

## Rac GAP1 (Phospho Ser387) Rabbit pAb

CatalogNo: YP0933

### Key Features

#### Host Species

- Rabbit

#### Reactivity

- Human, Mouse, Rat, Monkey

#### Applications

- WB, IHC, IF, ELISA

#### MW

- 72kD (Observed)

#### Isotype

- IgG

### Storage

**Storage\*** -15°C to -25°C/1 year (Do not lower than -25°C)

**Formulation** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

### Recommended Dilution Ratios

**WB 1:500-1:2000**

**IHC 1:100-1:300**

**IF 1:200-1:1000**

**ELISA 1:20000**

**Not yet tested in other applications.**

### Basic Information

**Clonality** Polyclonal

### Immunogen Information

**Immunogen** The antiserum was produced against synthesized peptide derived from human GTPase Activating Protein around the phosphorylation site of Ser387. AA range:353-402

## Specificity

Phospho-Rac GAP1 (S387) Polyclonal Antibody detects endogenous levels of Rac GAP1 protein only when phosphorylated at S387. The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):RISGC

## Target Information

**Gene name** RACGAP1

**Protein Name** Rac GTPase-activating protein 1

Organism	Gene ID	UniProt ID
Human	<a href="#">29127</a> ;	<a href="#">Q9H0H5</a> ;
Mouse	<a href="#">26934</a> ;	<a href="#">Q9WVM1</a> ;

### Cellular Localization

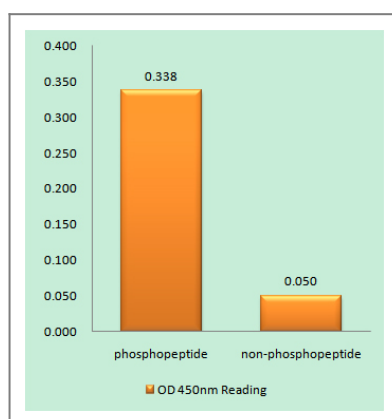
Nucleus . Cytoplasm. Cytoplasm, cytoskeleton, spindle . Cytoplasmic vesicle, secretory vesicle, acrosome. Cleavage furrow. Midbody, Midbody ring . Cell membrane; Peripheral membrane protein; Cytoplasmic side. Colocalizes with RND2 in Golgi-derived proacrosomal vesicles and the acrosome (By similarity). During interphase, localized to the nucleus and cytoplasm along with microtubules, in anaphase, is redistributed to the central spindle and, in telophase and cytokinesis, to the midbody ring, also called Flemming body. Colocalizes with RHOA at the myosin contractile ring during cytokinesis. Colocalizes with ECT2 to the mitotic spindles during anaphase/metaphase, the cleavage furrow during telophase and at the midbody at the end of cytokinesis. Colocalizes with Cdc42 to spindle microtubules from prometaphase to telophase. .

**Tissue specificity** Highly expressed in testis, thymus and placenta. Expressed at lower levels in spleen and peripheral blood lymphocytes. In testis, expression is restricted to germ cells with the highest levels of expression found in spermatocytes. Expression is regulated in a cell cycle-dependent manner and peaks during G2/M phase.

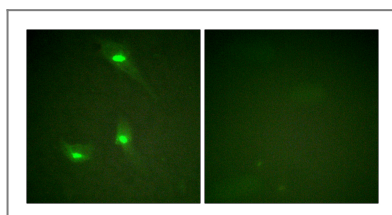
## Function

**Domain:**The coiled coil region is indispensable for localization to the midbody during cytokinesis.  
**Function:**Essential for the early stages of embryogenesis and may play a role in the microtubule-dependent steps in cytokinesis. Plays key roles in controlling cell growth and differentiation of hematopoietic cells through mechanisms other than regulating Rac GTPase activity. Also involved in the regulation of growth-related processes in adipocytes and myoblasts. May be involved in regulating spermatogenesis and in the RACGAP1 pathway in neuronal proliferation. Shows strong GAP (GTPase activation) activity towards CDC42 and RAC1 and less towards RHOA. Required for initiation of cleavage furrow ingression by regulating ECT2 and for assembly of the contractile ring. May play a role in regulating cortical activity through RHOA during cytokinesis. May participate in the regulation of sulfate transport in male germ cells.  
**induction:**Expression is down-regulated during macrophage differentiation of HL-60 cells.  
**PTM:**Phosphorylated at multiple sites in the midbody during cytokinesis. Phosphorylation by AURKB on SER-387 at the midbody is, at least in part, responsible for exerting its latent GAP activity towards RhoA.  
**similarity:**Contains 1 phorbol-ester/DAG-type zinc finger.  
**similarity:**Contains 1 Rho-GAP domain.  
**subcellular location:**During interphase, localized to the nucleus and cytoplasm along with microtubules, in anaphase, is redistributed to the central spindle and, in telophase and cytokinesis, to the midbody. Colocalizes with RHOA at the contractile ring during cytokinesis. Colocalizes with RND2 in Golgi-derived proacrosomal vesicles and the acrosome.  
**subunit:**Associates with alpha-, beta- and gamma-tubulin and microtubules. Interacts via its Rho-GAP domain with RND2. Associates with AURKB during M phase. Interacts via its Rho-GAP domain and basic region with PRC1. The interaction with PRC1 inhibits its GAP activity towards CDC42 in vitro, which may be required for maintaining normal spindle morphology. Associates with ECT2 at anaphase and during cytokinesis. Interacts with SLC26A8 via its N-terminus.  
**tissue specificity:**Highly expressed in testis, thymus and placenta. Expressed at lower levels in spleen and peripheral blood lymphocytes. In testis, expression is restricted to germ cells with the highest levels of expression found in spermatocytes. Expression is regulated in a cell cycle-dependent manner and peaks during G2/M phase.

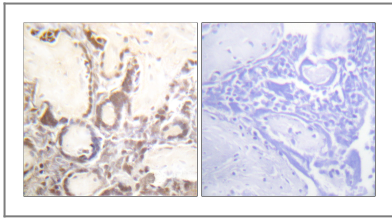
## Validation Data



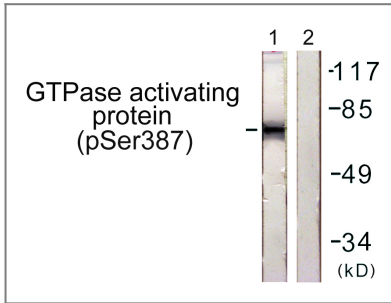
Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using GTPase Activating Protein (Phospho-Ser387) Antibody



Immunofluorescence analysis of HeLa cells, using GTPase Activating Protein (Phospho-Ser387) Antibody. The picture on the right is blocked with the phospho peptide.



Immunohistochemistry analysis of paraffin-embedded human placenta, using GTPase Activating Protein (Phospho-Ser387) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from COS7 cells, using GTPase Activating Protein (Phospho-Ser387) Antibody. The lane on the right is blocked with the phospho peptide.

## Contact information

Orders: [order.cn@immunoway.com](mailto:order.cn@immunoway.com)  
Support: [support.cn@immunoway.com](mailto:support.cn@immunoway.com)  
Telephone: 400-8787-807(China)  
Website: <http://www.immunoway.com.cn>  
Address: 2200 Ringwood Ave San Jose, CA 95131 USA



Please scan the QR code to access additional product information:

**Rac GAP1 (Phospho Ser387) Rabbit pAb**

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