SANTA CRUZ BIOTECHNOLOGY, INC.

KIF17 (B-2): sc-393253

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. Kinesins also play crucial roles in cell division, intracellular transport and membrane trafficking events including endocytosis and transcytosis. KIF 17 is a neuronal-specific kinesin that transports vesicles containing N-methyl-D-aspartate (NMDA) receptor 2B along microtubules.

REFERENCES

1. Hamm-Alvarez, S.F., et al. 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. Setou, M., et al. 2000. Kinesin superfamily motor protein KIF17 and mLin-10 in NMDA receptor-containing vesicle transport. Science 288: 1796-1802.
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. Wong, R.W., et al. 2002. Overexpression of motor protein KIF17 enhances spatial and working memory in transgenic mice. Proc. Natl. Acad. Sci. USA 99: 14500-14505.
6. Guillaud, L., et al. 2003. KIF17 dynamics and regulation of NR2B trafficking in hippocampal neurons. J. Neurosci. 23: 131-140.
7. Hirokawa, N., et al. 2004. Kinesin superfamily proteins and their various functions and dynamics. Exp. Cell Res. 301: 50-59.

CHROMOSOMAL LOCATION

Genetic locus: KIF17 (human) mapping to 1p36.12.

SOURCE

KIF17 (B-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 324-359 within an internal region of KIF17 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393253 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

KIF17 (B-2) is recommended for detection of KIF17 of 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 KIF17 siRNA (h): sc-60024, KIF17 shRNA Plasmid (h): sc-60024-SH and KIF17 shRNA (h) Lentiviral Particles: sc-60024-V.

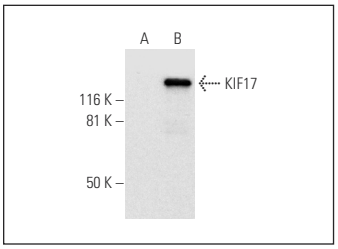
Molecular Weight of KIF17: 120 kDa.

Positive Controls: KIF17 (h): 293T Lysate: sc-117100.

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



KIF17 (B-2): sc-393253. Western blot analysis of KIF17 expression in non-transfected: sc-117752 (**A**) and human KIF17 transfected: sc-117100 (**B**) 293T whole cell lysates.

RESEARCH USE

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