SANTA CRUZ BIOTECHNOLOGY, INC.

KIF16B (H-270): sc-67372

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. KIF16B (kinesin family member 16B), also known as SNX23 (sorting nexin-23) or C20orf23, is a 1,317 amino acid protein that contains one FHA domain, one kinesin-motor domain and one PX domain and belongs to the Kinesin-like protein family. Present in early endosomes at the end of microtubules, KIF16B is thought to function as a microtubule-dependent motor protein that may regulate the motility of early endosomes, thereby mediating the balance between endosomal recycling and degradation. Five isoforms of KIF16B are expressed due to alternative splicing events.

REFERENCES

1. Teasdale, R.D., et al. 2001. A large family of endosome-localized proteins related to sorting nexin 1. Biochem. J. 358: 7-16.
2. Worby, C.A., et al. 2002. Sorting out the cellular functions of sorting nexins. Nat. Rev. Mol. Cell Biol. 3: 919-931.
3. Hoepfner, S., et al. 2005. Modulation of receptor recycling and degradation by the endosomal kinesin KIF16B. Cell 121: 437-450.
4. Miki, H., et al. 2005. Analysis of the kinesin superfamily: insights into structure and function. Trends Cell Biol. 15: 467-476.
5. Seet, L.F., et al.2006. The Phox (PX) domain proteins and membrane traffic. Biochim. Biophys. Acta 1761: 878-896.
6. Blatner, N.R., et al. 2007. The structural basis of novel endosome anchoring activity of KIF16B kinesin. EMBO J. 26: 3709-3719.
7. Vasilescu, J., et al. 2007. The proteomic reactor facilitates the analysis of affinity-purified proteins by mass spectrometry: application for identifying ubiquitinated proteins in human cells. J. Proteome Res. 6: 298-305.

CHROMOSOMAL LOCATION

Genetic locus: KIF16B (human) mapping to 20p12.1; Kif16b (mouse) mapping to 2 G1.

SOURCE

KIF16B (H-270) is a rabbit polyclonal antibody raised against amino acids 1-270 mapping at the N-terminus of KIF16B 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.

STORAGE

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

APPLICATIONS

KIF16B (H-270) is recommended for detection of KIF16B of mouse, rat and 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).

KIF16B (H-270) is also recommended for detection of KIF16B in additional species, including avian.

Suitable for use as control antibody for KIF16B siRNA (h): sc-61591, KIF16B siRNA (m): sc-61592, KIF16B shRNA Plasmid (h): sc-61591-SH, KIF16B shRNA Plasmid (m): sc-61592-SH, KIF16B shRNA (h) Lentiviral Particles: sc-61591-V and KIF16B shRNA (m) Lentiviral Particles: sc-61592-V.

Molecular Weight of KIF16B: 152 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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