

Rabbit Arc Polyclonal Antibody | anti-ARC antibody

Arc Antibody

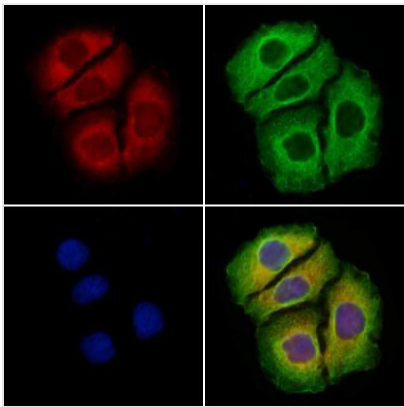
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA31242	Rabbit	Human, Mouse, Rat Predicted Reactivity: Pig(100%), Bovine(100%), Chicken(88%), Xenopus(83%)	ELISA

PRODUCT SYNONYMS

Arc; Polyclonal Antibody; Arc Antibody; activity regulated cytoskeleton associated protein; activity regulated gene 3.1 protein homolog; Activity-regulated cytoskeleton-associated protein; Activity-regulated gene 3.1 protein homolog; ARC/ARG3.1; ARC_HUMAN; Arg 3.1; Arg3.1; anti-ARC antibody

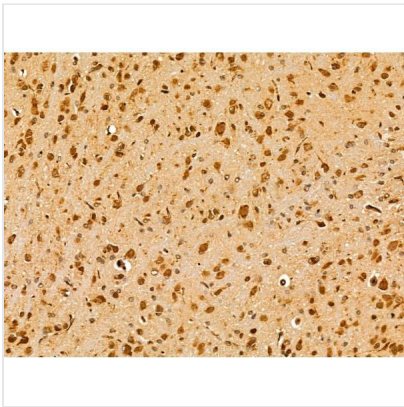
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig(100%), Bovine(100%), Chicken(88%), Xenopus(83%)
Clonality	Polyclonal
Isotype	IgG
Specificity	Arc Antibody detects endogenous levels of total Arc.
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin (Thermo Fisher Scientific).
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol
Concentration	1mg/ml (varies by lot)
Sequence Length	396
Applicable Applications for anti-ARC antibody	ELISA
Application Notes	IF: 1:100-1:500 ICC: 1:100-1:500 WB: 1:500-1:2000 IHC: 1:50-1:200 ELISA(peptide): 1:20,000-1:40,000
Immunogen	A synthesized peptide derived from human Arc, corresponding to a region within the internal amino acids.
Fragment	Fab fragment
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



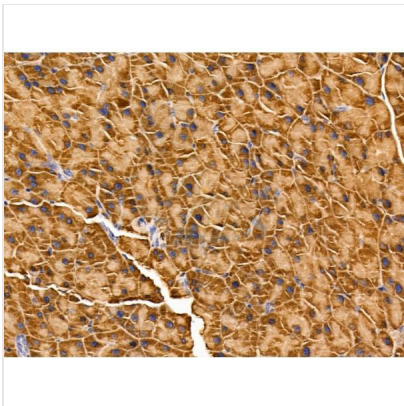
IF (Immunofluorescence)

AAA31242 staining HeLa cells by IF/ICC. The samples were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25°C. Samples were then incubated with primary Ab(AAA31242 1:200) and mouse anti-beta tubulin Ab(T0023 1:200) for 1 hour at 37°C. An AlexaFluor594 conjugated goat anti-rabbit IgG(H+L) Ab(Red) and an AlexaFluor488 conjugated goat anti-mouse IgG(H+L) Ab(Green) were used as the secondary antibody. The nuclear counter stain is DAPI(blue).



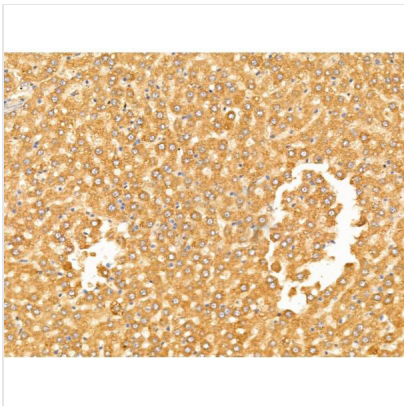
IHC (Immunohistochemistry-Paraffin)

AAA31242 at 1/100 staining Mouse brain tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4°C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



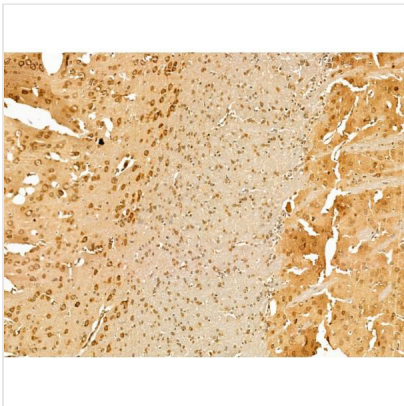
IHC (Immunohistochemistry-Paraffin)

AAA31242 at 1/100 staining Mouse pancreatic tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4°C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



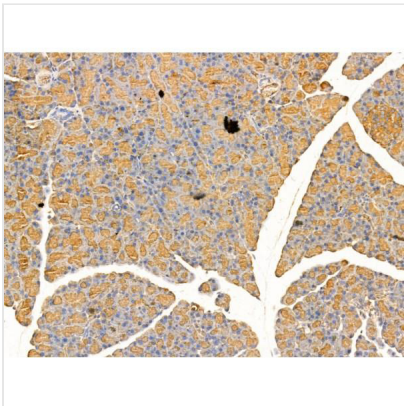
IHC (Immunohistochemistry-Paraffin)

