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ARF-BP1 Antibody
Catalog # ASC10538

Specification

ARF-BP1 Antibody - Product Information

Application	**WB, IF, ICC, E**
Primary Accession	Q7Z6Z7
Other Accession	NP_113584, 61676188
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**ARF-BP1 antibody can be used for detection of ARF-BP1 by Western blot at 1 µg/mL. Antibody can also be used for immunocytochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**

ARF-BP1 Antibody - Additional Information

Gene ID **10075**

Other Names
ARF-BP1 Antibody: MULE, Ib772, LASU1, UREB1, HECTH9, URE-B1, ARF-BP1, HSPC272, KIAA0312, KIAA1578, E3 ubiquitin-protein ligase HUWE1, ARF-binding protein 1, HECT, UBA and WWE domain containing 1

Target/Specificity
HUWE1;

Reconstitution & Storage
ARF-BP1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions
ARF-BP1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

ARF-BP1 Antibody - Protein Information

Name HUWE1

Synonyms KIAA0312, KIAA1578, UREB1

Function
E3 ubiquitin-protein ligase which mediates ubiquitination and subsequent proteasomal degradation of target proteins (PubMed:15567145, PubMed:15767685, PubMed:<a href="http://www.uniprot.org/citations/15989957"

target="_blank">15989957, PubMed:17567951, PubMed:18488021, PubMed:19037095, PubMed:19713937, PubMed:20534529, PubMed:30217973). Regulates apoptosis by catalyzing the polyubiquitination and degradation of MCL1 (PubMed:15989957). Mediates monoubiquitination of DNA polymerase beta (POLB) at 'Lys-41', 'Lys-61' and 'Lys-81', thereby playing a role in base-excision repair (PubMed:19713937). Also ubiquitinates the p53/TP53 tumor suppressor and core histones including H1, H2A, H2B, H3 and H4 (PubMed:15567145, PubMed:15767685, PubMed:15989956). Ubiquitinates MFN2 to negatively regulate mitochondrial fusion in response to decreased stearoylation of TFRC (PubMed:26214738). Ubiquitination of MFN2 also takes place following induction of mitophagy; AMBRA1 acts as a cofactor for HUWE1-mediated ubiquitination (PubMed:30217973). Regulates neural differentiation and proliferation by catalyzing the polyubiquitination and degradation of MYCN (PubMed:18488021). May regulate abundance of CDC6 after DNA damage by polyubiquitinating and targeting CDC6 to degradation (PubMed:17567951). Mediates polyubiquitination of isoform 2 of PA2G4 (PubMed:19037095). Acts in concert with MYCBP2 to regulate the circadian clock gene expression by promoting the lithium-induced ubiquination and degradation of NR1D1 (PubMed:20534529). Binds to an upstream initiator-like sequence in the preprodynorphin gene (By similarity). Mediates HAPSTR1 degradation, but is also a required cofactor in the pathway by which HAPSTR1 governs stress signaling (PubMed:35776542). Acts as a regulator of the JNK and NF-kappa-B signaling pathways by mediating assembly of heterotypic 'Lys-63'-/'Lys- 48'-linked branched ubiquitin chains that are then recognized by TAB2: HUWE1 mediates branching of 'Lys-48'-linked chains of substrates initially modified with 'Lys-63'-linked conjugates by TRAF6 (PubMed:27746020). 'Lys-63'-/'Lys-48'-linked branched ubiquitin chains protect 'Lys-63'-linkages from CYLD deubiquitination (PubMed:27746020). Ubiquitinates PPARA in hepatocytes (By similarity).

