

**Anti-Arpc1b/p41-Arc (Thr-21), Phosphospecific Antibody**  
**Catalog # AN1643****Specification****Anti-Arpc1b/p41-Arc (Thr-21), Phosphospecific Antibody - Product Information**

Primary Accession	<a href="#">O15143</a>
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
<b>Other Names</b>	
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  $\gamma$ -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**

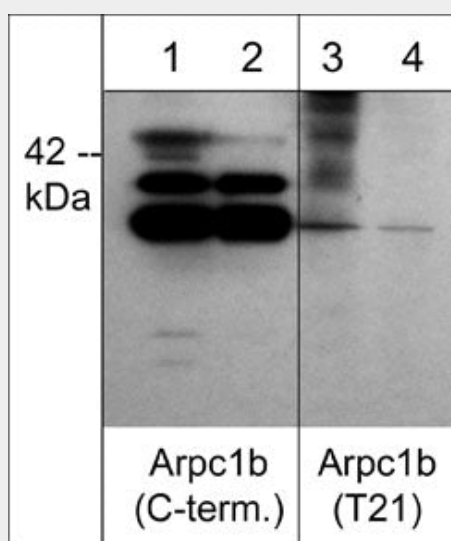
Blue Ice

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

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-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  $\gamma$ -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.