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ARPC1B Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8754c

Product Information

Application	IHC-P, FC, WB, E
Primary Accession	O15143
Other Accession	O88656, Q9WV32, Q58CQ2
Reactivity	Human
Predicted	Bovine, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB22849
Calculated MW	40950
Antigen Region	159-188

Additional Information

Gene ID	10095
Other Names	Actin-related protein 2/3 complex subunit 1B, Arp2/3 complex 41 kDa subunit, p41-ARC, ARPC1B, ARC41
Target/Specificity	This ARPC1B antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 159-188 amino acids from the Central region of human ARPC1B.
Dilution	IHC-P~~1:100~500 FC~~1:10~50 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ARPC1B Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ARPC1B (HGNC:704)
Synonyms	ARC41

Function	Component of the Arp2/3 complex, a multiprotein complex that mediates actin polymerization upon stimulation by nucleation-promoting factor (NPF) (PubMed:11741539, PubMed:9230079). The Arp2/3 complex mediates the formation of branched actin networks in the cytoplasm, providing the force for cell motility (PubMed:11741539, PubMed:9230079). In addition to its role in the cytoplasmic cytoskeleton, the Arp2/3 complex also promotes actin polymerization in the nucleus, thereby regulating gene transcription and repair of damaged DNA (PubMed:29925947). The Arp2/3 complex promotes homologous recombination (HR) repair in response to DNA damage by promoting nuclear actin polymerization, leading to drive motility of double-strand breaks (DSBs) (PubMed:29925947).
Cellular Location	Cytoplasm, cytoskeleton. Nucleus

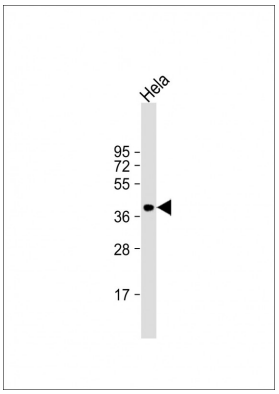
Background

ARPC1B is one of seven subunits of the human Arp2/3 protein complex. This subunit is a member of the SOP2 family of proteins and is most similar to the protein encoded by gene ARPC1A. The similarity between these two proteins suggests that they both may function as p41 subunit of the human Arp2/3 complex that has been implicated in the control of actin polymerization in cells. It is possible that the p41 subunit is involved in assembling and maintaining the structure of the Arp2/3 complex.

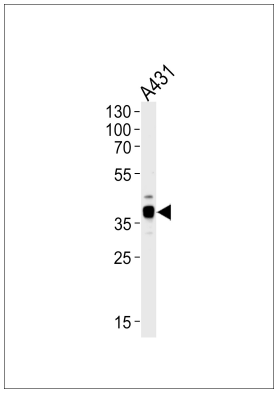
References

Volkmann,N., et.al., Science 293 (5539), 2456-2459 (2001)

Images

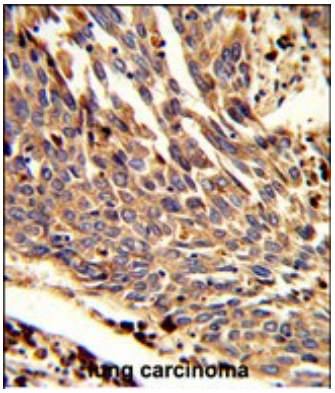


Anti-ARPC1B Antibody (Center) at 1:1000 dilution + Hela whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 41 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

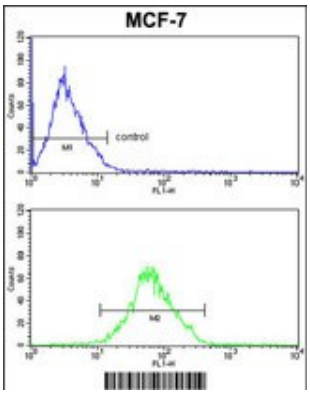


Western blot analysis of lysate from A431 cell line, using ARPC1B Antibody (Center)(Cat. #AP8754c). AP8754c was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug per lane.

Formalin-fixed and paraffin-embedded human lung carcinoma reacted with ARPC1B Antibody (Center), which was peroxidase-conjugated to the secondary antibody,



followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



ARPC1B Antibody (Center) (Cat.#AP8754c) FC analysis of MCF-7 cells (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.