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ARF6 Antibody

Catalog # ASC11763

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	P62330
Other Accession	NP_001654, 4502211
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	20082
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	ARF6 antibody can be used for detection of ARF6 by Western blot at 1 - 2 g/ml. Antibody can also be used for Immunohistochemistry starting at 5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	382
Other Names	ADP-ribosylation factor 6, ARF6
Target/Specificity	ARF6; ARF6 antibody is human, mouse and rat reactive.
Reconstitution & Storage	ARF6 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	ARF6 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ARF6 {ECO:0000303|Ref.6, ECO:0000312|HGNC:HGNC:659}
Function	GTP-binding protein involved in protein trafficking that regulates endocytic recycling and cytoskeleton remodeling (PubMed:11266366, PubMed:16737952, PubMed:18400762, PubMed:21170023, PubMed:32103017, PubMed:7589240). GTP-bound form plays an important role in the transport of multiple palmitoylated proteins form the Golgi to the plasma membrane (PubMed:37461827). Required for normal completion of mitotic cytokinesis (By similarity). Plays a role in the reorganization of the actin cytoskeleton and the formation of stress fibers (By similarity). Involved in the regulation of dendritic spine development, contributing to the regulation of dendritic branching and filopodia extension (PubMed:14978216). Potentiates the neurite outgrowth in primary neurons by interacting with the molecular adapter APBB1 (PubMed:36250347). Plays an

	important role in membrane trafficking, during junctional remodeling and epithelial polarization (PubMed:36017701). Regulates surface levels of adherens junction proteins such as CDH1 (By similarity). Required for NTRK1 sorting to the recycling pathway from early endosomes (By similarity).
Cellular Location	Cytoplasm, cytosol. Cell membrane; Lipid-anchor. Endosome membrane; Lipid-anchor. Recycling endosome membrane; Lipid-anchor. Cell projection, filopodium membrane; Lipid- anchor. Cell projection, ruffle. Cleavage furrow. Midbody, Midbody ring. Early endosome membrane {ECO:0000250|UniProtKB:P62331}; Lipid-anchor {ECO:0000250|UniProtKB:P62331}. Golgi apparatus, trans-Golgi network membrane {ECO:0000250|UniProtKB:P62331}; Lipid-anchor {ECO:0000250|UniProtKB:P62331}. Note=Distributed uniformly on the plasma membrane, as well as throughout the cytoplasm during metaphase Subsequently concentrated at patches in the equatorial region at the onset of cytokinesis, and becomes distributed in the equatorial region concurrent with cleavage furrow ingression. In late stages of cytokinesis, concentrates at the midbody ring/Flemming body (PubMed:23603394). Recruitment to the midbody ring requires both activation by PSD/EFA6A and interaction with KIF23/MKLP1 (PubMed:23603394). After abscission of the intercellular bridge, incorporated into one of the daughter cells as a midbody remnant and localizes to punctate structures beneath the plasma membrane (PubMed:23603394). Recruited to the cell membrane in association with CYTH2 and ARL4C (PubMed:17398095). Colocalizes with DAB2IP at the plasma membrane and endocytic vesicles (PubMed:19948740) Myristoylation is required for proper localization to membranes: myristoylation on Lys-3 allows ARF6 to remain on membranes during the GTPase cycle (PubMed:32103017, PubMed:7589240)
Tissue Location	Ubiquitous, with higher levels in heart, substantia nigra, and kidney.

Background

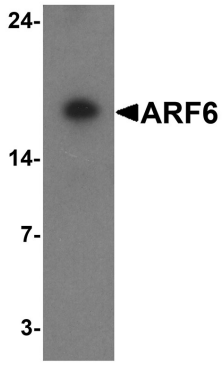
The ADP-ribosylation factor 6 (ARF6) is a member of the ARF family, which is part of the RAS superfamily (1). The ARF proteins are small guanine nucleotide-binding proteins that stimulate the ADP-ribosyltransferase activity of cholera toxin and play a role in vesicular trafficking and as activators of phospholipase D (2). The product of this gene is localized to the plasma membrane (3), and regulates vesicular trafficking, remodelling of membrane lipids, and signaling pathways that lead to actin remodeling (4).

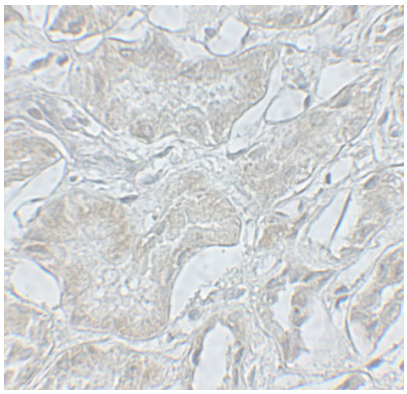
References

Graves RA, Tontonoz P, and Spiegelman BM. Analysis of a tissue-specific enhancer: ARF6 regulates adipogenic gene expression. Mol. Cell Biol. 1992; 12:1202-8.
Moss J and Vaughan M. Activation of toxin ADP-ribosyltransferases by eukaryotic ADP-ribosylation factors. Mol Cell Biochem. 1999; 193:153-7.
Cavenagh MM, Whitney JA, Carroll K, et al. Intracellular distribution of Arf proteins in mammalian cells. Arf6 is uniquely localized to the plasma membrane. J. Biol. Chem. 1996; 271:21767-74.
Schweitzer JK, Sedgewick AE, and D'Souza-Schorey C. ARF6-mediated endocytic recycling impacts cell movement, cell division and lipid homestasis. Semin. Cell Dev. Biol. 2011; 22:39-47.

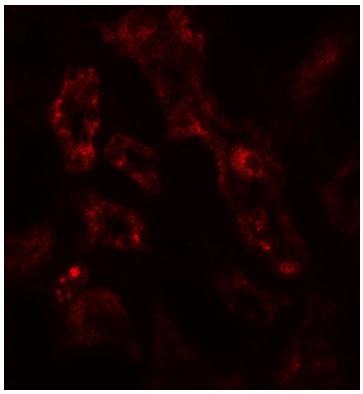
Images

Western blot analysis of ARF6 in rat liver tissue lysate with ARF6 antibody at 1 µg/ml.





Immunohistochemistry of ARF6 in human kidney tissue with ARF6 antibody at 5 µg/mL.



Immunofluorescence of ARF6 in human kidney tissue with ARF6 antibody at 20 µg/mL.

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