

STK16 (D-15): sc-169442

BACKGROUND

The phosphorylation of proteins by protein kinases and protein phosphatases is a key event in most nuclear and cytoplasmic processes. The ability to activate and deactivate proteins via phosphorylation or dephosphorylation is important for cell division, cell differentiation, DNA repair and transcription. STK16 (serine/threonine kinase 16), also known as KRCT, MPSK, TSF1 or PKL12, is a 305 amino acid lipid-anchored membrane protein that belongs to the superfamily of serine/threonine protein kinases. Expressed ubiquitously at low levels, STK16 is a protein kinase that can catalytically phosphorylate both serine and threonine residues on a variety of proteins. STK16 functions in an ATP-dependent manner and contains one protein kinase domain. Over-expression of STK16 causes disorganization of the Golgi apparatus, suggesting an additional role for STK16 in the secretory pathway. Human STK16 shares 94% sequence identity with its mouse counterpart, indicating a conserved function between species.

REFERENCES

- Ligos, J.M., et al. 1998. Cloning, expression analysis, and functional characterization of PKL12, a member of a new subfamily of Ser/Thr kinases. *Biochem. Biophys. Res. Commun.* 249: 380-384.
- Berson, A.E., et al. 1999. Identification and characterization of a myristylated and palmitylated serine/threonine protein kinase. *Biochem. Biophys. Res. Commun.* 259: 533-538.
- Ohta, S., et al. 2000. A novel transcriptional factor with Ser/Thr kinase activity involved in the transforming growth factor (TGF)- β signalling pathway. *Biochem. J.* 350: 395-404.
- Ligos, J.M., et al. 2002. Functional interaction between the Ser/Thr kinase PKL12 and N-acetylglucosamine kinase, a prominent enzyme implicated in the salvage pathway for GlcNAc recycling. *J. Biol. Chem.* 277: 6333-6343.

CHROMOSOMAL LOCATION

Genetic locus: STK16 (human) mapping to 2q35; Stk16 (mouse) mapping to 1 C3.

SOURCE

STK16 (D-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of STK16 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-169442 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.

APPLICATIONS

STK16 (D-15) is recommended for detection of STK16 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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.

STK16 (D-15) is also recommended for detection of STK16 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for STK16 siRNA (h): sc-94757, STK16 siRNA (m): sc-153894, STK16 shRNA Plasmid (h): sc-94757-SH, STK16 shRNA Plasmid (m): sc-153894-SH, STK16 shRNA (h) Lentiviral Particles: sc-94757-V and STK16 shRNA (m) Lentiviral Particles: sc-153894-V.

Molecular Weight of STK16: 34 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201 or mouse brain extract: sc-2253.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.



Try **STK16 (B-10): sc-374356**, our highly recommended monoclonal alternative to STK16 (D-15).