

KIF20A (L-13): sc-104954

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. KIF20A (kinesin family member 20A), also known as Rabkinesin 6, RAB6KIFL (Rab 6-interacting kinesin-like protein), GG10_2 or MKLP2 (mitotic kinesin-like protein 2), is a 890 amino acid protein that contains one kinesin-motor domain and belongs to the Kinesin-like protein family. KIF20A localizes to the Golgi apparatus and interacts with guanosine triphosphate (GTP)-bound forms of RAB 6. KIF20A may be responsible for the retrograde RAB 6 regulated transport of Golgi membranes and related vesicles along microtubules.

REFERENCES

- Hill, E., et al. 2000. The Rab 6-binding Kinesin, RAB6KIFL, is required for cytokinesis. *EMBO J.* 19: 5711-5719.
- Lai, F., et al. 2000. cDNA cloning, expression pattern, genomic structure and chromosomal location of RAB6KIFL, a human kinesin-like gene. *Gene* 248: 117-125.
- Fontijn, R.D., et al. 2001. The human kinesin-like protein RB6K is under tight cell cycle control and is essential for cytokinesis. *Mol. Cell. Biol.* 21: 2944-2955.
- Nagura, M., et al. 2003. The kinesin superfamily protein RAB6KIFL is not involved in the pathophysiology of Charcot-Marie-Tooth disease type 4C. *Int. J. Mol. Med.* 11: 45-47.
- Neef, R., et al. 2003. Phosphorylation of mitotic kinesin-like protein 2 by polo-like kinase 1 is required for cytokinesis. *J. Cell Biol.* 162: 863-875.
- Gruneberg, U., et al. 2004. Relocation of Aurora B from centromeres to the central spindle at the metaphase to anaphase transition requires MKlp2. *J. Cell Biol.* 166: 167-172.
- Taniuchi, K., et al. 2005. Down-regulation of RAB6KIFL/KIF20A, a kinesin involved with membrane trafficking of discs large homologue 5, can attenuate growth of pancreatic cancer cell. *Cancer Res.* 65: 105-112.
- Wonsey, D.R. and Follettie, M.T. 2005. Loss of the forkhead transcription factor FoxM1 causes centrosome amplification and mitotic catastrophe. *Cancer Res.* 65: 5181-5189.
- Neef, R., et al. 2005. Assay and functional properties of Rabkinesin-6/Rab6-KIFL/MKlp2 in cytokinesis. *Meth. Enzymol.* 403: 618-628.

CHROMOSOMAL LOCATION

Genetic locus: KIF20A (human) mapping to 5q31.2; Kif20a (mouse) mapping to 18 B1.

SOURCE

KIF20A (L-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of KIF20A 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.

Blocking peptide available for competition studies, sc-104954 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KIF20A (L-13) is recommended for detection of KIF20A 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).

KIF20A (L-13) is also recommended for detection of KIF20A in additional species, including equine and canine.

Suitable for use as control antibody for KIF20A siRNA (h): sc-91657, KIF20A siRNA (m): sc-146470, KIF20A shRNA Plasmid (h): sc-91657-SH, KIF20A shRNA Plasmid (m): sc-146470-SH, KIF20A shRNA (h) Lentiviral Particles: sc-91657-V and KIF20A shRNA (m) Lentiviral Particles: sc-146470-V.

Molecular Weight of KIF20A: 100 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.

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.


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Try **KIF20A (D-3): sc-374508**, our highly recommended monoclonal alternative to KIF20A (L-13).