SANTA CRUZ BIOTECHNOLOGY, INC.

KIF15 (36-I): sc-100948

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. KIF15 (kinesin family member 15), also known as HKLP2 (human kinesin-like protein 2) or KNSL7, is a 1,388 amino acid kinesin-related protein that shares 53% amino acid identity with the *Xenopus* protein Xklp2, a plus-end directed kinesin-like motor. Based on similarity with Xklp2 and cellular localization, KIF15 is believed to play a role in the cross-linking and immobilization of spindle microtubules. In mitotic cells, during prometaphase to early anaphase, KIF15 localizes to spindle poles and microtubules; during cytokinesis, KIF15 can be found at the Actin-based cleavage furrow. In postmitotic neurons, KIF15 exclusively localizes to microtubules.

REFERENCES

1. Hamm-Alvarez, S.F. 1998. Molecular motors and their role in membrane traffic. Adv. Drug Deliv. Rev. 29: 229-242.
2. Cole, D.G. 1999. Kinesin-II, the heteromeric kinesin. Cell. Mol. Life Sci. 56: 217-226.
3. Sueishi, M., et al. 2000. The forkhead-associated domain of Ki-67 antigen interacts with the novel kinesin-like protein Hklp2. J. Biol. Chem. 275: 28888-28892.
4. Yang, Z., et al. 2001. Molecular cloning and functional analysis of mouse C-terminal kinesin motor KifC3. Mol. Cell. Biol. 21: 765-770.
5. Takagi, M., et al. 2001. A novel nucleolar protein, NIFK, interacts with the forkhead associated domain of Ki-67 antigen in mitosis. J. Biol. Chem. 276: 25386-25391.
6. Heidebrecht, H.J., et al. 2003. repp86: a human protein associated in the progression of mitosis. Mol. Cancer Res. 1: 271-279.
7. Buster, D.W., et al. 2003. Expression of the mitotic kinesin KIF15 in postmitotic neurons: implications for neuronal migration and development. J. Neurocytol. 32: 79-96.
8. Sarli, V. and Giannis, A. 2006. Inhibitors of mitotic kinesins: next-generation antimitotics. ChemMedChem 1: 293-298.

CHROMOSOMAL LOCATION

Genetic locus: KIF15 (human) mapping to 3p21.31.

SOURCE

KIF15 (36-I) is a mouse monoclonal antibody raised against recombinant KIF15 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

KIF15 (36-I) is recommended for detection of KIF15 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for KIF15 siRNA (h): sc-78517, KIF15 shRNA Plasmid (h): sc-78517-SH and KIF15 shRNA (h) Lentiviral Particles: sc-78517-V.

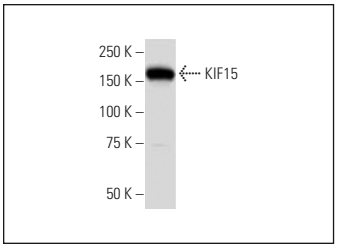
Molecular Weight of KIF15: 160 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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).

DATA



KIF15 (36-I): sc-100948. Western blot analysis of KIF15 expression in HeLa 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.

RESEARCH USE

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

PROTOCOLS

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