

**Anti-Kinesin-1 (Rabbit) Antibody**  
**Kinesin-1 Antibody**  
**Catalog # ASR3739**

**Specification**

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**Anti-Kinesin-1 (Rabbit) Antibody - Product Information**

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human
Clonality	Polyclonal
Application	WB, IHC, E, I, LCI
Application Note	Kinesin-1 antibody has been tested for use in western blot, and immunohistochemistry. For western blots expect a band of approximately 72 kDa in size corresponding to truncated kinesin-1 protein. Specific conditions for reactivity should be optimized by the end user.
Physical State	Liquid (sterile filtered)
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Immunogen	Anti-Kinesin-1 was prepared from whole rabbit serum produced by repeated immunizations with a truncated kinesin-1 construct expressed in E. coli corresponding to human kinesin-1 protein.
Preservative	0.01% (w/v) Sodium Azide

**Anti-Kinesin-1 (Rabbit) Antibody - Additional Information**

**Gene ID** 3799

**Other Names**  
3799

**Purity**

Anti-Kinesin-1 is directed against the human kinesin-1 protein. The product was prepared from monospecific antiserum by delipidation and defibrination. A BLAST analysis was used to suggest reactivity with human. Cross-reactivity with kinesin 1 from other sources have not been determined.

**Storage Condition**

Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

**Precautions Note**

This product is for research use only and is not intended for therapeutic or diagnostic applications.

## Anti-Kinesin-1 (Rabbit) Antibody - Protein Information

**Name** KIF5B ([HGNC:6324](#))

**Synonyms** KNS, KNS1

### Function

Microtubule-dependent motor required for normal distribution of mitochondria and lysosomes. Can induce formation of neurite-like membrane protrusions in non-neuronal cells in a ZFYVE27-dependent manner (By similarity). Regulates centrosome and nuclear positioning during mitotic entry. During the G2 phase of the cell cycle in a BICD2- dependent manner, antagonizes dynein function and drives the separation of nuclei and centrosomes (PubMed:<a href="http://www.uniprot.org/citations/20386726" target="\_blank">20386726</a>). Required for anterograde axonal transportation of MAPK8IP3/JIP3 which is essential for MAPK8IP3/JIP3 function in axon elongation (By similarity). Through binding with PLEKHM2 and ARL8B, directs lysosome movement toward microtubule plus ends (Probable). 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:<a href="http://www.uniprot.org/citations/24088571" target="\_blank">24088571</a>).

### Cellular Location

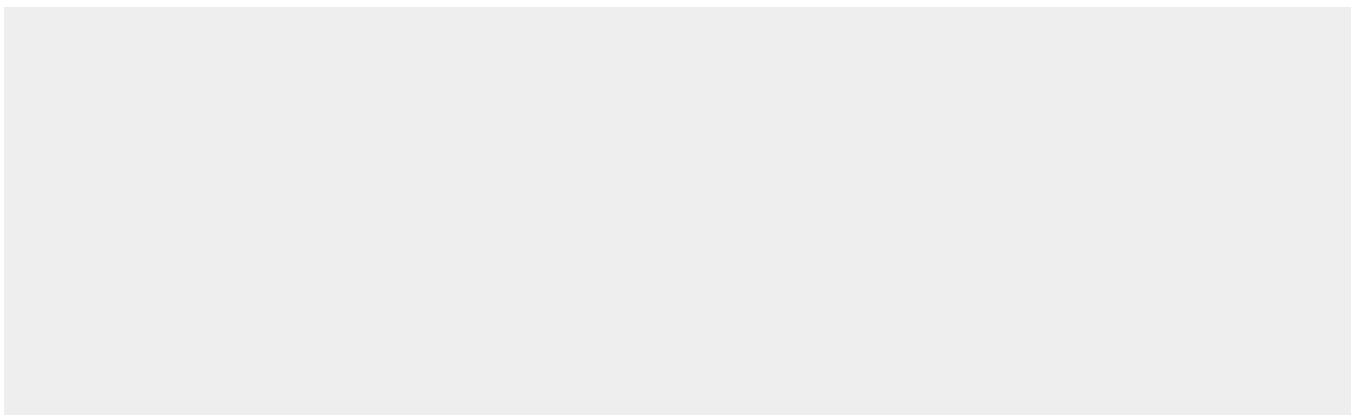
Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:Q2PQA9}. Cytolytic granule membrane. Lysosome membrane; Peripheral membrane protein; Cytoplasmic side Note=Uniformly distributed between soma and neurites in hippocampal neurons. {ECO:0000250|UniProtKB:Q2PQA9}

