

# KIF16B (H-6): sc-390309

## 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. and Dixon, J.E. 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

KIF16B (H-6) is a mouse monoclonal antibody raised against amino acids 1-270 mapping at the N-terminus of KIF16B of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

KIF16B (H-6) is available conjugated to agarose (sc-390309 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390309 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390309 PE), fluorescein (sc-390309 FITC), Alexa Fluor® 488 (sc-390309 AF488), Alexa Fluor® 546 (sc-390309 AF546), Alexa Fluor® 594 (sc-390309 AF594) or Alexa Fluor® 647 (sc-390309 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390309 AF680) or Alexa Fluor® 790 (sc-390309 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## 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-6) is recommended for detection of KIF16B 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 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.

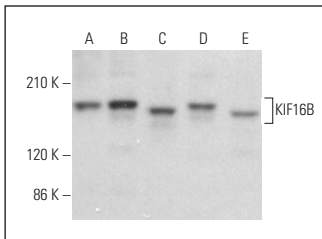
Molecular Weight of KIF16B: 152 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, human placenta extract: sc-363772 or human heart extract: sc-363763.

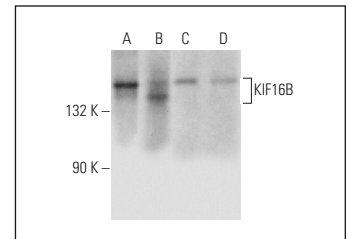
## RECOMMENDED SUPPORT REAGENTS

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). 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



KIF16B (H-6): sc-390309. Western blot analysis of KIF16B expression in Hep G2 (A), SK-BR-3 (B), C2C12 (C), A549 (D) and NIH/3T3 (E) whole cell lysates.



KIF16B (H-6): sc-390309. Western blot analysis of KIF16B expression in human liver (A), human placenta (B), human heart (C) and human skeletal muscle (D) tissue extracts.

## SELECT PRODUCT CITATIONS

1. Joly-Tonetti, N., et al. 2018. An explanation for the mysterious distribution of melanin in human skin: a rare example of asymmetric (melanin) organelle distribution during mitosis of basal layer progenitor keratinocytes. *Br. J. Dermatol.* 179: 1115-1126.
2. Polla, D.L., et al. 2021. Biallelic variants in TMEM222 cause a new autosomal recessive neurodevelopmental disorder. *Genet. Med.* 23: 1246-1254.

## RESEARCH USE

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