

**Anti-Rab3A Picoband Antibody**  
Catalog # ABO12013**Specification****Anti-Rab3A Picoband Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P20336</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Ras-related protein Rab-3A(RAB3A) detection. Tested with WB in Human;Mouse;Rat.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-Rab3A Picoband Antibody - Additional Information**

**Gene ID** 5864

**Other Names**

Ras-related protein Rab-3A, RAB3A

**Calculated MW**

24984 MW KDa

**Application Details**

Western blot, 0.1-0.5 µg/ml, Mouse, Rat, Human<br>

**Subcellular Localization**

Cell membrane ; Lipid-anchor ; Cytoplasmic side .

**Tissue Specificity**

Specifically expressed in brain.

**Protein Name**

Ras-related protein Rab-3A

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence at the C-terminus of human Rab3A (192-220aa DTADPAVTGAKQGPQLSDQQVPPHQDCAC), different from the related mouse and rat sequences by two amino acids.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins

Storage

**At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

**Anti-Rab3A Picoband Antibody - Protein Information**

**Name** RAB3A

**Function**

Small GTP-binding protein that plays a central role in regulated exocytosis and secretion. Controls the recruitment, tethering and docking of secretory vesicles to the plasma membrane (By similarity). Upon stimulation, switches to its active GTP-bound form, cycles to vesicles and recruits effectors such as RIMS1, RIMS2, Rabphilin-3A/RPH3A, RPH3AL or SYTL4 to help the docking of vesicles onto the plasma membrane (By similarity). Upon GTP hydrolysis by GTPase-activating protein, dissociates from the vesicle membrane allowing the exocytosis to proceed (By similarity). Stimulates insulin secretion through interaction with RIMS2 or RPH3AL effectors in pancreatic beta cells (By similarity). Regulates calcium-dependent lysosome exocytosis and plasma membrane repair (PMR) via the interaction with 2 effectors, SYTL4 and myosin-9/MYH9 (PubMed:<a href="http://www.uniprot.org/citations/27325790" target="\_blank">27325790</a>). Acts as a positive regulator of acrosome content secretion in sperm cells by interacting with RIMS1 (PubMed:<a href="http://www.uniprot.org/citations/22248876" target="\_blank">22248876</a>, PubMed:<a href="http://www.uniprot.org/citations/30599141" target="\_blank">30599141</a>). Also plays a role in the regulation of dopamine release by interacting with synaptotagmin I/SYT (By similarity). Interacts with MADD (via uDENN domain); the GTP-bound form is preferred for interaction (By similarity).

**Cellular Location**

Cytoplasm, cytosol {ECO:0000250|UniProtKB:P63012}. Lysosome Cytoplasmic vesicle, secretory vesicle {ECO:0000250|UniProtKB:P63012} Cell projection, axon {ECO:0000250|UniProtKB:P63011}. Cell membrane; Lipid-anchor; Cytoplasmic side. Presynapse {ECO:0000250|UniProtKB:P63011}. Postsynapse {ECO:0000250|UniProtKB:P63011}. Note=Cycles between a vesicle-associated GTP-bound form and a cytosolic GDP-bound form {ECO:0000250|UniProtKB:P63012}

**Tissue Location**

Specifically expressed in brain.

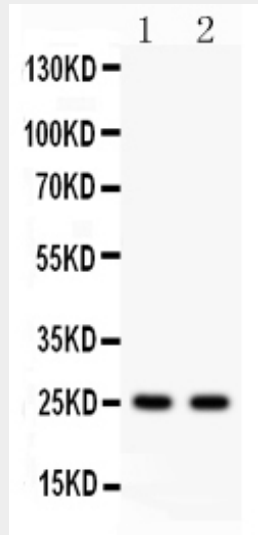
**Anti-Rab3A Picoband Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

- [Flow Cytometry](#)
- [Cell Culture](#)

### Anti-Rab3A Picoband Antibody - Images



Anti- Rab3A Picoband antibody, ABO12013, Western blotting All lanes: Anti Rab3A (ABO12013) at 0.5ug/ml Lane 1: Rat Brain Tissue Lysate at 50ug Lane 2: Mouse Brain Tissue Lysate at 50ug Predicted bind size: 25KD Observed bind size: 25KD

### Anti-Rab3A Picoband Antibody - Background

Ras-related protein Rab-3A is a protein that in humans is encoded by the RAB3A gene. This gene is mapped to 19p13.11. Synapsin I stimulated the RAB3A cycle by increasing GTP binding, GTPase activity, and RAB3A recruitment to the synaptic vesicle membrane. Conversely, RAB3A inhibited synapsin I binding to actin and synapsin I-induced synaptic vesicle clustering. It has been found that RAB3A was necessary for both forms of synaptic plasticity, and it is also involved in calcium exocytosis in neurons. In addition to that, RAB3A has been found to regulate a late step in synaptic vesicle fusion.