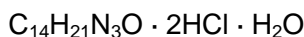


PRODUCT DESCRIPTION

Y-27632 (Catalog #07171/07172), also known as Rho-Associated Coil Kinase (ROCK) inhibitor, increases the cloning efficiency of human embryonic stem cells (hESCs).¹ It prevents apoptosis and enhances the survival of single hESCs without affecting their pluripotency, or causing karyotypic abnormalities.

Y-27632 is a highly potent, cell-permeable, selective inhibitor of Rho-associated protein kinases (ROCK-I and ROCK-II). Inhibition is achieved by competing with ATP for binding to the catalytic site.

Y-27632 has the following chemical structure and molecular formula:



Y-27632 is a $\geq 95\%$ pure synthetic compound with a molecular weight of 338.3 g/mol. It is a lyophilized solid that is light sensitive and hygroscopic.

STABILITY AND STORAGE

Store at -20°C in the dark and with a desiccant. Product stable at -20°C for 1 year from date of receipt. Product stable at -20°C for 6 months upon reconstitution in water to a concentration of 5 mM.

DIRECTIONS FOR USE

This product has been shown to be effective at a final concentration of 10 μM .^{1,2} Prepare stock solution by reconstituting in water to a concentration of 5 mM.

PRODUCT INFORMATION SHEET	Human Pluripotent Stem Cell Research	Y-27632
	STEMCELL TECHNOLOGIES	Rho-Associated Coil Kinase (ROCK) Inhibitor
VERSION 1.1.0	CATALOG #07171 #07172	1 mg/vial 5 mg/vial

RELATED PRODUCTS

PRODUCT	CATALOG #
mTeSR™ Medium Kit for hESC and hiPSC	05850 05870
mFreSR™ Defined Cryopreservation Medium for hESC and hiPSC	05854 05855
BD Matrigel™ hESC-qualified Matrix (qualified for hESC culture by STEMCELL Technologies)	BD Catalog #354277
AggreWell™400 plates for the reproducible formation of uniformly sized embryoid bodies	27845 27945
Collagenase IV (1 mg/mL)	07909
Dispase (1 mg/mL)	07923
Gelatin	07903
MEM Non-Essential Amino Acids, 10 mM (100X Concentrate)	07600
L-glutamine	07100
Trypsin-EDTA (0.05%)	07910
Trypsin-EDTA (0.25%)	07901

REFERENCES

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2. Ungrin MD, Joshi C, Nica A, Bauwens C, Zandstra PW: Reproducible, Ultra-High-Throughput Formation of Multicellular Organization from Single Cell Suspension-Derived Human Embryonic Stem Cell Aggregates. PLoS One 3(2):e1565, 2008
3. Watanabe K, Ueno M, Kamiya D, Nishiyama A, Matsumura M, Wataya T, Takahashi JB, Nishikawa S, Nishikawa S, Muguruma K, Sasai Y: A ROCK inhibitor permits survival of dissociated human embryonic stem cells. Nat Biotechnol. 2007 Jun; 25(6):681-686