Cellular Location
Cytoplasm. Nucleus. Mitochondrion. Note=Mainly expressed in the cytoplasm of most tissues, except in the nucleus of spermatogonia, primary spermatocytes and neuronal cells (By similarity). Recruited to mitochondria following interaction with AMBRA1 (PubMed:30217973) {ECO:0000250|UniProtKB:Q7TMY8, ECO:0000269|PubMed:30217973}

Tissue Location
Weakly expressed in heart, brain and placenta but not in other tissues. Expressed in a number of cell lines, predominantly in those from colorectal carcinomas

ARF-BP1 Antibody - Protocols

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

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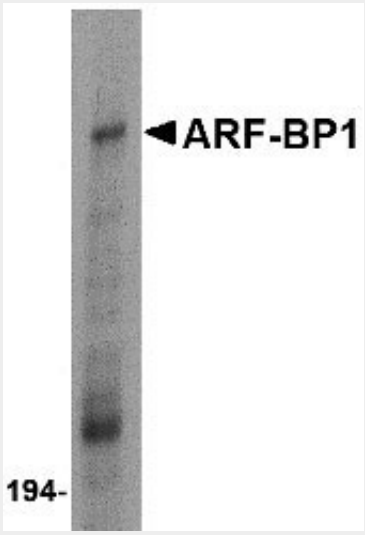
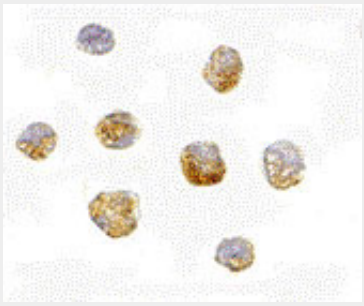
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

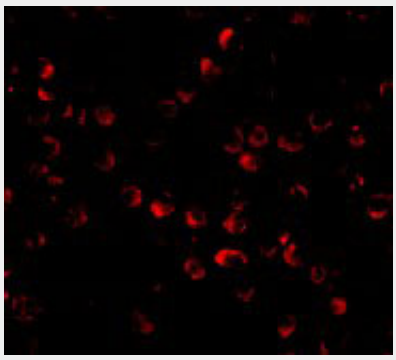
ARF-BP1 Antibody - Images



Western blot analysis of ARF-BP1 in Daudi cell lysate with ARF-BP1 antibody at 1 µg/mL.



Immunocytochemistry of ARF-BP1 in Daudi cells with ARF-BP1 antibody at 5 µg/mL.



Immunofluorescence of ARF-BP1 in Daudi cells with ARF-BP1 antibody at 20 µg/mL.

ARF-BP1 Antibody - Background

ARF-BP1 Antibody: The ARF tumor suppressor is a critical regulator of p53 stability. In addition to p53, ARF1 binds to other proteins such as MDM2 and ARF-BP1, a large protein containing HECT, UBA and WWE motifs. ARF-BP1 directly binds and ubiquitinates p53; this activity is inhibited by ARF, indicating that ARF-BP1 is a critical mediator of the p53-dependent and p53-independent tumor suppressor functions of ARF. ARF-BP1 can also catalyze the polyubiquitination of Mcl-1, an anti-apoptotic Bcl-2 family member involved in DNA damage-induced apoptosis. Elimination of ARF-BP1 expression by RNA interference stabilized Mcl-1 protein, resulting in an attenuation of apoptosis induced by DNA-damage agents.

ARF-BP1 Antibody - References

Gallagher SJ, Kefford RF and Rizos H. The ARF tumour suppressor. Int. J. Biochem. Cell Biol.2006; 38:1637-41.
Pomerantz J, Schreiber-Agus N, Leigeois NJ, et al. The Ink4a tumor suppressor gene product, p19ARF interacts with MDM2 and neutralizes MDM2’s inhibition of p53. Cell1998; 92:725-34.
Chen D, Kon N, Li M, et al. ARF-BP1/Mule is a critical mediator of the ARF tumor suppressor. Cell2005; 121:1071-83.
Zhong Q, Gao W, Du F, et al. Mule/ARF-BP1, a BH3-only E3 ubiquitin ligase, catalyzes the polyubiquitination of Mcl-1 and regulates apoptosis. Cell2005; 121:1085-95.