AAA31242 at 1/100 staining Rat liver tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4°C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry-Paraffin)

AAA31242 at 1/100 staining Rat brain tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4°C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry-Paraffin)

AAA31242 at 1/100 staining Rat pancreatic tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the primary antibody at 4°C overnight. An HRP conjugated anti-Rabbit antibody was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-ARC antibody	Function: Master regulator of synaptic plasticity that self-assembles into virion-like capsids that encapsulate RNAs and mediate intercellular RNA transfer in the nervous system. ARC protein is released from neurons in extracellular vesicles that mediate the transfer of ARC mRNA into new target cells, where ARC mRNA can undergo activity-dependent translation. ARC capsids are endocytosed and are able to transfer ARC mRNA into the cytoplasm of neurons. Acts as a key regulator of synaptic plasticity: required for protein synthesis-dependent forms of long-term potentiation (LTP) and depression (LTD) and for the formation of long-term memory. Regulates synaptic plasticity by promoting endocytosis of AMPA receptors (AMPA) in response to synaptic activity: this endocytic pathway maintains levels of surface AMPARs in response to chronic changes in neuronal activity through synaptic scaling, thereby contributing to neuronal homeostasis. Acts as a postsynaptic mediator of activity-dependent synapse elimination in the developing cerebellum by mediating elimination of surplus climbing fiber synapses. Accumulates at weaker synapses, probably to prevent their undesired enhancement. This suggests that ARC-containing virion-like capsids may be required to eliminate synaptic material. Required to transduce experience into long-lasting changes in visual cortex plasticity and for long-term memory (By similarity). Involved in postsynaptic trafficking and processing of amyloid-beta A4 (APP) via interaction with PSEN1 (By similarity). In addition to its role in synapses, also involved in the regulation of the immune system: specifically expressed in skin-migratory dendritic cells and regulates fast dendritic cell migration, thereby regulating T-cell activation (By similarity). Post Translational Modifications: Palmitoylation anchors the protein into the membrane by allowing direct insertion into the hydrophobic core of the lipid bilayer. Ubiquitinated by UBE3A, leading to its degradation by the proteasome, thereby promoting AMPA receptors (AMPA) expression at synapses. Phosphorylation at Ser-260 by CaMK2 prevents homooligomerization into virion-like capsids by disrupting an interaction surface essential for high-order oligomerization. Phosphorylation by CaMK2 inhibits synaptic activity. Subcellular Location: Extracellular vesicle membrane>Lipid-anchor. Cell junction>Synapse>Postsynaptic cell membrane>Lipid-anchor. Cell junction>Synapse. Cell junction>Synapse>Postsynaptic density. Early endosome membrane. Cell projection>Dendrite. Cytoplasm>Cytoskeleton. Cytoplasm>Cell cortex. Cell projection>Dendritic spine. Cytoplasmic vesicle>Secretory vesicle>Acrosome. Note: Forms virion-like extracellular vesicles that are released from neurons. Enriched in postsynaptic density of dendritic spines. Targeted to inactive synapses following interaction with CAMK2B in the kinase inactive state. Accumulation at weaker synapses may be required to prevent their undesired enhancement. Associated with the cell cortex of neuronal soma and dendrites (By similarity). Associated with the sperm tail (By similarity). Subunit Structure: Homooligomer; homooligomerizes into virion-like capsids (PubMed:25748042). Interacts with SH3GL1/endophilin-2, SH3GL3/endophilin-3 and DNM2/DYN2 (By similarity). Interacts with CAMK2B (in the kinase inactive state); leading to target ARC to inactive synapses (By similarity). Interacts with PSEN1 (By similarity). Similarity: The protein is evolutionarily related to retrotransposon Gag proteins: it contains large N- and C-terminal domains that form a bi-lobar architecture similar to the capsid domain of human immunodeficiency virus (HIV) gag protein. It contains structural elements found within viral Gag polyproteins originated from the Ty3/gypsy retrotransposon family and retains the ability to form virion-like capsid structures that can mediate mRNA transfer between cells. Tetrapod and fly Arc protein-coding genes originated independently from distinct lineages of Ty3/gypsy retrotransposons. Belongs to the ARC/ARG3.1 family.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	8567330
NCBI GeneID	23237
NCBI Accession #	NP_056008.1
NCBI GenBank Nucleotide #	NP_056008.1
UniProt Accession #	Q7LC44
Molecular Weight	Observed Molecular Weight: (Observed)45kD. Predicted Molecular Weight: (Calculated)45kDa.
NCBI Official Full Name	activity-regulated cytoskeleton-associated protein
NCBI Official Synonym Full Names	activity regulated cytoskeleton associated protein
NCBI Official Symbol	ARC

NCBI Official Synonym Symbols	hArc; Arg3.1
NCBI Protein Information	activity-regulated cytoskeleton-associated protein
UniProt Protein Name	Activity-regulated cytoskeleton-associated protein
UniProt Gene Name	ARC
UniProt Synonym Gene Names	Arg3.1
UniProt Entry Name	ARC_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/arc-antibody-elisa/31242>