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Anti-Arpc1b/p41-Arc (Thr-21), Phosphospecific Antibody

Catalog # AN1643

Specification

Anti-Arpc1b/p41-Arc (Thr-21), Phosphospecific Antibody - Product Information

Primary Accession	O15143
Reactivity	**Bovine, Chicken, Drosophila, C.Elegans**
Host	**Rabbit**
Clonality	**Rabbit Polyclonal**
Isotype	**IgG**
Calculated MW	**40950**

Anti-Arpc1b/p41-Arc (Thr-21), Phosphospecific Antibody - Additional Information

Gene ID	**10095**

Other Names
Arc41, p41, Arpc1b

Target/Specificity
Cellular morphology, adhesion, and motility occur through dynamic reorganization of actin-based superstructures. Actin-binding proteins are critical for regulating actin polymerization and superstructure formation. The Arp2/3 complex is an actin polymerization-inducing complex that includes Arp2, Arp3, p41-Arc, p34-Arc, p21-Arc, p20-Arc, and p16-Arc. Several nucleation promoting factors, such as WASP and coronin, regulate the activity of the Arp2/3 complex. In addition, the Arp2/3 complex may be regulated by phosphorylation of specific subunits in the complex. p41-Arc (Arpc1b) subunit Arpc1 has two isoforms in humans, Arpc1a and Arpc1b. PAK1 can bind and phosphorylate Thr-21 in Arpc1b leading to growth factor-stimulated cell motility. In addition, Arpc1b colocalizes with γ-tubulin at centrosomes and stimulates Aurora A activity. Aurora A phosphorylates Arpc1b on Thr-21 and a nonphosphorylatable Arpc1b mutant cannot activate Aurora A kinase and centrosome amplification. Thus, Arpc1b has roles in cytoskeletal dynamics during cell motility and mitosis, and these activities are regulated by phosphorylation at Thr-21

Format
Antigen Affinity Purified

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Anti-Arpc1b/p41-Arc (Thr-21), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping
Blue Ice

Anti-Arpc1b/p41-Arc (Thr-21), Phosphospecific Antibody - Protocols

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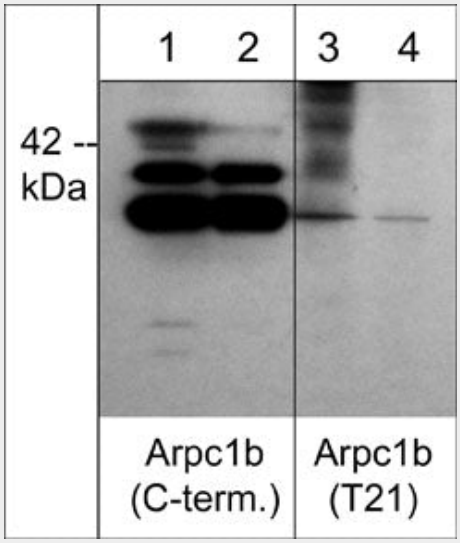
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Arpc1b/p41-Arc (Thr-21), Phosphospecific Antibody - Images



Western blot analysis of Arpc1b phosphorylation in human A431 stimulated with calyculin A (100 nM) for 30 min (lanes 1 & 3). The blots were treated with lambda phosphatase to remove phosphorylation (lanes 2 & 4), then probed with anti-Arpc1b (C-terminal region) (lanes 1 & 2) or anti-Arpc1b (Thr-21) (lanes 3 & 4).

Anti-Arpc1b/p41-Arc (Thr-21), Phosphospecific Antibody - Background

Cellular morphology, adhesion, and motility occur through dynamic reorganization of actin-based superstructures. Actin-binding proteins are critical for regulating actin polymerization and superstructure formation. The Arp2/3 complex is an actin polymerization-inducing complex that includes Arp2, Arp3, p41-Arc, p34-Arc, p21-Arc, p20-Arc, and p16-Arc. Several nucleation promoting factors, such as WASP and coronin, regulate the activity of the Arp2/3 complex. In addition, the Arp2/3 complex may be regulated by phosphorylation of specific subunits in the complex. p41-Arc (Arpc1b) subunit Arpc1 has two isoforms in humans, Arpc1a and Arpc1b. PAK1 can bind and phosphorylate Thr-21 in Arpc1b leading to growth factor-stimulated cell motility. In addition, Arpc1b colocalizes with γ-tubulin at centrosomes and stimulates Aurora A activity. Aurora A phosphorylates Arpc1b on Thr-21 and a nonphosphorylatable Arpc1b mutant cannot activate Aurora A kinase and centrosome amplification. Thus, Arpc1b has roles in cytoskeletal dynamics during cell motility and mitosis, and these activities are regulated by phosphorylation at Thr-21