SANTA CRUZ BIOTECHNOLOGY, INC.

KIF17 (D-8): sc-137040

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. KIF17 is a neuronal-specific kinesin that transports vesicles containing N-methyl-D-aspartate (NMDA) receptor 2B along 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. 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. Over-expression 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; Kif17 (mouse) mapping to 4 D3.

SOURCE

KIF17 (D-8) is a mouse monoclonal antibody raised against amino acids 741-1020 mapping near the C-terminus 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.

KIF17 (D-8) is available conjugated to agarose (sc-137040 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-137040 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137040 PE), fluorescein (sc-137040 FITC), Alexa Fluor® 488 (sc-137040 AF488), Alexa Fluor® 546 (sc-137040 AF546), Alexa Fluor® 594 (sc-137040 AF594) or Alexa Fluor® 647 (sc-137040 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-137040 AF680) or Alexa Fluor® 790 (sc-137040 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

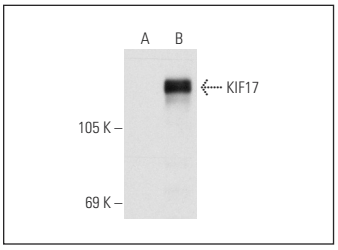
KIF17 (D-8) is recommended for detection of KIF17 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 siRNA (m): sc-60025, KIF17 shRNA Plasmid (h): sc-60024-SH, KIF17 shRNA Plasmid (m): sc-60025-SH, KIF17 shRNA (h) Lentiviral Particles: sc-60024-V and KIF17 shRNA (m) Lentiviral Particles: sc-60025-V.

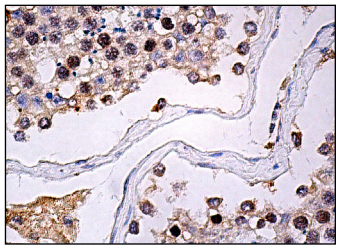
Molecular Weight of KIF17: 120 kDa.

Positive Controls: KIF17 (m2): 293T Lysate: sc-178843, IMR-32 cell lysate: sc-2409 or SK-N-MC cell lysate: sc-2237.

DATA



KIF17 (D-8): sc-137040. Western blot analysis of KIF17 expression in non-transfected: sc-117752 (**A**) and mouse KIF17 transfected: sc-178843 (**B**) 293T whole cell lysates.



KIF17 (D-8): sc-137040. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of cells in seminiferous ducts and cytoplasmic staining of Leydig cells.

SELECT PRODUCT CITATIONS

1. Xie, M.X., et al. 2021. ATF4 selectively regulates heat nociception and contributes to kinesin-mediated TRPM3 trafficking. Nat. Commun. 12: 1401.
2. Uniyal, A., et al. 2022. Inhibition of pan-Aurora kinase attenuates evoked and ongoing pain in nerve injured rats via regulating KIF17-NR2B mediated signaling. Int. Immunopharmacol. 106: 108622.

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.