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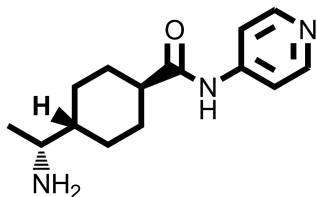
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## Rock Inhibitor Y-27632

**Chemical Name:** (1R,4r)-4-((R)-1-aminoethyl)-N-(pyridin-4-yl)cyclohexanecarboxamide



Molecular Weight:	247.34
Formula:	C <sub>14</sub> H <sub>21</sub> N <sub>3</sub> O
Purity:	≥98%
CAS#:	146986-50-7
Solubility:	DMSO up to 100mM
Storage	Powder: 4°C 1 year DMSO: 4°C 3 month -20°C 1 year

### Biological Activity:

Y-27632 is a widely used, selective inhibitor of the Rho-associated protein kinase p160ROCK with a K<sub>i</sub> value at ~ 0.14 μM. In many studies, it was shown and used to enhance the survival and cloning efficiency of many primary cell types after single cell dissociation without affecting their self-renewal properties, including hESC/iPSCs, neural stem cells, intestinal stem cells, and mammary epithelial cells.

### How to Use:

**In vitro:** Y-27632 is typically used at 10 μM concentration in cell culture.

**In vivo:** In several hypertension rat models, Y-27632 was orally dosed at 30 mg/kg to significantly decrease blood pressure.

### Reference:

1. Uehata M, et al. Calcium sensitization of smooth muscle mediated by a Rho-associated protein kinase in hypertension. (1997) *Nature*. 389(6654):990-4.
2. Ishizaki, T. et al. Pharmacological properties of Y-27632, a specific inhibitor of rho-associated kinases. (2000) *Mol Pharmacol* 57, 976-983.
3. Koyanagi et al. Inhibition of the Rho/ROCK pathway reduces apoptosis during transplantation of embryonic stem cell-derived neural precursors. (2008) *J. Neurosci Res* 86: 270-280.
4. Watanabe et al. A ROCK inhibitor permits survival of dissociated human embryonic stem cells. (2007) *Nat Biotech* 25: 681-686.

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