

KIF13B (N-16): sc-87189

BACKGROUND

KIF13B (kinesin family member 13B) is also known as kinesin-like protein GAKIN or GAKIN and is a 1,826 amino acid protein that is widely expressed in tissues, with highest expression in brain and kidney. KIF13B is localized to the cytoplasm, as well as to the cytoskeleton, and is thought to be a microtubule-dependent motor protein which is able to bind to a variety of proteins in order to traffic them to various locations throughout the cell. KIF13B belongs to the kinesin-like protein family and possesses three domains typical of the kinesin-like protein family, namely an N-terminal motor domain with an ATP-binding motif, an FHA domain which is known to bind diverse cargos and a large stalk domain involved in protein-protein binding. Additionally, KIF13B has a microtubule-interacting sequence which is known as the CAP-Gly domain at its C-terminus. The CAP-Gly domain is highly conserved domain among eukaryotes, and in humans, defects in the CAP-Gly domain are implicated in many diseases affecting the trafficking of vesicles, neuromuscular junctions and lysosome proliferation.

REFERENCES

- Hanada, T., et al. 2000. GAKIN, a novel kinesin-like protein associates with the human homologue of the *Drosophila* discs large tumor suppressor in T lymphocytes. *J. Biol. Chem.* 275: 28774-28784.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607350. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Asaba, N., et al 2003. Direct interaction with a kinesin-related motor mediates transport of mammalian discs large tumor suppressor homologue in epithelial cells. *J. Biol. Chem.* 278: 8395-8400.
- Kanamarlapudi, V. 2005. Centaurin- α 1 and KIF13B kinesin motor protein interaction in ARF6 signalling. *Biochem. Soc. Trans.* 33: 1279-1281.
- Venkateswarlu, K., et al. 2005. Centaurin- α 1 interacts directly with kinesin motor protein KIF13B. *J. Cell Sci.* 118: 2471-2484.

CHROMOSOMAL LOCATION

Genetic locus: KIF13B (human) mapping to 8p12; Kif13b (mouse) mapping to 14 D1.

SOURCE

KIF13B (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of KIF13B of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-87189 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

KIF13B (N-16) is recommended for detection of KIF13B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

KIF13B (N-16) is also recommended for detection of KIF13B in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for KIF13B siRNA (h): sc-77793, KIF13B siRNA (m): sc-146465, KIF13B shRNA Plasmid (h): sc-77793-SH, KIF13B shRNA Plasmid (m): sc-146465-SH, KIF13B shRNA (h) Lentiviral Particles: sc-77793-V and KIF13B shRNA (m) Lentiviral Particles: sc-146465-V.

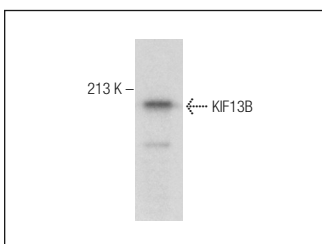
Molecular Weight of KIF13B: 200 kDa.

Positive Controls: EOC 20 whole cell lysate: sc-364187.

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



KIF13B (N-16): sc-87189. Western blot analysis of KIF13B expression in EOC 20 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.

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Try **KIF13B (6E11): sc-517181**, our highly recommended monoclonal alternative to KIF13B (N-16).