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ARL8B Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP57762

Product Information

Application	IHC-P, IHC-F, IF, ICC, E
Primary Accession	Q9NVJ2
Reactivity	Rat, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	21539

Additional Information

Gene ID	55207
Other Names	ADP-ribosylation factor-like protein 8B, ADP-ribosylation factor-like protein 10C, Novel small G protein indispensable for equal chromosome segregation 1, ARL8B, ARL10C, GIE1
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	ARL8B (HGNC:25564)
Synonyms	ARL10C, GIE1
Function	Small GTPase which cycles between active GTP-bound and inactive GDP-bound states (PubMed:15331635, PubMed:16537643). In its active state, binds to a variety of effector proteins playing a key role in the regulation of lysosomal positioning which is important for nutrient sensing, natural killer cell-mediated cytotoxicity and antigen presentation. Along with its effectors, orchestrates lysosomal transport and fusion (PubMed:16537643, PubMed:16650381, PubMed:25898167, PubMed:27808481, PubMed:28325809). Localizes specifically to lysosomal membranes and mediates anterograde lysosomal motility by recruiting PLEKHM2, which in turn recruits the motor protein kinesin-1 on lysosomes. Required for lysosomal and cytolytic granule exocytosis (PubMed:22172677, PubMed:24088571, PubMed:29592961). Critical factor involved in NK cell-mediated cytotoxicity. Drives the polarization of cytolytic granules and microtubule-organizing centers (MTOCs) toward the immune synapse

between effector NK lymphocytes and target cells (PubMed:24088571). In neurons, mediates the anterograde axonal long-range transport of presynaptic lysosome-related vesicles required for presynaptic biogenesis and synaptic function (By similarity). Also acts as a regulator of endosome to lysosome trafficking pathways of special significance for host defense (PubMed:21802320). Recruits RUFY1 onto early endosomes regulating endosomes to trans-Golgi network proteins retrieval (PubMed:36282215). Regulates cargo trafficking to lysosomes by binding to PLEKHM1 and recruiting the HOPS subunit VPS41, resulting in functional assembly of the HOPS complex on lysosomal membranes (PubMed:16537643, PubMed:25908847). Plays an important role in cargo delivery to lysosomes for antigen presentation and microbial killing. Directs the intersection of CD1d with lipid antigens in lysosomes, and plays a role in intersecting phagosomes with lysosomes to generate phagolysosomes that kill microbes (PubMed:21802320, PubMed:25908847). Involved in the process of MHC II presentation. Regulates the delivery of antigens to lysosomes and the formation of MHC II-peptide complexes through the recruitment of the HOPS complex to lysosomes allowing the fusion of late endosomes to lysosomes (By similarity). May play a role in chromosome segregation (PubMed:15331635).

Cellular Location

Late endosome membrane. Lysosome membrane. Cytoplasm, cytoskeleton, spindle. Cell projection, axon {ECO:0000250|UniProtKB:Q9CQW2}. Synapse {ECO:0000250|UniProtKB:Q9CQW2} Cytolytic granule membrane. Early endosome membrane. Note=GTP-bound form resides on lysosomal membranes, whereas GDP-bound form is likely associated with microtubular structures (PubMed:16650381). Localizes with microtubules at the spindle mid-zone during mitosis. In dendritic cells, localizes to MHC II+ compartments (By similarity) {ECO:0000250|UniProtKB:Q9CQW2, ECO:0000269|PubMed:15331635, ECO:0000269|PubMed:16650381}

Tissue Location

Ubiquitously expressed.

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