

KID (H-280): sc-366118

BACKGROUND

KID (kinesin-like DNA-binding protein) is a nuclear protein that belongs to the kinesin-like protein family. KID is involved in spindle formation and the movements of chromosomes during mitosis and meiosis by binding to microtubules in addition to DNA. The N-terminal half of KID contains the kinesin-like motor domain; there is a helix-hairpin-helix DNA-binding domain at its C-terminus. It has been reported that the subcellular localization of KID changes dramatically during cell division.

REFERENCES

1. Tokai, N., Fujimoto-Nishiyama, A., Toyoshima, Y., Yonemura, S., Tsukita, S., Inoue, J. and Yamamoto, T. 1996. KID, a novel kinesin-like DNA binding protein, is localized to chromosomes and the mitotic spindle. *EMBO J.* 15: 457-467.
2. Song, J., Murakami, H., Yang, Z.Q., Koga, C., Adati, N., Murata, T., Geltinger, C., Saito-Ohara, F., Ikeuchi, T., Matsumura, M., Itakura, K., Kanazawa, I., Sun, K. and Yokoyama, K.K. 1998. Human genes for KNSL4 and MAZ are located close to one another on chromosome 16p11.2. *Genomics* 52: 374-377.
3. Germani, A., Bruzzoni-Giovanelli, H., Fellous, A., Gisselbrecht, S., Varin-Blank, N. and Calvo, F. 2000. KIAH-1 interacts with a Tubulin and degrades the kinesin KID by the proteasome pathway during mitosis. *Oncogene* 19: 5997-6006.
4. Funabiki, H. and Murray, A.W. 2000. The *Xenopus* chromokinesin Xkid is essential for metaphase chromosome alignment and must be degraded to allow anaphase chromosome movement. *Cell* 102: 411-424.
5. Yajima, J., Edamatsu, M., Watai-Nishii, J., Tokai-Nishizumi, N., Yamamoto, T. and Toyoshima, Y.Y. 2003. The human chromokinesin KID is a plus end-directed microtubule-based motor. *EMBO J.* 22: 1067-1074.
6. Shiroguchi, K., Ohsugi, M., Edamatsu, M., Yamamoto, T. and Toyoshima, Y.Y. 2003. The second microtubule-binding site of monomeric KID enhances the microtubule affinity. *J. Biol. Chem.* 278: 22460-22465.
7. Tahara, K., Takagi, M., Ohsugi, M., Sone, T., Nishiumi, F., Maeshima, K., Horiuchi, Y., Tokai-Nishizumi, N., Imamoto, F., Yamamoto, T., Kose, S. and Imamoto, N. 2008. Importin β and the small guanosine triphosphatase Ran mediate chromosome loading of the human chromokinesin Kid. *J. Cell Biol.* 180: 493-506.
8. SWISS-PROT/TrEMBL (Q14807). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

CHROMOSOMAL LOCATION

Genetic locus: KIF22 (human) mapping to 16p11.2; Kif22 (mouse) mapping to 7 F3.

SOURCE

KID (H-280) is a rabbit polyclonal antibody raised against amino acids 42-321 mapping near the N-terminus of KID of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

KID (H-280) is recommended for detection of KID of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

KID (H-280) is also recommended for detection of KID in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for KID siRNA (h): sc-44350, KID siRNA (m): sc-45228, KID siRNA (r): sc-156170, KID shRNA Plasmid (h): sc-44350-SH, KID shRNA Plasmid (m): sc-45228-SH, KID shRNA Plasmid (r): sc-156170-SH, KID shRNA (h) Lentiviral Particles: sc-44350-V, KID shRNA (m) Lentiviral Particles: sc-45228-V and KID shRNA (r) Lentiviral Particles: sc-156170-V.

Molecular Weight of KID: 66 kDa.

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.

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.



Try **KID (B-9): sc-390640** or **KID (E-3): sc-390533**, our highly recommended monoclonal alternatives to KID (H-280).