

KIF18A (E-14): sc-109947

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. KIF18A (kinesin family member 18A), also designated MS-KIF18A, is a 898 amino acid protein that contains one kinesin-motor domain, which is responsible for the ATP-dependent movement of KIF18A across microtubules. KIF18A plays a role in chromosome congression by reducing the amplitude of pre-anaphase oscillations and slowing poleward movement during anaphase, thus suppressing chromosome movements. Expression of KIF18A is induced by estrogen.

REFERENCES

1. Luboshits, G. and Benayahu, D. 2005. MS-KIF18A, new kinesin; structure and cellular expression. *Gene*. 351: 19-28.
2. Mayr, M.I., et al. 2007. The human kinesin KIF18A is a motile microtubule depolymerase essential for chromosome congression. *Curr. Biol.* 17: 488-498.
3. Luboshits, G. and Benayahu, D. 2007. MS-KIF18A, a kinesin, is associated with estrogen receptor. *J. Cell. Biochem.* 100: 693-702.
4. Stumpff, J., et al. 2008. The kinesin-8 motor KIF18A suppresses kinetochore movements to control mitotic chromosome alignment. *Dev. Cell.* 14: 252-262.
5. Zusev, M. and Benayahu, D. 2008. New insights on cellular distribution, microtubule interactions and post-translational modifications of MS-KIF18A. *J. Cell. Physiol.* 217: 618-625.
6. Gardner, M.K., et al. 2008. Kinesin-8 molecular motors: putting the brakes on chromosome oscillations. *Trends Cell Biol.* 18: 307-310.
7. Zusev, M. and Benayahu, D. 2009. The regulation of MS-KIF18A expression and cross talk with estrogen receptor. *PLoS ONE* 4: e6407.
8. Du, Y., et al. 2010. The kinesin-8 Kif18A dampens microtubule plus-end dynamics. *Curr. Biol.* 20: 374-380.

CHROMOSOMAL LOCATION

Genetic locus: KIF18A (human) mapping to 11p14.1; Kif18a (mouse) mapping to 2 E3.

SOURCE

KIF18A (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of KIF18A of human origin.

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-109947 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KIF18A (E-14) is recommended for detection of KIF18A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other KIF family members.

Suitable for use as control antibody for KIF18A siRNA (h): sc-96629, KIF18A siRNA (m): sc-146467, KIF18A shRNA Plasmid (h): sc-96629-SH, KIF18A shRNA Plasmid (m): sc-146467-SH, KIF18A shRNA (h) Lentiviral Particles: sc-96629-V and KIF18A shRNA (m) Lentiviral Particles: sc-146467-V.

Molecular Weight of KIF18A: 100 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.


 MONOS
Satisfaction
Guaranteed

Try **KIF18A (C-12): sc-390600** or **KIF18A (B-11): sc-398484**, our highly recommended monoclonal alternatives to KIF18A (E-14).