SANTA CRUZ BIOTECHNOLOGY, INC.

STK33 (I-15): sc-169451

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. STK33 (serine/threonine kinase 33) is a 514 amino acid protein that belongs to the CaMK (calcium/calmodulin dependent kinase) subfamily of structurally related serine/threonine kinases. Widely expressed at low levels with predominant expression in testis, lung, retina and fetal organs such as brain, heart and spinal cord, STK33 contains one protein kinase domain and functions as a Ser/Thr protein kinase with a possible role in spermatogenesis. The gene encoding STK33 lies within a region on chromosome 11 that has been associated with a variety of defects, including Long QT syndrome, T-cell leukemia, Beckwith-Wiedemann syndrome, Usher syndrome 1C and various other malignancies.

REFERENCES

1. Amid, C., et al. 2001. Comparative genomic sequencing reveals a strikingly similar architecture of a conserved syntenic region on human chromosome 11p15.3 (including gene ST5) and mouse chromosome 7. Cytogenet. Cell Genet. 93: 284-290.
2. Mujica, A.O., et al. 2001. A novel serine/threonine kinase gene, STK33, on human chromosome 11p15.3. Gene 280: 175-181.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607670. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Guo, L., et al. 2003. Molecular cloning and characterization of a novel human kinase gene, PDIK1L. J. Genet. 82: 27-32.
5. Mujica, A.O., et al. 2005. Differential expression pattern of the novel serine/threonine kinase, STK33, in mice and men. FEBS J. 272: 4884-4898.
6. Woods, I.G. and Talbot, W.S. 2005. The you gene encodes an EGF-CUB protein essential for hedgehog signaling in zebrafish. PLoS Biol. 3: E66.

CHROMOSOMAL LOCATION

Genetic locus: STK33 (human) mapping to 11p15.4; Stk33 (mouse) mapping to 7 E3.

SOURCE

STK33 (I-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of STK33 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-169451 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

STK33 (I-15) is recommended for detection of STK33 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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); non cross-reactive with other STK family members.

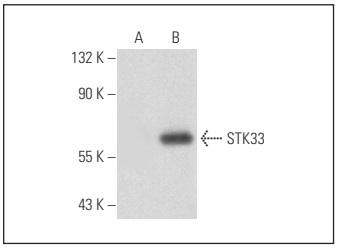
STK33 (I-15) is also recommended for detection of STK33 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for STK33 siRNA (h): sc-96894, STK33 siRNA (m): sc-153899, STK33 shRNA Plasmid (h): sc-96894-SH, STK33 shRNA Plasmid (m): sc-153899-SH, STK33 shRNA (h) Lentiviral Particles: sc-96894-V and STK33 shRNA (m) Lentiviral Particles: sc-153899-V.

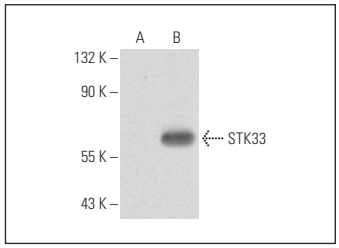
Molecular Weight of STK33: 53 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or STK33 (h): 293T Lysate: sc-174845.

DATA



STK33 (I-15): sc-169451. Western blot analysis of STK33 expression in non-transfected: sc-117752 (**A**) and human STK33 transfected: sc-174857 (**B**) 293T whole cell lysates.



STK33 (I-15): sc-169451. Western blot analysis of STK33 expression in non-transfected: sc-117752 (**A**) and human STK33 transfected: sc-174845 (**B**) 293T whole cell lysates.

STORAGE

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

PROTOCOLS

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