

# KIF3C (C-20): sc-18751

## 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 2p23.3 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.
- Cole, D.G. 1999. Kinesin-II, the heteromeric kinesin. *Cell. Mol. Life Sci.* 56: 217-226.
- Hirokawa, N. 2000. Stirring up development with the heterotrimeric kinesin KIF3. *Traffic* 1: 29-34.

## CHROMOSOMAL LOCATION

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

## SOURCE

KIF3C (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of KIF3C of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-18751 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

KIF3C (C-20) is recommended for detection of KIF3C of human origin by Western Blotting (starting dilution 1:200, 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).

KIF3C (C-20) is also recommended for detection of KIF3C in additional species, including equine.

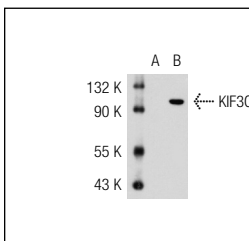
Suitable for use as control antibody for KIF3C siRNA (h): sc-43378, KIF3C shRNA Plasmid (h): sc-43378-SH and KIF3C shRNA (h) Lentiviral Particles: sc-43378-V.

Positive Controls: KIF3C (h): 293T Lysate: sc-111597.

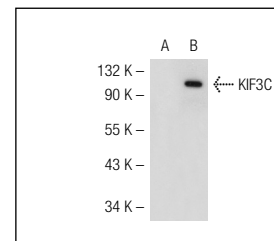
## RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



KIF3C (C-20): sc-18751. Western blot analysis of KIF3C expression in non-transfected: sc-117752 (A) and human KIF3C transfected: sc-115585 (B) 293T whole cell lysates.



KIF3C (C-20): sc-18751. Western blot analysis of KIF3C expression in non-transfected: sc-117752 (A) and human KIF3C transfected: sc-111597 (B) 293T whole cell lysates.

## RESEARCH USE

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

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Try **KIF3C (B-10): sc-393778**, our highly recommended monoclonal alternative to KIF3C (C-20).