

# KID (2486C3a): sc-130645

## 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., et al. 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., et al. 1998. Human genes for KNSL4 and MAZ are located close to one another on chromosome 16p11.2. *Genomics* 52: 374-377.
3. Germani, A., et al. 2000. SIAH-1 interacts with  $\alpha$  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., et al. 2003. The human chromokinesin KID is a plus end-directed microtubule-based motor. *EMBO J.* 22: 1067-1074.
6. Shiroguchi, K., et al. 2003. The second microtubule-binding site of monomeric KID enhances the microtubule affinity. *J. Biol. Chem.* 278: 22460-22465.
7. Tahara, K., et al. 2008. Importin  $\beta$  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.

## SOURCE

KID (2486C3a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to a region near the C-terminus of KID of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml PBS with < 0.1% sodium azide and 1.0% gelatin.

## 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.

## APPLICATIONS

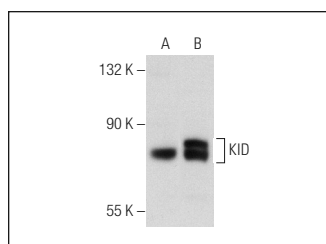
KID (2486C3a) is recommended for detection of KID of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)].

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

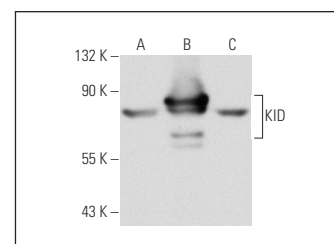
Molecular Weight of KID: 66 kDa.

Positive Controls: KID (h4): 293T Lysate: sc-170546, MCF7 whole cell lysate: sc-2206 or HeLa whole cell lysate: sc-2200

## DATA



KID (2486C3a): sc-130645. Western blot analysis of KID expression in non-transfected: sc-117752 (A) and human KID transfected: sc-170546 (B) 293T whole cell lysates.



KID (2486C3a): sc-130645. Western blot analysis of KID expression in non-transfected 293T: sc-117752 (A), human KID transfected 293T: sc-170134 (B) and MCF7 (C) whole cell lysates.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.