

KIF5 Antibody

Catalog # ASC10566

Product Information

Application	WB, IF, ICC, E
Primary Accession	Q12840
Other Accession	Q12840 , 143811412
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	117378
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	KIF5 antibody can be used for detection of KIF5 by Western blot at 0.5 - 1 μ g/mL. Antibody can also be used for immunocytochemistry starting at 5 μ g/mL. For immunofluorescence start at 20 μ g/mL.

Additional Information

Gene ID	3798
Other Names	Kinesin heavy chain isoform 5A, Kinesin heavy chain neuron-specific 1, Neuronal kinesin heavy chain, NKHC, KIF5A, NKHC1
Target/Specificity	KIF5A; KIF5 has at least three known isoforms; this antibody recognizes all three.
Reconstitution & Storage	KIF5 antibody can be stored at 4°C for three months and -20°C, 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	KIF5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KIF5A (HGNC:6323)
Synonyms	NKHC1
Function	Microtubule-dependent motor required for slow axonal transport of neurofilament proteins (NFH, NFM and NFL). Can induce formation of neurite-like membrane protrusions in non-neuronal cells in a ZFYVE27-dependent manner. The ZFYVE27-KIF5A complex contributes to the vesicular transport of VAPA, VAPB, SURF4, RAB11A, RAB11B and RTN3 proteins in neurons. Required for anterograde axonal transportation of

MAPK8IP3/JIP3 which is essential for MAPK8IP3/JIP3 function in axon elongation.

Cellular Location

Cytoplasm, perinuclear region {ECO:0000250|UniProtKB:Q6QLM7}.
Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:Q6QLM7}. Perikaryon {ECO:0000250|UniProtKB:Q6QLM7}. Note=Concentrated in the cell body of the neurons, particularly in the perinuclear region {ECO:0000250|UniProtKB:Q6QLM7}

Tissue Location

Distributed throughout the CNS but is highly enriched in subsets of neurons.

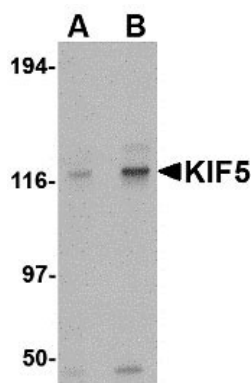
Background

KIF5 Antibody: The kinesin superfamily proteins (KIFs) are microtubule-dependent motors that slide along microtubules and transport cellular organelles and mRNA to different parts of the cell. In neurons, KIF5 performs this role in an anterograde fashion from the neuronal cell body to axonal or dendritic terminals. KIF5 was initially differentiated from the ubiquitously expressed kinesin as being highly enriched in subsets of neurons and selectively concentrated in the cell body. Mutations in one of the three isoforms of KIF5 (KIF5A) are thought to be involved in hereditary spastic paraplegias.

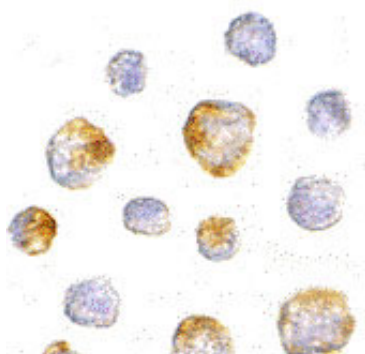
References

Hirokawa N. mRNA transport in dendrites: RNA granules, motors and tracks. *J. Neurosci.* 2006; 26:7139-42.
Niclas J, Navone F, Hom-Booher N, et al. Cloning and localization of a conventional KIF5 motor expressed exclusively in neurons. *Neuron* 1994; 12:1059-72.
Fichera M, Lo Giudice M, Falco M, et al. Evidence of kinesin heavy chain (KIF5A) involvement in pure hereditary spastic paraplegia. *Neurology* 2004; 63:1108-10.

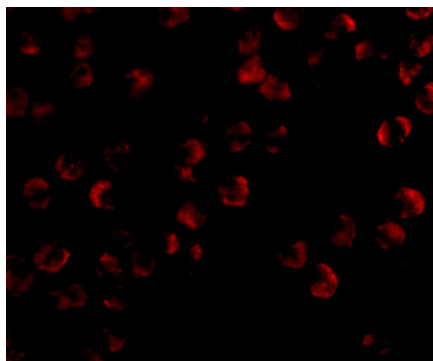
Images



Western blot analysis of KIF5 in K562 cell lysate with KIF5 antibody at (A) 0.5 and (B) 1 µg/mL.



Immunocytochemistry of KIF5 in K562 cells with KIF5 antibody at 5 µg/mL.



Immunofluorescence of KIF5 in K562 cells with KIF5 antibody at 20 $\mu\text{g/mL}$.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.