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STK16 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7241a

Product Information

Application	WB, IHC-P, E
Primary Accession	O75716
Other Accession	P57760, O88697
Reactivity	Human, Mouse
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB3581
Calculated MW	34656
Antigen Region	17-46

Additional Information

Gene ID	8576
Other Names	Serine/threonine-protein kinase 16, Myristoylated and palmitoylated serine/threonine-protein kinase, MPSK, Protein kinase PKL12, TGF-beta-stimulated factor 1, TSF-1, Tyrosine-protein kinase STK16, hPSK, STK16, MPSK1, PKL12, TSF1
Target/Specificity	This STK16 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 17-46 amino acids from the N-terminal region of human STK16.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	STK16 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	STK16

Synonyms	MPSK1, PKL12, TSF1
Function	Membrane-associated protein kinase that phosphorylates on serine and threonine residues. In vitro substrates include DRG1, ENO1 and EIF4EBP1. Also autophosphorylates. May be involved in secretory vesicle trafficking or intracellular signaling. May have a role in regulating stromal-epithelial interactions that occur during ductal morphogenesis in the mammary gland. May be involved in TGF-beta signaling. Able to autophosphorylate on Tyr residue; it is however unclear whether it has tyrosine-protein kinase toward other proteins.
Cellular Location	Cytoplasm, perinuclear region. Membrane; Lipid-anchor. Note=Associates with Golgi and Golgi-derived vesicles.
Tissue Location	Ubiquitously expressed at very low levels.

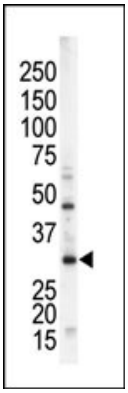
Background

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the g phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains. The STE group (homologs of yeast Sterile 7, 11, 20 kinases) consists of 50 kinases related to the mitogen-activated protein kinase (MAPK) cascade families (Ste7/MAP2K, Ste11/MAP3K, and Ste20/MAP4K). MAP kinase cascades, consisting of a MAPK and one or more upstream regulatory kinases (MAPKKs) have been best characterized in the yeast pheromone response pathway. Pheromones bind to Ste cell surface receptors and activate yeast MAPK pathway.

References

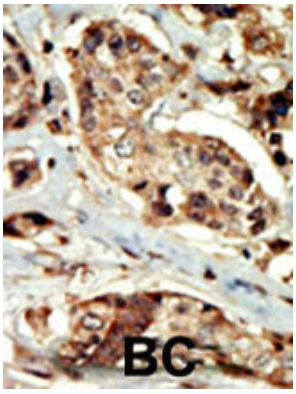
Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).
Berson, A.E., et al., Biochem. Biophys. Res. Commun. 259(3):533-538 (1999).
Ligos, J.M., et al., Biochem. Biophys. Res. Commun. 249(2):380-384 (1998).

Images

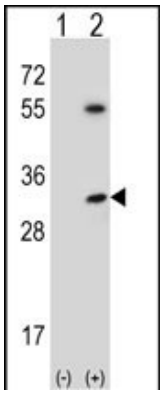


The anti-STK16 Pab (Cat. #AP7241a) is used in Western blot to detect STK16 in mouse brain tissue lysate.

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use



of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Western blot analysis of STK16 (arrow) using rabbit polyclonal STK16 Antibody (S32) (Cat. #AP7241a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the STK16 gene.

Citations

- Cardiac-specific overexpression of sarcolipin in phospholamban null mice impairs myocyte function that is restored by phosphorylation.