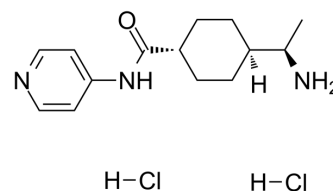


## Y-27632 dihydrochloride (GMP)

<b>Cat. No.:</b>	HY-10583G
<b>CAS No.:</b>	129830-38-2
<b>Molecular Formula:</b>	C <sub>14</sub> H <sub>23</sub> Cl <sub>2</sub> N <sub>3</sub> O
<b>Molecular Weight:</b>	320.26
<b>Target:</b>	ROCK
<b>Pathway:</b>	Cell Cycle/DNA Damage; Cytoskeleton; Stem Cell/Wnt; TGF-beta/Smad
<b>Storage:</b>	-20°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



### SOLVENT & SOLUBILITY

#### In Vitro

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

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	3.1225 mL	15.6123 mL	31.2246 mL
5 mM	0.6245 mL	3.1225 mL	6.2449 mL
10 mM	0.3122 mL	1.5612 mL	3.1225 mL

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

Y-27632 dihydrochloride (GMP) is the GMP level of Y-27632 dihydrochloride (HY-10583). GMP guidelines are used to produce Y-27632 dihydrochloride (GMP). GMP small molecules works appropriately as an auxiliary reagent for cell research manufacture. Y-27632 dihydrochloride is an orally active and ATP-competitive ROCK (Rho-kinase) inhibitor with antiepileptic effect<sup>[1][2][3][4]</sup>.

#### In Vitro

Y-27632 dihydrochloride (GMP) (2 μM; 4-8 d) enhances the survival rate and increases reprogramming of mouse fibroblasts directly converted into neuronal cells<sup>[1]</sup>.  
 Y-27632 dihydrochloride (GMP) induces human fibroblasts convert into functional cardiomyocytes<sup>[2]</sup>.  
 Y-27632 dihydrochloride (GMP) induces fibroblasts convert into pluripotent stem cells (hiPSCs)<sup>[2]</sup>.  
 Y-27632 dihydrochloride (GMP) (2-10 μM) promotes human EPS cell proliferation and induces primed hPSCs convert into hEPS cells<sup>[3]</sup>.  
 Y-27632 dihydrochloride (GMP) (10 μM) induces human EPS cell derived from blastocysts<sup>[4]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- Nature. 2022 Nov;611(7936):603-613.
- Nature. 2022 Jan;601(7894):600-605.
- Science. 2020 Dec 4;370(6521):eaay2002.
- Cancer Cell. 2023 Jun 12;41(6):1103-1117.e12.
- Cell Res. 2023 Jul 17.

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## REFERENCES

- [1]. Li X, et al. Small-Molecule-Driven Direct Reprogramming of Mouse Fibroblasts into Functional Neurons. Cell Stem Cell. 2015 Aug 6;17(2):195-203.
- [2]. Cao N, et al. Conversion of human fibroblasts into functional cardiomyocytes by small molecules. Science. 2016 Jun 3;352(6290):1216-20.
- [3]. Choi IY, et al. Concordant but Varied Phenotypes among Duchenne Muscular Dystrophy Patient-Specific Myoblasts Derived using a Human iPSC-Based Model. Cell Rep. 2016 Jun 7;15(10):2301-2312.
- [4]. Yang Y, et al. Derivation of Pluripotent Stem Cells with In Vivo Embryonic and Extraembryonic Potency. Cell. 2017 Apr 6;169(2):243-257.e25.

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA