



## Rabbit Anti-phospho-ROCK2 (Tyr256) antibody

SL5676R

<b>Product Name:</b>	phospho-ROCK2 (Tyr256)
<b>Chinese Name:</b>	磷酸化Rho相关蛋白激酶2抗体
<b>Alias:</b>	ROCK2(phospho Y256); p164 ROCK 2; Rho associated coiled coil containing protein kinase 2; Rho associated protein kinase 2; Rho kinase 2; ROCK 2; Rock II; Rock2m; ROK alpha; ROKalpha; ROCK2 HUMAN.
<b>Organism Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>React Species:</b>	Human,Mouse,Rat,Dog,Pig,Cow,Guinea Pig,
<b>Applications:</b>	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=0.2ug/testIF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Molecular weight:</b>	153kDa
<b>Cellular localization:</b>	The nucleuscytoplasmicThe cell membrane
<b>Form:</b>	Lyophilized or Liquid
<b>Concentration:</b>	1mg/ml
<b>immunogen:</b>	KLH conjugated Synthesised phosphopeptide derived from human ROCK2 around the phosphorylation site of Tyr256:PD(p-Y)IS
<b>Lsotype:</b>	IgG
<b>Purification:</b>	affinity purified by Protein A
<b>Storage Buffer:</b>	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
<b>Storage:</b>	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
<b>PubMed:</b>	<a href="#">PubMed</a>
<b>Product Detail:</b>	The protein encoded by this gene is a serine/threonine kinase that regulates cytokinesis, smooth muscle contraction, the formation of actin stress fibers and focal adhesions, and the activation of the c-fos serum response element. This protein, which is an isozyme of

ROCK1 is a target for the small GTPase Rho.

**Function:**

Protein kinase which is a key regulator of actin cytoskeleton and cell polarity. Involved in regulation of smooth muscle contraction, actin cytoskeleton organization, stress fiber and focal adhesion formation, neurite retraction, cell adhesion and motility via phosphorylation of ADD1, BRCA2, CNN1, EZR, DPYSL2, EP300, MSN, MYL9/MLC2, NPM1, RDX, PPP1R12A and VIM. Phosphorylates SORL1 and IRF4. Acts as a negative regulator of VEGF-induced angiogenic endothelial cell activation. Positively regulates the activation of p42/MAPK1-p44/MAPK3 and of p90RSK/RPS6KA1 during myogenic differentiation. Plays an important role in the timely initiation of centrosome duplication. Inhibits keratinocyte terminal differentiation. May regulate closure of the eyelids and ventral body wall through organization of actomyosin bundles. Plays a critical role in the regulation of spine and synaptic properties in the hippocampus.

**Subunit:**

Homodimer. Interacts with IRS1, RHOB and RHOC. Interacts with RHOA (activated by GTP), PPP1R12A, CHORDC1, SORL1, EP300 and BRCA2. Interacts with NPM1 and this interaction enhances its activity. Interacts with RAF1.

**Subcellular Location:**

Cytoplasm. Cell membrane; Peripheral membrane protein (By similarity). Nucleus. Cytoplasm, cytoskeleton, centrosome.

**Post-translational modifications:**

Phosphorylated upon DNA damage, probably by ATM or ATR. Phosphorylation at Tyr-722 reduces its binding to RHOA and is crucial for focal adhesion dynamics. Dephosphorylation by PTPN11 stimulates its RHOA binding activity. Cleaved by granzyme B during apoptosis. This leads to constitutive activation of the kinase and membrane blebbing.

**Similarity:**

Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. Contains 1 AGC-kinase C-terminal domain. Contains 1 PH domain. Contains 1 phorbol-ester/DAG-type zinc finger. Contains 1 protein kinase domain. Contains 1 REM (Hr1) repeat.

**SWISS:**

O75116

**Gene ID:**

9475

**Database links:**

[Entrez Gene: 9475](#)Human

[Entrez Gene: 19878](#)Mouse

[Entrez Gene: 25537](#)Rat

[Omin: 604002](#)Human

[SwissProt: O75116](#)Human

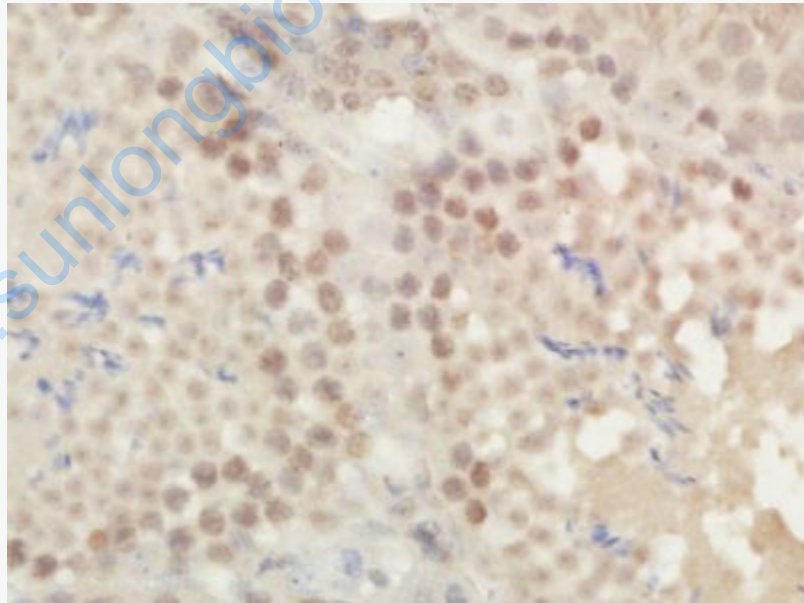
[SwissProt: P70336](#)Mouse

**Important Note:**

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

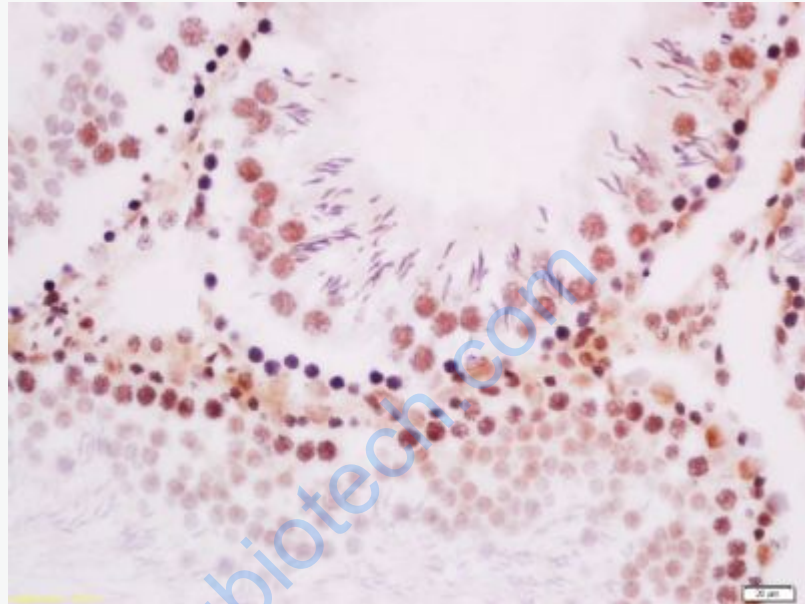
ROCK2 (Rho kinase alpha) 是 ROCK1 的同工酶。是一个丝/苏氨酸激酶，可调节 cell factor，平滑肌收缩和肌动蛋白的形成。

**Picture:**

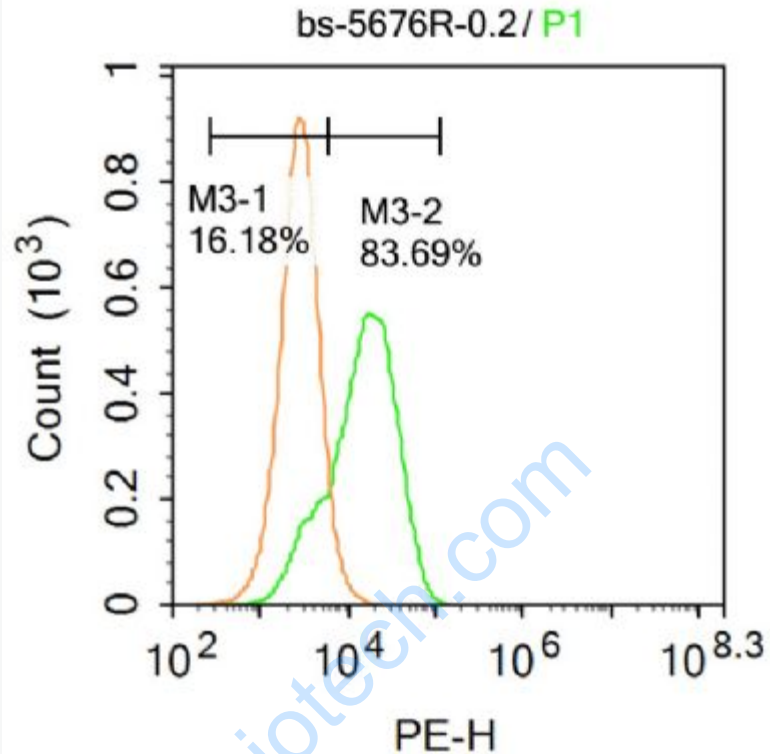


Paraformaldehyde-fixed, paraffin embedded (Mouse testis); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (phospho-ROCK2(Tyr256)) Polyclonal

Antibody, Unconjugated (SL5676R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Tissue/cell: rat testis tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;  
Antigen retrieval: citrate buffer ( 0.01M, pH 6.0 ), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;  
Incubation: Anti-phospho-ROCK2 (Tyr256) Polyclonal Antibody, Unconjugated(SL5676R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Blank control: Hela.

Primary Antibody (green line): Rabbit Anti-phospho-ROCK2(Tyr256) antibody (SL5676R)

Dilution:  $1\mu\text{g} / 10^6$  cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-PE

Dilution:  $1\mu\text{g} / \text{test}$ .

Protocol

The cells were fixed with 4% PFA (10min at room temperature) and then permeabilized with 90% ice-cold methanol for 20 min at  $-20^\circ\text{C}$ . The cells were then incubated in 5% BSA to block non-specific protein-protein interactions for 30 min at room temperature. Cells stained with Primary Antibody for 30 min at room

temperature. The secondary antibody used for 40 min at room temperature.

Acquisition of 20,000 events was performed.

[www.sunlongbiotech.com](http://www.sunlongbiotech.com)