



KIFC2 (C-13): sc-48571

BACKGROUND

The kinesin superfamily proteins (KIFs) are microtubule-dependent molecular motors that transport membranous organelles and protein complexes in a microtubule- and ATP-dependent manner. Cells use KIFs to tightly control the direction, destination, and speed of transportation of a variety of important functional molecules, including mRNA. KIFC2 is 792 amino acid member of the C-terminal motor family specifically expressed in both the central and peripheral nervous systems in nonproliferative cells. KIFC2 accumulates at the proximal and distal sides of axons and is a minus-end-directed kinesin. KIFC2 localizes with some, but not all, axonally transported organelles. KIFC2 may be involved in retrograde axonal transport.

REFERENCES

- Drescher, J. and Desselberger, U. 1976. Kinetics of reactions of anti-hemagglutinin and antineuraminidase antibodies with H2N2 and H3N2 influenza virus strains and description of a modification of the photometric ACU method for titration of antineuraminidase antibodies. Arch. Virol. 50: 97-107.
- Hanlon, D.W., Yang, Z. and Goldstein, L.S. 1997. Characterization of KIFC2, a neuronal kinesin superfamily member in mouse. Neuron 18: 439-51.
- Nakagawa, T., Tanaka, Y., Matsuoka, E., Kondo, S., Okada, Y., Noda, Y., Kanai, Y. and Hirokawa, N. 1997. Identification and classification of 16 new kinesin superfamily (KIF) proteins in mouse genome. Proc. Natl. Acad. Sci. USA. 94: 9654-9659.
- Hirokawa, N., Noda, Y. and Okada, Y. 1998. Kinesin and Dynein superfamily proteins in organelle transport and cell division. Curr. Opin. Cell Biol. 10: 60-73.
- Hamlin, P.J., Jones, P.F., Leek, J.P., Bransfield, K., Lench, N.J., Aldersley, M.A., Howdle, P.D., Markham, A.F. and Robinson, P.A. 1999. Assignment of GALGT encoding β -1, 4N-acetylgalactosaminyl-transferase (GalNAc-T) and KIF5A encoding neuronal kinesin (D12S1889) to human chromosome band 12q13 by assignment to ICI YAC 26EG10 and *in situ* hybridization. Cytogenet. Cell Genet. 82: 267-268.
- Miki, H., Setou, M., Kaneshiro, K. and Hirokawa, N. 2001. All Kinesin superfamily protein, KIF, genes in mouse and human. Proc. Natl. Acad. Sci. USA. 98: 7004-7011.
- Yang, Z., Roberts, E.A. and Goldstein, L.S. 2001. Functional analysis of mouse C-terminal Kinesin motor KIFC2. Mol. Cell. Biol. 21: 2463-2466.
- Banani, E., Murray, J.W., Stockert, R.J., Satir, P. and Wolkoff, A.W. 2003. Regulation of early endocytic vesicle system. J. Cell. Sci. 116: 2749-2761.
- Banani, E., Nath, S., Gordon, K., Satir, P., Stockert, R.J., Murray, J.W. and Wolkoff, A.W. 2004. Microtubule-dependent movement of late endocytic vesicles *in vitro*: requirements for Dynein and Kinesin. Mol. Biol. Cell 15: 3688-3697.

CHROMOSOMAL LOCATION

Genetic locus: KIFC2 (human) mapping to 8q24.3; Kifc2 (mouse) mapping to 15 D-E.

SOURCE

KIFC2 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of KIFC2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-48571 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KIFC2 (C-13) is recommended for detection of KIFC2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for KIFC2 siRNA (h): sc-60890 and KIFC2 siRNA (m): sc-60891.

Molecular Weight of KIFC2: 90 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.