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Anti-Rab3A Picoband Antibody

Catalog # ABO12013

Specification

Anti-Rab3A Picoband Antibody - Product Information

Application	**WB**
Primary Accession	P20336
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

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 Na2HPO4, 0.05mg NaN3.

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 r˚Constitution, 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 vesicules 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:27325790). Acts as a positive regulator of acrosome content secretion in sperm cells by interacting with RIMS1 (PubMed:22248876, PubMed:30599141). 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

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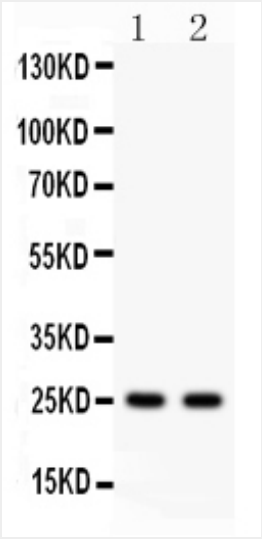
- Flow Cytomety
- Cell Culture

Anti-Rab3A Picoband Antibody - Images



Anti- Rab3A Picoband antibody, ABO12013, Western blottingAll lanes: Anti Rab3A (ABO12013) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: Mouse Brain Tissue Lysate at 50ugPredicted bind size: 25KDObserved 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.