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Mouse Monoclonal Antibody to ARF1
Purified Mouse Monoclonal Antibody
Catalog # AO2352a

Specification

Mouse Monoclonal Antibody to ARF1 - Product Information

Application	**WB, IHC, FC, ICC, E**
Primary Accession	P84077
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG2a**
Calculated MW	**20.7kDa KDa**

Description
ADP-ribosylation factor 1 (ARF1) is a member of the human ARF gene family. The family members encode small guanine nucleotide-binding proteins that stimulate the ADP-ribosyltransferase activity of cholera toxin and play a role in vesicular trafficking as activators of phospholipase D. The gene products, including 6 ARF proteins and 11 ARF-like proteins, constitute a family of the RAS superfamily. The ARF proteins are categorized as class I (ARF1, ARF2 and ARF3), class II (ARF4 and ARF5) and class III (ARF6), and members of each class share a common gene organization. The ARF1 protein is localized to the Golgi apparatus and has a central role in intra-Golgi transport. Multiple alternatively spliced transcript variants encoding the same protein have been found for this gene.;

Immunogen
Purified recombinant fragment of human ARF1 (AA: 76-182) expressed in E. Coli.

Formulation
Purified antibody in PBS with 0.05% sodium azide

Application Note
ELISA: 1/10000; WB: 1/500 - 1/2000; IHC: 1/200 - 1/1000; ICC: 1/200 - 1/1000; FCM: 1/200 - 1/400

Mouse Monoclonal Antibody to ARF1 - Additional Information

Gene ID 375

Dilution
WB~~1:1000
IHC~~1:100~500
FC~~1:10~50
ICC~~N/A
E~~N/A

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

Mouse Monoclonal Antibody to ARF1 is for research use only and not for use in diagnostic or therapeutic procedures.

Mouse Monoclonal Antibody to ARF1 - Protein Information

Name ARF1

Function
Small GTPase involved in protein trafficking between different compartments (PubMed:8253837). Modulates vesicle budding and uncoating within the Golgi complex (PubMed:8253837). In its GTP-bound form, triggers the recruitment of coatomer proteins to the Golgi membrane (PubMed:8253837). The hydrolysis of ARF1-bound GTP, which is mediated by ARFGAPs proteins, is required for dissociation of coat proteins from Golgi membranes and vesicles (PubMed:8253837). The GTP- bound form interacts with PICK1 to limit PICK1-mediated inhibition of Arp2/3 complex activity; the function is linked to AMPA receptor (AMPAR) trafficking, regulation of synaptic plasticity of excitatory synapses and spine shrinkage during long-term depression (LTD) (By similarity). Plays a key role in the regulation of intestinal stem cells and gut microbiota, and is essential for maintaining intestinal homeostasis (By similarity). Also plays a critical role in mast cell expansion but not in mast cell maturation by facilitating optimal mTORC1 activation (By similarity).

Cellular Location
Golgi apparatus membrane; Lipid-anchor; Cytoplasmic side. Synapse, synaptosome {ECO:0000250|UniProtKB:P84079}. Postsynaptic density {ECO:0000250|UniProtKB:P84079}. Note=In the GDP-bound form, associates transiently with the membranes via its myristoylated N-terminus where guanine nucleotide-exchange factor (GEF)-mediated nucleotide exchange occurs (By similarity). Following nucleotide exchange, the GTP-bound form undergoes a conformational change, leading to the exposure of a myristoylated N-terminal amphipathic helix that provides stable membrane anchorage (By similarity). {ECO:0000250|UniProtKB:P84080}

Mouse Monoclonal Antibody to ARF1 - Protocols

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

Mouse Monoclonal Antibody to ARF1 - Images

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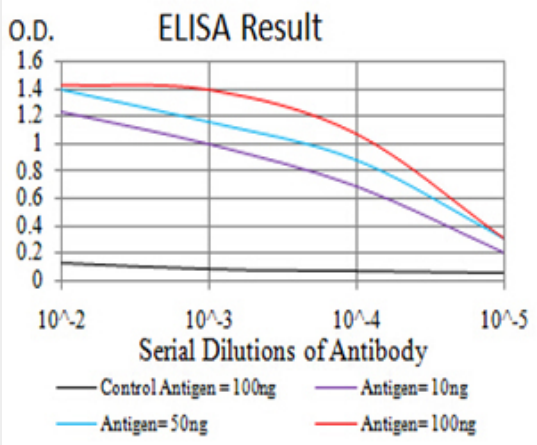
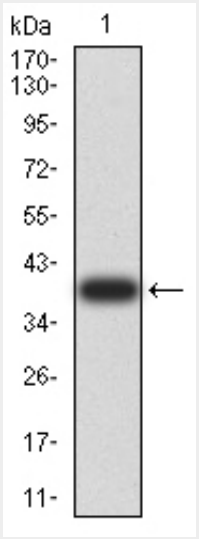
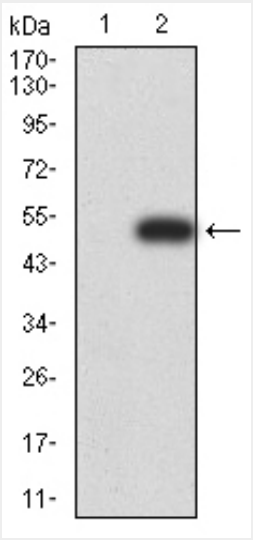


Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)



Western blot analysis using ARF1 mAb against human ARF1 (AA: 76-182) recombinant protein. (Expected MW is 39.3 kDa)



Western blot analysis using ARF1 mAb against HEK293 (1) and ARF1 (AA: 1-182)-hIgGFc transfected HEK293 (2) cell lysate.

