

# KIF26B (N-16): sc-247350

## 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. KIF26B (kinesin family member 26B) is a 2,108 amino acid protein that contains one kinesin-motor domain and belongs to the kinesin-like protein family. The kinesin-motor domain is responsible for the ATP-dependent movement of KIF26B across microtubules. KIF26B regulates the adhesion of mesenchymal cells in contact with ureteric buds, making it essential for kidney development. KIF26B is also thought to play a role in embryogenesis, specifically in the development of limbs, face and somites. KIF26B localizes to the cytoplasm and exists as two alternatively spliced isoforms. The gene encoding KIF26B is located on human chromosome 1q44.

## REFERENCES

1. Vallee, R.B. and Shpetner, H.S. 1990. Motor proteins of cytoplasmic microtubules. *Annu. Rev. Biochem.* 59: 909-932.7
2. Endow, S.A. 1991. The emerging kinesin family of microtubule motor proteins. *Trends Biochem. Sci.* 16: 221-225.
3. Brady, S.T. 1995. A kinesin medley: biochemical and functional heterogeneity. *Trends Cell Biol.* 5: 159-164.
4. Hamm-Alvarez, S.F. 1998. Molecular motors and their role in membrane traffic. *Adv. Drug Deliv. Rev.* 29: 229-242.
5. 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.
6. Marikawa, Y., Fujita, T.C. and Alarcón, V.B. 2004. An enhancer-trap LacZ transgene reveals a distinct expression pattern of Kinesin family 26B in mouse embryos. *Dev. Genes Evol.* 214: 64-71.
7. Sarli, V. and Giannis, A. 2006. Inhibitors of mitotic kinesins: next-generation antimicrotubule. *Chem. Med. Chem.* 1: 293-298.
8. Uchiyama, Y., Sakaguchi, M., Terabayashi, T., Inenaga, T., Inoue, S., Kobayashi, C., Oshima, N., Kiyonari, H., Nakagata, N., Sato, Y., Sekiguchi, K., Miki, H., Araki, E., Fujimura, S., Tanaka, S.S. and Nishinakamura, R. 2010. Kif26b, a kinesin family gene, regulates adhesion of the embryonic kidney mesenchyme. *Proc. Natl. Acad. Sci. USA* 107: 9240-9245.

## CHROMOSOMAL LOCATION

Genetic locus: KIF26B (human) mapping to 1q44; Kif26b (mouse) mapping to 1 H4.

## SOURCE

KIF26B (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of KIF26B of human origin.

## RESEARCH USE

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

## 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-247350 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

KIF26B (N-16) is recommended for detection of KIF26B 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); non cross-reactive with KIF26A.

KIF26B (N-16) is also recommended for detection of KIF26B in additional species, including equine, canine and bovine.

Suitable for use as control antibody for KIF26B siRNA (m): sc-146473, KIF26B shRNA Plasmid (m): sc-146473-SH and KIF26B shRNA (m) Lentiviral Particles: sc-146473-V.

Molecular Weight of KIF26B isoforms: 224/184 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.