

p-KID (Ser 427): sc-33400

BACKGROUND

Kinesin-like DNA binding protein (KID), also designated kinesin-like protein KIF22, is a member of the kinesin family and is involved in spindle formation. It can bind to microtubules and to DNA and is involved in the regulation of the movement of chromosomes along microtubules during mitosis. KID is a nuclear protein that colocalizes with mitotic chromosomes and the gene maps to chromosome 16p11.2. The gene encoding for KID, KNSL4, spans 16 kb and consists of 13 introns and 14 exons. The N-terminal half of KID contains the kinesin-like motor domain, and 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 α Tubulin and degrades the kinesin KID by the proteasome pathway during mitosis. *Oncogene* 19: 5997-6006.
4. Shiroguchi, K., et al. 2003. The second microtubule-binding site of monomeric KID enhances the microtubule affinity. *J. Biol. Chem.* 278: 22460-22465.
5. Yajima, J., et al. 2003. The human chromokinesin KID is a plus end-directed microtubule-based motor. *EMBO J.* 22: 1067-1074.
6. 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

p-KID (Ser 427) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 427 phosphorylated 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.

Blocking peptide available for competition studies, sc-33400 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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

p-KID (Ser 427) is recommended for detection of Serine 427 phosphorylated 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).

p-KID (Ser 427) is also recommended for detection of correspondingly phosphorylated 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 shRNA Plasmid (h): sc-44350-SH, KID shRNA Plasmid (m): sc-45228-SH, KID shRNA (h) Lentiviral Particles: sc-44350-V and KID shRNA (m) Lentiviral Particles: sc-45228-V.

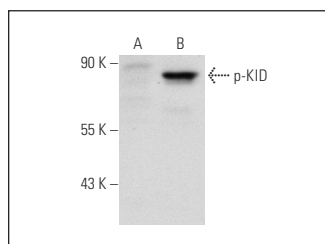
Molecular Weight of p-KID: 73 kDa.

Positive Controls: KID (h3): 293T Lysate: sc-170134.

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 B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 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



p-KID (Ser 427): sc-33400. Western blot analysis of KID phosphorylation in non-transfected: sc-117752 (A) and human KID transfected: sc-170134 (B) 293T whole cell lysates.

PROTOCOLS

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