

KIF18A (C-12): sc-390600

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.

CHROMOSOMAL LOCATION

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

SOURCE

KIF18A (C-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 501-519 of KIF18A of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

KIF18A (C-12) is available conjugated to agarose (sc-390600 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390600 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390600 PE), fluorescein (sc-390600 FITC), Alexa Fluor® 488 (sc-390600 AF488), Alexa Fluor® 546 (sc-390600 AF546), Alexa Fluor® 594 (sc-390600 AF594) or Alexa Fluor® 647 (sc-390600 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390600 AF680) or Alexa Fluor® 790 (sc-390600 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390600 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

KIF18A (C-12) is recommended for detection of KIF18A 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

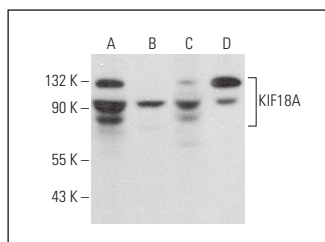
KIF18A (C-12) is also recommended for detection of KIF18A in additional species, including canine.

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.

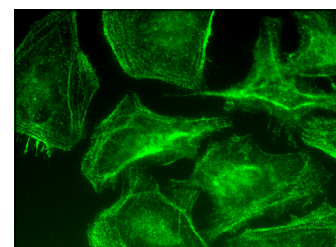
Molecular Weight of KIF18A: 100 kDa.

Positive Controls: F9 cell lysate: sc-2245, WEHI-231 whole cell lysate: sc-2213 or Neuro-2A whole cell lysate: sc-364185.

DATA



KIF18A (C-12): sc-390600. Western blot analysis of KIF18A expression in F9 (A), WEHI-231 (B), Neuro-2A (C) and SJRH30 (D) whole cell lysates.



KIF18A (C-12): sc-390600. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization.

SELECT PRODUCT CITATIONS

1. Li, X., et al. 2019. High kinesin family member 18A expression correlates with poor prognosis in primary lung adenocarcinoma. *Thorac. Cancer* 10: 1103-1110.
2. Nasa, I., et al. 2020. Quantitative kinase and phosphatase profiling reveal that CDK1 phosphorylates PP2Ac to promote mitotic entry. *Sci. Signal.* 13: eaba7823.

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 for detailed protocols and support products.