

Rabbit STK11 Polyclonal Antibody | anti-STK11 antibody

STK11 Antibody

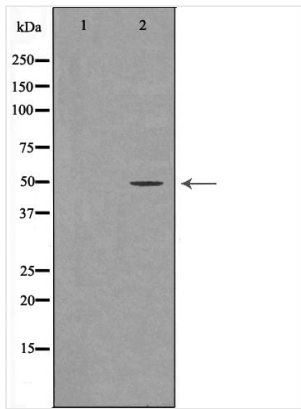
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326605	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

STK11; Polyclonal Antibody; STK11 Antibody; hLKB1; Liver kinase B1; LKB1; PJS; Polarization related protein LKB1; Renal carcinoma antigen NY-REN-19; Serine/Threonine Kinase 11; Serine/threonine protein kinase 11; Serine/threonine protein kinase LKB1; Serine/threonine protein kinase STK11; Serine/threonine-protein kinase 11; Serine/threonine-protein kinase LKB1; Serine/threonine-protein kinase XEEK1; Stk11; STK11_HUMAN; anti-STK11 antibody

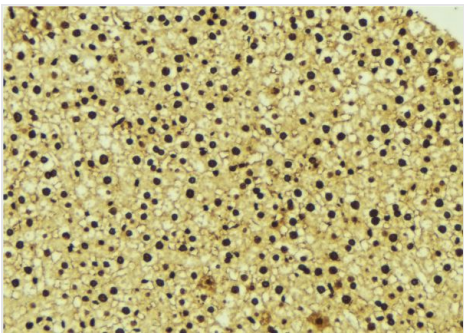
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	STK11 antibody detects endogenous levels of total STK11
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	433
Applicable Applications for anti-STK11 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human STK11
Subcellular Location	Nucleus. Cytoplasm. Relocates to the cytoplasm when bound to CAB39 and STRAD or CAB39 and ALS2CR2.
Tissue Specificity	Ubiquitously expressed. Strongest expression in testis and fetal liver.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



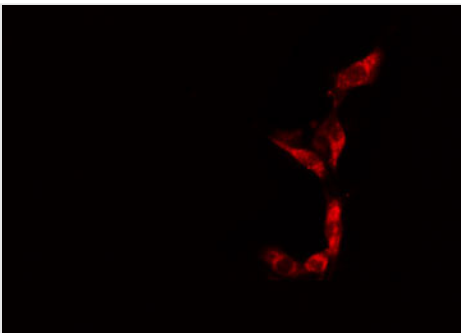
WB (Western Blot)

Western blot analysis of extracts of HEK-293, using STK11 antibody. The lane on the left is treated with the antigen-specific peptide.



IHC (Immunohistochemistry)

AAA326605 at 1/100 staining Mouse liver tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



IF (Immunofluorescence)

