

# KIF27 (A-9): sc-390766

## 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. KIF27 (kinesin family member 27) is a 1,401 amino acid protein that contains one kinesin-motor domain, which is responsible for the ATP-dependent movement of KIF27 across microtubules. The gene encoding human KIF27 maps to chromosome 9, which consists of about 145 million bases and encodes nearly 900 genes. Hereditary hemorrhagic telangiectasia and familial dysautonomia are associated with the chromosome 9 genes. Chromosome 9 is partnered with chromosome 22 in the translocation leading to the aberrant production of Bcr-Abl fusion protein often found in leukemias.

## REFERENCES

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3. Brady, S.T. 1995. A kinesin medley: biochemical and functional heterogeneity. *Trends Cell Biol.* 5: 159-164.
4. Miki, H., et al. 2001. All kinesin superfamily protein, KIF, genes in mouse and human. *Proc. Natl. Acad. Sci. USA* 98: 7004-7011.
5. Humphray, S.J., et al. 2004. DNA sequence and analysis of human chromosome 9. *Nature* 429: 369-374.
6. Burmeister, T., et al. 2007. Atypical Bcr-Abl mRNA transcripts in adult acute lymphoblastic leukemia. *Haematologica* 92: 1699-1702.
7. Fernandez-L, A., et al. 2007. Gene expression fingerprinting for human hereditary hemorrhagic telangiectasia. *Hum. Mol. Genet.* 16: 1515-1533.
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## CHROMOSOMAL LOCATION

Genetic locus: KIF27 (human) mapping to 9q21.32; Kif27 (mouse) mapping to 13 B1.

## SOURCE

KIF27 (A-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 617-644 of KIF27 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-390766 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

KIF27 (A-9) is recommended for detection of KIF27 of mouse, rat and 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 KIF27 siRNA (h): sc-92572, KIF27 siRNA (m): sc-146474, KIF27 shRNA Plasmid (h): sc-92572-SH, KIF27 shRNA Plasmid (m): sc-146474-SH, KIF27 shRNA (h) Lentiviral Particles: sc-92572-V and KIF27 shRNA (m) Lentiviral Particles: sc-146474-V.

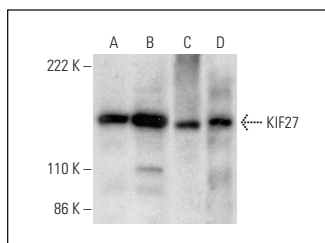
Molecular Weight of KIF27 isoforms 1-4: 160/152/149/34 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Hs 181 Tes whole cell lysate: sc-364779 or NTERA-2 cl.D1 whole cell lysate: sc-364181.

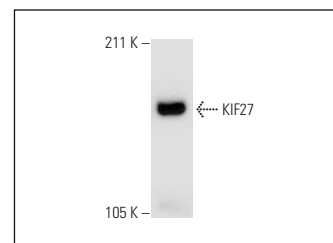
## RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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



KIF27 (A-9): sc-390766. Western blot analysis of KIF27 expression in Hs 181 Tes (A), NTERA-2 cl.D1 (B) and F9 (C) whole cell lysates and mouse testis tissue extract (D).



KIF27 (A-9): sc-390766. Western blot analysis of KIF27 expression in Jurkat whole cell lysate.

## 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](http://www.scbt.com) for detailed protocols and support products.