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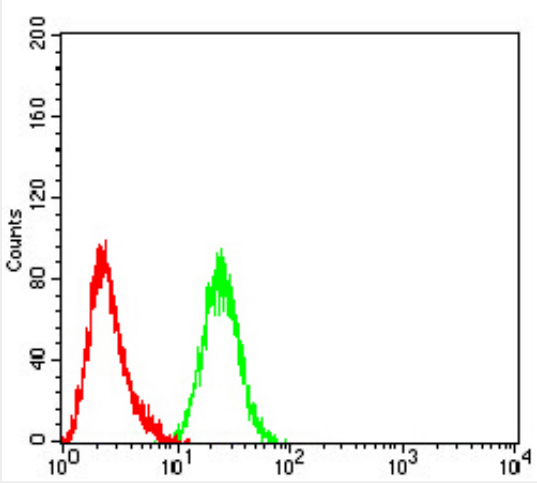
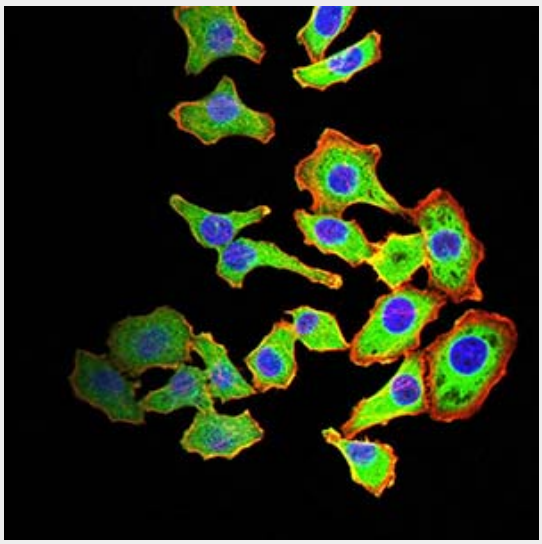
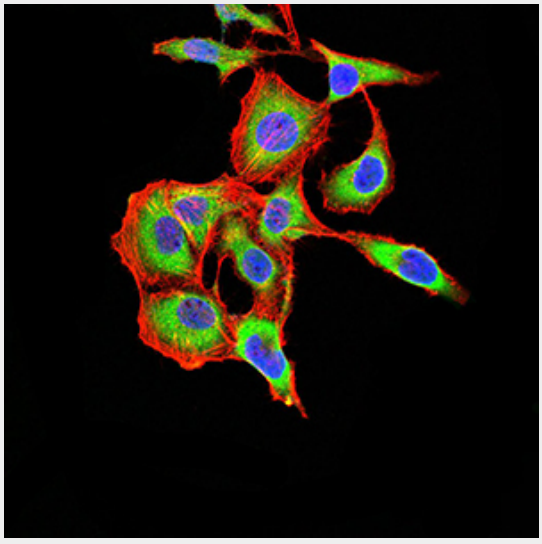


Flow cytometric analysis of Hela cells using ARF1 mouse mAb (green) and negative control (red).

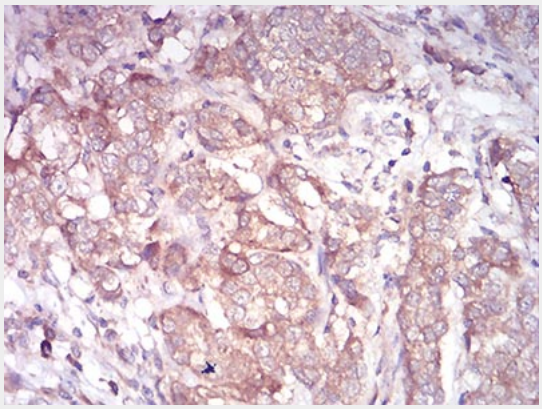


Immunofluorescence analysis of HL-7702 cells using ARF1 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor- 555 phalloidin. Secondary antibody from Fisher



Immunofluorescence analysis of SK-OV-3 cells using ARF1 mouse mAb (green). Blue: DRAQ5

fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor- 555 phalloidin. Secondary antibody from Fisher



Immunohistochemical analysis of paraffin-embedded bladder cancer tissues using ARF1 mouse mAb with DAB staining.

Mouse Monoclonal Antibody to ARF1 - References

1.Mol Biol Cell. 2014 Jan;25(1):17-29. ; 2.Cancer Sci. 2012 Jun;103(6):1136-44. ;