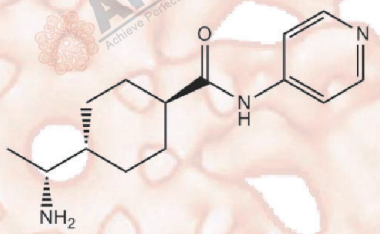
Product Data Sheet

Y-27632

Cat. No.:	B1293
CAS No.:	146986-50-7
Formula:	C14H21N3O
M.Wt:	247.34
Synonyms:	
Target:	TGF-β / Smad Signaling
Pathway:	ROCK
Storage:	Store at -20°C



Solvent & Solubility

In Vitro

≥24.7 mg/mL in DMSO; insoluble in Chloroform

Preparing Stock Solutions

Concentration \ Mass / Solvent	1mg	5mg	10mg
1 mM	4.0430 mL	20.2151 mL	40.4302 mL
5 mM	0.8086 mL	4.0430 mL	8.0860 mL
10 mM	0.4043 mL	2.0215 mL	4.0430 mL

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

Biological Activity

Shortsummary	ROCK inhibitor,potent and selective
IC_{50} & Target	140 nM(Ki) (ROCK1 (p160ROCK)), 300 nM(Ki) (ROCK2)

In Vitro

Cell Viability Assay

Cell Line:	HeLa cells, Swiss 3T3 cells
Preparation method:	The solubility of this compound in DMSO is > 10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	0.3 and 1 μM, 30 min or 24 h

	Applications:	Y-27632 inhibited the kinase activity of both ROCK-I and ROCK-II in vitro, and this inhibition was reversed by ATP in a competitive manner. Y-27632 abolished stress fibers in Swiss 3T3 cells at 10 μM, but the G1-S phase transition of the cell cycle and cytokinesis were little affected at this concentration. In Swiss 3T3 cells, prior treatment of cells with Y-27632 for 30 min prevented cell shape and actin-stress fibers changes in a concentration-dependent manner; almost complete inhibition was observed at 10 μM. 10 and 100 μM Y-27632 prolonged the lag time and delayed the appearance of BrdU-labeled cells in a concentration-dependent manner, delays of about 1 and 4 h. In HeLa cells, 30 μM Y-27632 inhibited cytokinesis.
In Vivo	**Animal experiment**	
	Applications:	
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Zhou N, Lee JJ, et al. "Rho Kinase Regulates AorticVascular Smooth Muscle Cell Stiffness Via Actin/SRF/Myocardin in Hypertension."Cell Physiol Biochem. 2017 Nov 23;44(2):701-715.PMID:29169155

2. Pazhoohan S, Raoufy MR, et al. "Effect of Rho-kinase inhibitionon complexity of breathing pattern in a guinea pig model of asthma." PLoS One.2017 Oct 31;12(10):e0187249.PMID:29088265

3. GUANGQI ZHOU, XINMEI LIU, et al. "Homeobox B4 inhibits breast cancer cell migration by directly binding to StAR-related lipid transfer domain protein 13." ONCOLOGY LETTERS,August 3, 2017.

4. Wang E, Wang D, et al. "Growth of hollow cell spheroids inmicrobead templated chambers." Biomaterials. 2017 Oct;143:57-64.PMID:28763630

5. Jones BC, Kelley LC, et al. "Dual Targeting of Mesenchymal and Amoeboid Motility HindersMetastatic Behavior." Mol Cancer Res. 2017 Jun;15(6):670-682.PMID:28235899

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References

[1]. Ishizaki T, Uehata M, Tamechika I, et al. Pharmacological properties of Y-27632, a specific inhibitor of rho-associated kinases[J]. Molecular pharmacology, 2000, 57(5): 976-983.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage

temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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