# SANTA CRUZ BIOTECHNOLOGY, INC.

# KIF18B (P-17): sc-247344



The Power to Question

### 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. KIF18B (kinesin family member 18B) is an 864 amino acid nuclear and cytoplasmic protein that belongs to the kinesin-like protein family. Containing one kinesin-motor domain, KIF18B is dominantly expressed in amygdala. During mitosis, KIF18B is suggested to be closely associated with astral microtubules emanating from the spindle pole during prometaphase and metaphase. KIF18B may play an important role in regulating cell division. KIF18B exists as four alternatively spliced isoforms and is encoded by a gene located on human chromosome 17q21.31.

#### REFERENCES

- Worby, C.A. and Dixon, J.E. 2002. Sorting out the cellular functions of sorting nexins. Nat. Rev. Mol. Cell Biol. 3: 919-931.
- Miki, H., Okada, Y. and Hirokawa, N. 2005. Analysis of the kinesin superfamily: insights into structure and function. Trends Cell Biol. 15: 467-476.
- Daub, H., Olsen, J.V., Bairlein, M., Gnad, F., Oppermann, F.S., Körner, R., Greff, Z., Kéri, G., Stemmann, O. and Mann, M. 2008. Kinase-selective enrichment enables quantitative phosphoproteomics of the kinome across the cell cycle. Mol. Cell 31: 438-448.
- Dephoure, N., Zhou, C., Villén, J., Beausoleil, S.A., Bakalarski, C.E., Elledge, S.J. and Gygi, S.P. 2008. A quantitative atlas of mitotic phosphorylation. Proc. Natl. Acad. Sci. USA 105: 10762-10767.
- Lee, Y.M., Kim, E., Park, M., Moon, E., Ahn, S.M., Kim, W., Hwang, K.B., Kim, Y.K., Choi, W. and Kim, W. 2010. Cell cycle-regulated expression and subcellular localization of a kinesin-8 member human KIF18B. Gene 466: 16-25.
- Tanenbaum, M.E., Macurek, L., van der Vaart, B., Galli, M., Akhmanova, A. and Medema, R.H. 2011. A complex of Kif18b and MCAK promotes microtubule depolymerization and is negatively regulated by Aurora kinases. Curr. Biol. 21: 1356-1365.
- Stout, J.R., Yount, A.L., Powers, J.A., Leblanc, C., Ems-McClung, S.C. and Walczak, C.E. 2011. Kif18B interacts with EB1 and controls astral microtubule length during mitosis. Mol. Biol. Cell 22: 3070-3080.

#### CHROMOSOMAL LOCATION

Genetic locus: KIF18B (human) mapping to 17q21.31.

#### SOURCE

KIF18B (P-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of KIF18B 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  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-247344 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## **APPLICATIONS**

KIF18B (P-17) is recommended for detection of KIF18B of 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 KIF18A.

KIF18B (P-17) is also recommended for detection of KIF18B in additional species, including equine and porcine.

Molecular Weight of KIF18B: 120 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) Immunofluo-rescence: 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.

## **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.