

KIF12 (H-300): sc-134589

BACKGROUND

Kinesin is a cytoskeletal motor protein involved in axonal transport and cell division. The kinesin superfamily proteins (KIFs) are microtubule-dependent molecular motors that transport membranous organelles and protein complexes in a microtubule- and ATP-dependent manner. Cells use KIFs to tightly control the direction, destination and speed of transportation of a variety of important functional molecules, including mRNA. KIFs are involved in neuronal function and development. Kinesin family member 12 (KIF12) is a kinesin-like 651 amino-acid protein which is involved in mitotically linked cytokinesis. KIF12 is required during mitosis for normal myosin II localization and during late anaphase and telophase for normal nuclear separation. The KIF12 gene consists of a KISc domain, a coiled-coil domain with an internal hinge region and a C-terminal tail domain. KIF12 mRNA is expressed in fetal liver, adult brain, pancreatic islet, kidney tumors, and uterus and pancreatic cancer.

REFERENCES

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- Lakshminanth, G.S., et al. 2004. A mitotic kinesin-like protein required for normal karyokinesis, myosin localization to the furrow, and cytokinesis in *Dictyostelium*. *Proc. Natl. Acad. Sci. USA* 101: 16519-16524.
- Mrug, M., et al. 2005. Kinesin family member 12 is a candidate polycystic kidney disease modifier in the cpk mouse. *J. Am. Soc. Nephrol.* 16: 905-916.
- Katoh, M., et al. 2005. Characterization of KIF12 gene in silico. *Oncol. Rep.* 13: 367-370.

CHROMOSOMAL LOCATION

Genetic locus: KIF12 (human) mapping to 9q32; Kif12 (mouse) mapping to 4 B3.

SOURCE

KIF12 (H-300) is a rabbit polyclonal antibody raised against amino acids 347-646 mapping at the C-terminus of KIF12 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.

STORAGE

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

APPLICATIONS

KIF12 (H-300) is recommended for detection of KIF12 of human and, to a lesser extent, mouse and rat 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).

Suitable for use as control antibody for KIF12 siRNA (h): sc-60880, KIF12 siRNA (m): sc-60881, KIF12 shRNA Plasmid (h): sc-60880-SH, KIF12 shRNA Plasmid (m): sc-60881-SH, KIF12 shRNA (h) Lentiviral Particles: sc-60880-V and KIF12 shRNA (m) Lentiviral Particles: sc-60881-V.

Molecular Weight (predicted) of KIF12: 70 kDa.

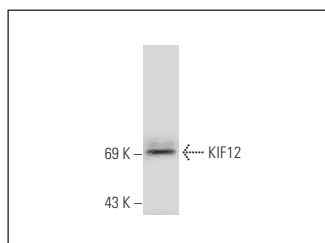
Molecular Weight (observed) of KIF12: 70-85 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



KIF12 (H-300): sc-134589. Western blot analysis of KIF12 expression in Mia PaCa-2 whole cell lysate.

RESEARCH USE

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

MONOS
Satisfaction
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Try **KIF12 (C-4): sc-376572** or **KIF12 (A-9): sc-376766**, our highly recommended monoclonal alternatives to KIF12 (H-300).