KID (h): 293T Lysate: sc-114788



The Power to Question

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

- Tokai, N., Fujimoto-Nishiyama, A., Toyoshima, Y., Yonemura, S., Tsukita, S., Inoue, J. and Yamamota, T. 1996. KID, a novel kinesin-like DNA binding protein, is localized to chromosomes and the mitotic spindle. EMBO J. 15: 457-467.
- 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. SIAH-1 interacts with α -Tubulin and degrades the kinesin KID by the proteasome pathway during mitosis. Oncogene 19: 5997-6006.
- 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.
- 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.
- 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.
- 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 b 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.

PRODUCT

KID (h): 293T Lysate represents a lysate of human KID transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

KID (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive KID antibodies. Recommended use: 10-20 µl per lane.

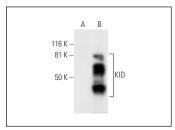
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-tranfected 293T cells.

KID (B-9): sc-390640 is recommended as a positive control antibody for Western Blot analysis of enhanced human KID expression in KID transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

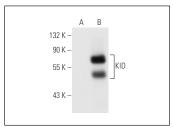
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG κ BP-HRP: sc-516102 or m-lgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA







KID (E-10): sc-166814. Western blot analysis of KID expression in non-transfected: sc-117752 (A) and human KID transfected: sc-114788 (B) 293T whole cell lysates

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.