

KANK1 (H-300): sc-135113

BACKGROUND

KANK1 (KN motif and ankyrin repeat domains 1), also known as ANKRD15, is a 1,352 amino acid protein containing 5 ANK domains. KANK1 interacts with 14-3-3, regulated by Insulin and EGF and mediated through phosphorylation of Kank by Akt, which inhibits insulin-induced cell migration as well as Insulin and active Akt-dependent activation of RhoA. KANK1 also negatively regulates the formation of actin stress fibers through inhibition of RhoA activity. KANK1 also interacts with IRSp53, inhibiting the binding of IRSp53 with active Rac1 which in turn inhibits the development of lamellipodia but not filopodia. KANK1 also regulates cell polarity during directed migration in wound healing. KANK1 is also thought to inhibit fibronectin-mediated cell spreading and neurite outgrowth. Mutations in the KANK1 gene results in CPSQ2 (cerebral palsy, spastic quadriplegic 2), a non-progressive disorder of movement and/or posture resulting from defects in the developing nervous system.

REFERENCES

1. Wang, Y., et al. 2005. Alternative splicing of the human Kank gene produces two types of Kank protein. *Biochem. Biophys. Res. Commun.* 330: 1247-1253.
2. Roy, B.C., et al. 2005. Pathological characterization of Kank in renal cell carcinoma. *Exp. Mol. Pathol.* 78: 41-48.
3. Wang, Y., et al. 2006. Nucleo-cytoplasmic shuttling of human Kank protein accompanies intracellular translocation of β -catenin. *J. Cell Sci.* 119: 4002-4010.
4. Kakinuma, N., et al. 2008. Kank regulates RhoA-dependent formation of actin stress fibers and cell migration via 14-3-3 in PI3K-Akt signaling. *J. Cell Biol.* 181: 537-549.
5. Roy, B.C., et al. 2009. Kank attenuates actin remodeling by preventing interaction between IRSp53 and Rac1. *J. Cell Biol.* 184: 253-267.
6. Medves, S., et al. 2010. KANK1, a candidate tumor suppressor gene, is fused to PDGFRB in an imatinib-responsive myeloid neoplasm with severe thrombocytopenia. *Leukemia* 24: 1052-1055.

CHROMOSOMAL LOCATION

Genetic locus: KANK1 (human) mapping to 9p24.3; Kank1 (mouse) mapping to 19 B.

SOURCE

KANK1 (H-300) is a rabbit polyclonal antibody raised against amino acids 301-600 mapping within an internal region of KANK1 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.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

KANK1 (H-300) is recommended for detection of KANK1 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).

KANK1 (H-300) is also recommended for detection of KANK1 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for KANK1 siRNA (h): sc-92843, KANK1 siRNA (m): sc-141079, KANK1 shRNA Plasmid (h): sc-92843-SH, KANK1 shRNA Plasmid (m): sc-141079-SH, KANK1 shRNA (h) Lentiviral Particles: sc-92843-V and KANK1 shRNA (m) Lentiviral Particles: sc-141079-V.

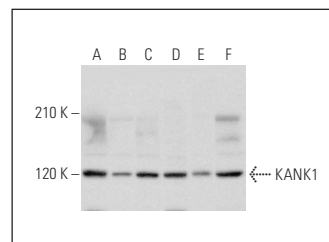
Molecular Weight of KANK1: 130 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, ACHN whole cell lysate: sc-364365 or HEK293 whole cell lysate: sc-45136.

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.

DATA



KANK1 (H-300): sc-135113. Western blot analysis of KANK1 expression in ACHN (A), Jurkat (B), HEK293 (C), NIH/3T3 (D), HeLa (E) and K-562 (F) whole cell lysates.

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.