

Kinectin 1 (23): sc-136534

BACKGROUND

The kinesin family of motor proteins comprise at least two forms of conventional kinesin, which are encoded by different genes and designated as ubiquitous kinesin, which is expressed in all cells and tissues, and neuronal kinesin, which is expressed exclusively in neuronal cells. The motor protein kinesin is a heterotetramer composed of two heavy chains and two light chains. While the kinesin heavy chain contains the motor activity, evidence suggests that the kinesin light chain is involved in either modulation of kinesin heavy chain activity or in cargo binding. Kinesin-driven vesicle motility is dependent upon Kinectin 1, a kinesin-binding protein. Kinectin 1, also known as kinesin recep-tor, is an integral membrane protein in the ER. Despite the kinesin-Kinectin 1 interaction, a great deal of debate surrounds the involvement of Kinectin 1 in microtubule-dependent transport.

REFERENCES

1. Kumar, J., Yu, H. and Sheetz, M.P. 1995. Kinectin, an essential anchor for kinesin-driven vesicle motility. *Science* 267: 1834-1837.
2. Vignali, G., Lizio, C., Sprocati, M.T., Sirtori, C., Battaglia, G. and Navone, F. 1997. Expression of neuronal kinesin heavy chain is developmentally regulated in the central nervous system of the rat. *J. Neurochem.* 69: 1840-1849.
3. Diefenbach, R.J., Mackay, J.P., Armati, P.J. and Cunningham, A.L. 1998. The C-terminal region of the stalk domain of ubiquitous human kinesin heavy chain contains the binding site for kinesin light chain. *Biochemistry* 37: 16663-16670.
4. Rahman, A., Friedman, D.S. and Goldstein, L.S. 1998. Two kinesin light chain genes in mice. Identification and characterization of the encoded proteins. *J. Biol. Chem.* 273: 15395-15403.

CHROMOSOMAL LOCATION

Genetic locus: KTN1 (human) mapping to 14q22.3; Ktn1 (mouse) mapping to 14 C1.

SOURCE

Kinectin 1 (23) is a mouse monoclonal antibody raised against amino acids 99-210 and 845-959 of Kinectin 1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Kinectin 1 (23) is available conjugated to agarose (sc-136534 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-136534 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-136534 PE), fluorescein (sc-136534 FITC), Alexa Fluor® 488 (sc-136534 AF488), Alexa Fluor® 546 (sc-136534 AF546), Alexa Fluor® 594 (sc-136534 AF594) or Alexa Fluor® 647 (sc-136534 AF647), 200 µg/ml, for WB (RGB), IF and IHC(P); and to either Alexa Fluor® 680 (sc-136534 AF680) or Alexa Fluor® 790 (sc-136534 AF790), 200 µg/ml, for Near-Infrared (NIR) WB and IF.

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APPLICATIONS

Kinectin 1 (23) is recommended for detection of Kinectin 1 of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Kinectin 1 siRNA (h): sc-43382, Kinectin 1 siRNA (m): sc-43383, Kinectin 1 shRNA Plasmid (h): sc-43382-SH, Kinectin 1 shRNA Plasmid (m): sc-43383-SH, Kinectin 1 shRNA (h) Lentiviral Particles: sc-43382-V and Kinectin 1 shRNA (m) Lentiviral Particles: sc-43383-V.

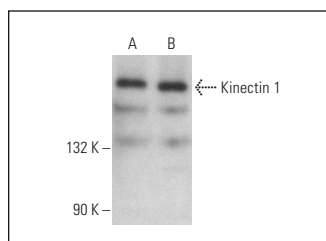
Molecular Weight of Kinectin 1: 160 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, KNRK whole cell lysate: sc-2214 or F9 cell lysate: sc-2245.

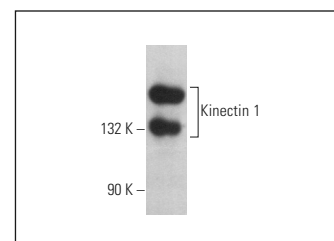
RECOMMENDED SUPPORT REAGENTS

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



Kinectin 1 (23): sc-136534. Western blot analysis of Kinectin 1 expression in F9 (A) and KNRK (B) whole cell lysates.



Kinectin 1 (23): sc-136534. Western blot analysis of Kinectin 1 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. Not for resale.

PROTOCOLS

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