

KIF3C (B-10): sc-393778

BACKGROUND

The kinesins constitute a large family of microtubule-dependent motor proteins, which are responsible for the distribution of numerous organelles, vesicles and macromolecular complexes throughout the cell. Individual kinesin members play crucial roles in cell division, intracellular transport and membrane trafficking events including endocytosis and transcytosis. Members of the heterotrimeric kinesin II family of microtubule associated motors generally contain two different motor subunits from the KIF3 family, which includes KIF3A, B and C. KIF3 isoforms mediate anterograde transport of membrane bound organelles in neurons and melanosomes, transport between the endoplasmic reticulum and the Golgi, and transport of protein complexes within cilia and flagella required for their morphogenesis. The human KIF3C gene maps to chromosome 2p23 and encodes a 793 amino acid protein that is highly expressed in neural tissues such as brain, spinal cord and retina. The selective expression of KIF3C protein in the nervous system during embryonic development and its upregulation during neuroblastoma differentiation suggests a role for this motor during maturation of neuronal cells.

REFERENCES

- Hamm-Alvarez, S.F. 1998. Molecular motors and their role in membrane traffic. *Adv. Drug Deliv. Rev.* 29: 229-242.
- Yang, Z. and Goldstein, L.S. 1998. Characterization of the KIF3C neural kinesin-like motor from mouse. *Mol. Biol. Cell* 9: 249-261.
- Telford, E.A., et al. 1998. cDNA cloning, genomic organization, and chromosomal localization of a novel human gene that encodes a kinesin-related protein highly similar to mouse Kif3C. *Biochem. Biophys. Res. Commun.* 242: 407-412.

CHROMOSOMAL LOCATION

Genetic locus: KIF3C (human) mapping to 2p23.3.

SOURCE

KIF3C (B-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 764-795 near the C-terminus of KIF3C of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

KIF3C (B-10) is available conjugated to agarose (sc-393778 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393778 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393778 PE), fluorescein (sc-393778 FITC), Alexa Fluor® 488 (sc-393778 AF488), Alexa Fluor® 546 (sc-393778 AF546), Alexa Fluor® 594 (sc-393778 AF594) or Alexa Fluor® 647 (sc-393778 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393778 AF680) or Alexa Fluor® 790 (sc-393778 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393778 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

KIF3C (B-10) is recommended for detection of KIF3C of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

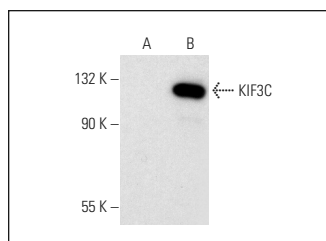
Suitable for use as control antibody for KIF3C siRNA (h): sc-43378, KIF3C shRNA Plasmid (h): sc-43378-SH and KIF3C shRNA (h) Lentiviral Particles: sc-43378-V.

Positive Controls: KIF3C (h2): 293T Lysate: sc-115585.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



KIF3C (B-10): sc-393778. Western blot analysis of KIF3C expression in non-transfected: sc-117752 (A) and human KIF3C transfected: sc-115585 (B) 293T whole cell lysates.

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 for detailed protocols and support products.