub> N <sub>3</sub> O   |
| <b>Structure</b>             |   |
| <b>Molecular Weight</b>      | 320.3  |
| <b>CAS Number</b>            | 146986-50-7  |
| <b>Purity</b>                | Greater than 97% by HPLC analysis  |
| <b>Formulation</b>           | White solid  |
| <b>Solubility</b>            | For a 10 mM concentrated stock solution of Y27632, reconstitute the compound by adding 624.4 μl of DMSO to the entire contents of the vial. If precipitate is observed, warm the solution to 37°C for 2 to 5 minutes. For cell culture, the media should be prewarmed prior to adding the reconstituted compound. Note: for most cells, the maximum tolerance to DMSO is less than 0.5%. This molecule is soluble in DMSO at 100 mM  |
| <b>Storage and Stability</b> | Store powder at 4°C protected from light. Following reconstitution, store aliquots at -20°C. Stock solutions are stable for 6 months when stored as directed.  |
| <b>Quality Control</b>       | The purity of Y27632 was determined by HPLC analysis. The accurate mass was determined by mass spectrometry. Cellular toxicity of Y27632 was tested on mouse embryonic stem cells.   |

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3. Koyanagi, M., Takahashi, J., Arakawa, Y., Doi, D., Fukuda, H., Hayashi, H., Narumiya, S., and Hashimoto, N. (2008) Inhibition of the Rho/ROCK pathway reduces apoptosis during transplantation of embryonic stem cell-derived neural precursors. *J. Neurosci Res.* 86: 270-280.
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