

Kinectin 1 (K-18): sc-19909

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 receptor, 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. Toyoshima, I., et al. 1992. Kinectin, a major kinesin-binding protein on ER. *J. Cell Biol.* 118: 1121-1131.
2. Kumar, J., et al. 1995. Kinectin, an essential anchor for kinesin-driven vesicle motility. *Science* 267: 1834-1837.
3. Futterer, A., et al. 1995. Molecular cloning and characterization of human Kinectin. *Mol. Biol. Cell* 6: 161-170.
4. Yu, H., et al. 1995. Characterization of Kinectin, a kinesin-binding protein: primary sequence and N-terminal topogenic signal analysis. *Mol. Biol. Cell* 6: 171-183.
5. Vignali, G., et al. 1997. Expression of neuronal kinesin heavy chain is developmentally regulated in the central nervous system of the rat. *J. Neurochem.* 69: 1840-1849.
6. Diefenbach, R.J., et al. 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.
7. Rahman, A., et al. 1998. Two kinesin light chain genes in mice. Identification and characterization of the encoded proteins. *J. Biol. Chem.* 273: 15395-15403.
8. Rahman, A., et al. 1999. Defective kinesin heavy chain behavior in mouse kinesin light chain mutants. *J. Cell Biol.* 146: 1277-1288.

CHROMOSOMAL LOCATION

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

SOURCE

Kinectin 1 (K-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Kinectin 1 of human origin.

STORAGE

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

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-19909 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Kinectin 1 (K-18) is recommended for detection of Kinectin 1 of mouse, rat and 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)], 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).

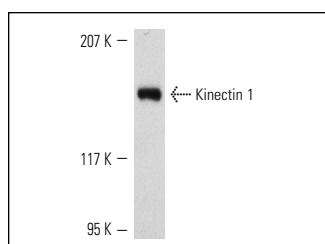
Kinectin 1 (K-18) is also recommended for detection of Kinectin 1 in additional species, including equine, canine and bovine.

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.

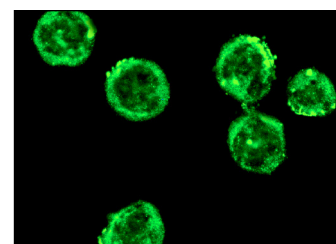
Molecular Weight of Kinectin 1: 160 kDa.

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

DATA



Kinectin 1 (K-18): sc-19909. Western blot analysis of Kinectin 1 expression in KNRK whole cell lysate.



Kinectin 1 (K-18): sc-19909. Immunofluorescence staining of methanol-fixed Ramos cells showing cytoplasmic localization.

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.

MONOS
Satisfaction
Guaranteed

Try **Kinectin 1 (A-12): sc-374577** or **Kinectin 1 (G-5): sc-374576**, our highly recommended monoclonal alternatives to Kinectin 1 (K-18).