

# Y-27632 (dihydrochloride)

Catalog No: tcsc0878



## Available Sizes

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg

**Size:** 200mg

**Size:** 500mg

**Size:** 1g

**Size:** 2g



## Specifications

**CAS No:**

129830-38-2

**Formula:**

$C_{14}H_{23}Cl_2N_3O$

**Pathway:**

Apoptosis; Cell Cycle/DNA Damage; Cytoskeleton; Stem Cell/Wnt; TGF-beta/Smad

**Target:**

Apoptosis; ROCK

**Form:**

White to off-white (Solid)

**Purity / Grade:**

98.01%

**Solubility:**

DMSO : 33.33 mg/mL (104.07 mM; Need ultrasonic)

H<sub>2</sub>O : 100 mg/mL (312.25 mM; Need ultrasonic)

**Storage Instruction:**

2-8°C, sealed storage, away from moisture

**Alternative Names:**

Cyclohexanecarboxamide, 4-[(1R)-1-aminoethyl]-N-4-pyridinyl-, hydrochloride (1:2), trans

**Observed Molecular Weight:**

320.26

**References**

[1]. Ishizaki T, et al. Pharmacological properties of Y-27632, a specific inhibitor of rho-associated kinases. *Mol Pharmacol*. 2000 May;57(5):976-83. [2]. Xue ZW, et al. Rho-associated coiled kinase inhibitor Y-27632 promotes neuronal-like differentiation of adult human adipose tissue-derived stem cells. *Chin Med J (Engl)*. 2012 Sep;125(18):3332-5. [3]. Inan S, et al. Antiepileptic effects of two Rho-kinase inhibitors, Y-27632 and fasudil, in mice. *Br J Pharmacol*. 2008 Sep;155(1):44-51. [4]. Tada S, et al. A selective ROCK inhibitor, Y27632, prevents dimethylnitrosamine-induced hepatic fibrosis in rats. *J Hepatol*. 2001 Apr;34(4):529-36

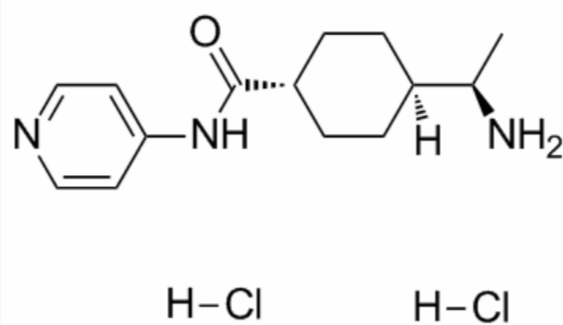
**Product Description**

Y-27632 dihydrochloride is an ATP-competitive inhibitor of **ROCK-I** and **ROCK-II**, with  $K_i$  of 220 nM and 300 nM for **ROCK-I** and **ROCK-II**, respectively.

IC<sub>50</sub> & Target:  $K_i$ : 220/300 nM (ROCK-I/II)<sup>[1]</sup>

**In Vitro:** Y-27632 inhibits the ROCK family of kinases 100 times more potently than other kinases including protein kinase C, cAMP-dependent kinase and myosin light chain kinase. Y-27632 prolongs the lag time and delays the appearance of BrdU-labeled cells in a concentration-dependent manner, delays of about 1 and 4 h are noticed in the Swiss 3T3 cells treated with 10 and 100 μM Y-27632, respectively<sup>[1]</sup>. Y-27632 promotes neuronal differentiation of adipose tissue-derived stem cells (ADSCs). Compared to 1.0 and 2.5 μM Y-27632 induced groups, percentages of neuroal-like cells achieved a peak in the 5.0 μM Y-27632 induced group<sup>[2]</sup>.

**In Vivo:** Y-27632 (5 and 10 mg/kg) significantly prolongs the onset time of myoclonic jerks when compare with saline group. Y-27632 (5 and 10 mg/kg) significantly prolongs the onset time of clonic convulsions when compare with saline group<sup>[3]</sup>. Treatment with Dimethylnitrosamine (DMN) causes a significant decrease in rat body and liver weight (DMN-S group) compared with control animals (S-S group). Oral Y27632 (30 mg/kg) essentially prevents this DMN-induced rat body and liver weight loss (DMN-Y group)<sup>[4]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!