

# STK16 (B-10): sc-374356

## 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)- $\beta$  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.

## SOURCE

STK16 (B-10) is a mouse monoclonal antibody raised against amino acids 226-305 mapping at the C-terminus of STK16 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STK16 (B-10) is available conjugated to agarose (sc-374356 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374356 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374356 PE), fluorescein (sc-374356 FITC), Alexa Fluor<sup>®</sup> 488 (sc-374356 AF488), Alexa Fluor<sup>®</sup> 546 (sc-374356 AF546), Alexa Fluor<sup>®</sup> 594 (sc-374356 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-374356 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-374356 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-374356 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

STK16 (B-10) is recommended for detection of STK16 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

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

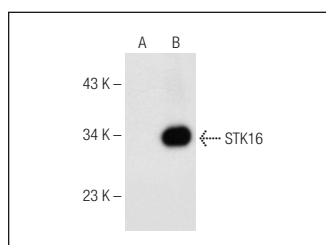
Molecular Weight of STK16: 34 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201 or STK16 (h): 293T Lysate: sc-116468.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



STK16 (B-10): sc-374356. Western blot analysis of STK16 expression in non-transfected: sc-117752 (A) and human STK16 transfected: sc-116468 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Karim, M., et al. 2022. Numb-associated kinases are required for SARS-CoV-2 infection and are cellular targets for antiviral strategies. *Antiviral Res.* 204: 105367.

## 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.