

KIF9 (4E9): sc-517075

BACKGROUND

Kinesin is a cytoskeletal motor protein involved in axonal transport and cell division. 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. KIF9 (kinesin family member 9) is a member of the kinesin-like protein family and is a 790 amino acid protein that exists as two isoforms. KIF9 contains one kinesin-motor domain and KIF9's expression is developmentally regulated in tissues including brain, kidney, spleen, lung and testis. KIF9 is involved in keeping the MTOC (microtubule organizing center) connected to the nucleus during interphase, and is thought to interact with Gem, an association which may connect KIF9 to the cytoskeleton. In addition, KIF9 may act as a plus-ended microtubule motor that may exist as a homodimer.

REFERENCES

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- Miki, H., et al. 2001. All kinesin superfamily protein, KIF, genes in mouse and human. *Proc. Natl. Acad. Sci. USA* 98: 7004-7011.
- Miki, H., et al. 2003. Kinesin superfamily proteins (KIFs) in the mouse transcriptome. *Genome Res.* 13: 1455-1465.
- Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607910. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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- Tikhonenko, I., et al. 2009. Microtubule-nuclear interactions in dictyostelium mediated by central motor kinesins. *Eukaryot. Cell* 8: 723-731.

CHROMOSOMAL LOCATION

Genetic locus: KIF9 (human) mapping to 3p21.31.

SOURCE

KIF9 (4E9) is a mouse monoclonal antibody raised against amino acids 691-789 representing partial length KIF9 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

KIF9 (4E9) is recommended for detection of KIF9 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for KIF9 siRNA (h): sc-78310, KIF9 shRNA Plasmid (h): sc-78310-SH and KIF9 shRNA (h) Lentiviral Particles: sc-78310-V.

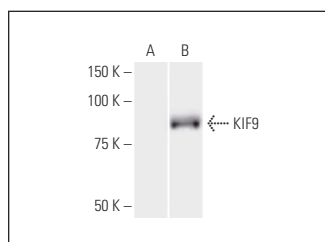
Molecular Weight of KIF9: 90 kDa.

Positive Controls: KIF9 transfected 293T whole cell lysate.

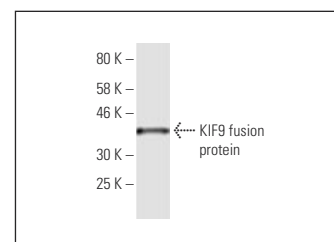
RECOMMENDED SUPPORT REAGENTS

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).

DATA



KIF9 (4E9): sc-517075. Western blot analysis of KIF9 expression in non-transfected (A) and KIF9 transfected (B) 293T whole cell lysates.



KIF9 (4E9): sc-517075. Western blot analysis of human recombinant KIF9 fusion protein.

SELECT PRODUCT CITATIONS

- Zhong, Z., et al. 2018. Expression of KLF9 in pancreatic cancer and its effects on the invasion, migration, apoptosis, cell cycle distribution, and proliferation of pancreatic cancer cell lines. *Oncol. Rep.* 40: 3852-3860.

STORAGE

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

PROTOCOLS

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