AAA326605 staining HeLa cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) antibody, diluted at 1/600, was used as secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-STK11 antibody	Description: LKB1 (STK11) is a serine/threonine kinase and tumor suppressor that helps control cell structure, apoptosis and energy homeostasis through regulation of numerous downstream kinases (1, 2). A cytosolic protein complex comprised of LKB1, putative kinase STRAD, and the MO25 scaffold protein, activates both AMP-activated protein kinase (AMPK) and several AMPK-related kinases (3). AMPK plays a predominant role as the master regulator of cellular energy homeostasis, controlling downstream effectors that regulate cell growth and apoptosis in response to cellular ATP concentrations (4). LKB1 appears to be phosphorylated in cells at several sites, including human LKB1 at Ser31/325/428 and Thr189/336/363 (5). Mutation in the corresponding LKB1 gene causes Peutz-Jeghers syndrome (PJS), an autosomal dominant disorder characterized by benign GI tract polyps and dark skin lesions of the mouth, hands and feet (6). A variety of other LKB1 gene mutations have been associated with the formation of sporadic cancers in several tissues (7). Function: Tumor suppressor serine/threonine-protein kinase that controls the activity of AMP-activated protein kinase (AMPK) family members, thereby playing a role in various processes such as cell metabolism, cell polarity, apoptosis and DNA damage response. Acts by phosphorylating the T-loop of AMPK family proteins, thus promoting their activity: phosphorylates PRKAA1, PRKAA2, BRSK1, BRSK2, MARK1, MARK2, MARK3, MARK4, NUA1, NUA2, SIK1, SIK2, SIK3 and SNRK but not MELK. Also phosphorylates non-AMPK family proteins such as STRADA, PTEN and possibly p53/TP53. Acts as a key upstream regulator of AMPK by mediating phosphorylation and activation of AMPK catalytic subunits PRKAA1 and PRKAA2 and thereby regulates processes including: inhibition of signaling pathways that promote cell growth and proliferation when energy levels are low, glucose homeostasis in liver, activation of autophagy when cells undergo nutrient deprivation, and B-cell differentiation in the germinal center in response to DNA damage. Also acts as a regulator of cellular polarity by remodeling the actin cytoskeleton. Required for cortical neuron polarization by mediating phosphorylation and activation of BRSK1 and BRSK2, leading to axon initiation and specification. Involved in DNA damage response: interacts with p53/TP53 and recruited to the CDKN1A/WAF1 promoter to participate in transcription activation. Able to phosphorylate p53/TP53; the relevance of such result in vivo is however unclear and phosphorylation may be indirect and mediated by downstream STK11/LKB1 kinase NUA1. Also acts as a mediator of p53/TP53-dependent apoptosis via interaction with p53/TP53: translocates to the mitochondrion during apoptosis and regulates p53/TP53-dependent apoptosis pathways. In vein endothelial cells, inhibits PI3K/Akt signaling activity and thus induces apoptosis in response to the oxidant peroxynitrite (in vitro). Regulates UV radiation-induced DNA damage response mediated by CDKN1A. In association with NUA1, phosphorylates CDKN1A in response to UV radiation and contributes to its degradation which is necessary for optimal DNA repair (PubMed:25329316). Subunit Structure: Catalytic component of a trimeric complex composed of STK11/LKB1, STRAD (STRADA or STRADB) and CAB39/MO25 (CAB39/MO25alpha or CAB39L/MO25beta): the complex tethers STK11/LKB1 in the cytoplasm and stimulates its catalytic activity. Found in a ternary complex composed of SMAD4, STK11/LKB1 and STK11IP. Interacts with p53/TP53, SMAD4, STK11IP and WDR6. Interacts with NR4A1. Interacts with NISCH; this interaction may increase STK11 activity. Interacts with PTEN; leading to PTEN phosphorylation. Interacts with SIRT1; the interaction deacetylates STK11. Interacts with CDKN1A. Post-translational Modifications: Phosphorylated by ATM at Thr-363 following ionizing radiation (IR). Phosphorylation at Ser-428 by RPS6KA1 and/or some PKA is required to inhibit cell growth. Phosphorylation at Ser-428 is also required during neuronal polarization to mediate phosphorylation of BRSK1 and BRSK2 (By similarity). Phosphorylation by PKC/PRKCZ at Ser-428 promotes peroxynitrite-induced nuclear export of STK11, leading to PTEN activation and subsequent inhibition of AKT signaling. Phosphorylation by PKC/PRKCZ at Ser-399 in isoform 2 promotes metformin (or peroxynitrite)-induced nuclear export of STK11 and activation of AMPK. UV radiation-induced phosphorylation at Thr-363 mediates CDKN1A degradation (By similarity). Acetylated. Deacetylation at Lys-48 enhances cytoplasmic localization and kinase activity in vitro. Similarity: Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. LKB1 subfamily.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4507271
NCBI GeneID	6794
NCBI Accession #	NP_000446.1
NCBI GenBank Nucleotide #	NM_000455.4
UniProt Accession #	Q15831; B2RBX7; E7EW76
Molecular Weight	Observed: 49 kDa Predicted: 49 kDa
NCBI Official Full Name	serine/threonine-protein kinase STK11

NCBI Official Synonym Full Names	serine/threonine kinase 11
NCBI Official Symbol	STK11
NCBI Official Synonym Symbols	PJS; LKB1; hLKB1
NCBI Protein Information	serine/threonine-protein kinase STK11
UniProt Protein Name	Serine/threonine-protein kinase STK11
UniProt Gene Name	STK11
UniProt Synonym Gene Names	LKB1; PJS; LKB1; hLKB1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://stage.aaabiotech.com/polyclonal/stk11-antibody-immunocytochemistry-immunofluorescence-immunohistochemistry-western-blot-elisa/326605>