# Y-27632 . dihydrochloride

## ROCK inhibitor

Y-27632 is a highly potent, cell permeable, selective and ATP competitive inhibitor of ROCK1 and ROCK2 ($IC_{50}$=800nM). It acts as a potent inhibitor of agonist-induced $Ca^{2+}$sensitization of myosin phosphorylation and smooth muscle contractions, blocks cell spreading, and suppresses RhoA-induced formation of stress fibers in hepatic stellate cells. Y-27632 significantly reduces the increase of inflammatory cytokines after reperfusion, preventing the development of acute renal failure. There are numerous application for this compound including: anti-nociceptive effect, cardioprotective effects, inhibition of superoxide production, mimicking effect of β-agonists on human cells, and suppression of tumor cell invasion.

There has been a growing interest in Y-27632 for use in stem cell self-renewal and reprogramming. It is known to increase the survival rate of human embryonic stem cells undergoing cryopreservation.

**Citations:** 170 View Online »

## Ordering Information

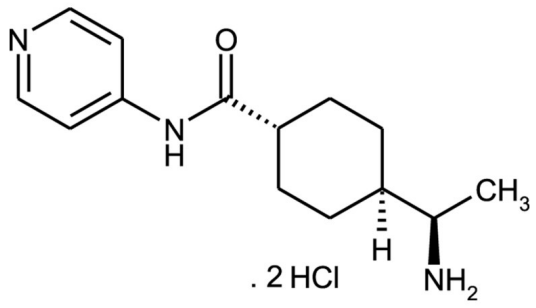
Order Online »

| | |
|---|---|
| **ALX-270-333-M001** | 1mg |
| **ALX-270-333-M005** | 5mg |
| **ALX-270-333-M025** | 25mg |

## Manuals, SDS & CofA

View Online »

- Selective inhibitor of ROCK1 and ROC/2
- Highly potent inhibitor of smooth muscle contractions
- Media component used in the cryopreservation of stem cells
- Applications in cancer, cardiology, nephrology, neurology, and stem cell studies
- Highly cited


N
O
N
H
CH3
H
. 2 HCl
NH2


Y-27632 . dihy
Cat. No.: ALX-27
Lot No.: 0824Z2
Storage: -20°C
25 mg
MW 320.3
Enzo

## Handling & Storage

| | |
|---|---|
| **Use/Stability** | As indicated on product label or CoA when stored as recommended. Stock solutions are stable for up to 1 month when stored at -20°C. |
| **Handling** | Protect from light. Packaged under inert gas. After reconstitution, prepare aliquots and store at -20°C. |
| **Long Term Storage** | -20°C |
| **Shipping** | Ambient Temperature |

## Regulatory Status

RUO - Research Use Only

## Product Details

| | |
|---|---|
| **Alternative Name** | (R)-(+)-trans-N-(4-Pyridyl)-4-(1-aminoethyl)-cyclohexanecarboxamide . 2HCl |
| **Appearance** | White to pale yellow powder. |
| **CAS** | 129830-38-2 |
| **Couple Target** | ROCK |
| **Couple Type** | Inhibitor |
| **Formula** | $C_{14}H_{21}N_3O$ . 2HCl |
| **Identity** | Identity determined by MS and NMR. |
| **MW** | 247.3 . 73.0 |
| **Purity** | ≥98% (HPLC (UV)) |
| **Purity Detail** | Enantiomeric excess ≥96% |
| **Solubility** | Soluble in DMSO (25mg/ml), methanol (25mg/ml), acetonitrile (<1mg/ml), dioxane (<1mg/ml), water (very soluble). |

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