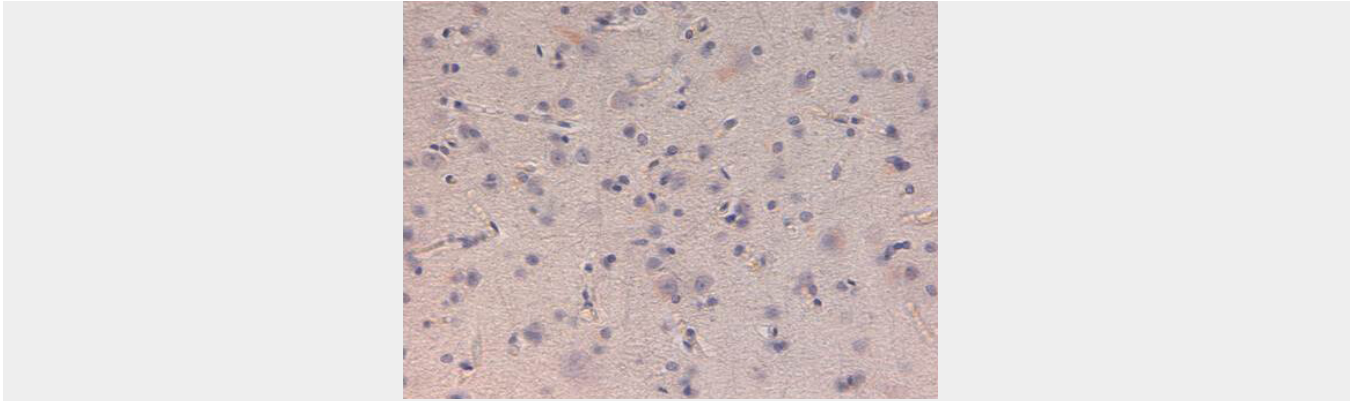
## Anti-Kinesin-1 (Rabbit) Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Anti-Kinesin-1 (Rabbit) Antibody - Images





Immunohistochemistry of Rabbit anti-Kinesin-1. Tissue: Human Brain at 40X at pH 6.

### **Anti-Kinesin-1 (Rabbit) Antibody - Background**

Intracellular transport is critical to cellular functions and the maintenance of its integrity (membrane renewal, vesicles trafficking, cell division, mRNA transport, etc.). Among the molecular motors that are involved in intracellular transport, three large superfamilies have been identified and well characterized these last decades - kinesins, dyneins and myosins.

Kinesins, also known as KIFs, are microtubule-dependent molecular motors that use ATP as chemical fuel to transport cargo along the microtubule network. Indeed, five major kinesin families were initially described but there are as many as 45 mammalian kinesin genes to date. In most kinesins, the motor domain is found at the N-terminus (N-type). N-type kinesins are (+) end-directed motors, i.e. they transport cargo towards the (+) end of the microtubule. In the neuronal axon, synaptic vesicle precursors, mitochondria and protein complexes are transported bi-directionally. While retrograde transport is powered by dyneins, anterograde transport is essentially powered by kinesins.

Deciphering the regulation and functions of kinesins constitutes a major challenge and will broaden our understanding of molecular motors implications in intracellular transport.