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STK38 Rabbit pAb

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Catalog # AP58405

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q15208
Reactivity	Human, Mouse
Predicted	Rat, Chicken, Dog, Pig, Horse, Guinea Pig
Host	Rabbit
Clonality	Polyclonal
Calculated MW	54190
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human STK38
Epitope Specificity	31-130/465
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nucleus. Cytoplasm.
SIMILARITY	Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. Contains 1 AGC-kinase C-terminal domain. Contains 1 protein kinase domain.
SUBUNIT	Homodimeric S100B binds two molecules of STK38.
Post-translational modifications	ISGylated (Probable).Phosphorylated by STK3/MST2 and this is enhanced by MOBKL1B.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	STK38 belongs to the NDR family of serine/threonine protein kinases. NDR kinases require the phosphorylation of conserved Ser/Thr residues for activation. NDR family members have two unique stretches of primary sequence: an N-terminal regulatory (NTR) domain and an insert of several residues between subdomains VII and VIII of the kinase domain. The kinase domain insert functions as an auto-inhibitory sequence (AIS), while binding of the co-activator MOB (Mps-one binder) proteins to the NTR domain releases NDR kinases from inhibition of autophosphorylation. STK38 negatively regulates the activation of MEKK1/2 by direct interaction with the catalytic domain of MEKK1/2. The negative regulation of MEKK1/2 is not due to its phosphorylation by STK38.

Additional Information

Gene ID	11329
Other Names	Serine/threonine-protein kinase 38, 2.7.11.1, NDR1 protein kinase, Nuclear Dbf2-related kinase 1, STK38 {ECO:0000303|PubMed:17906693, ECO:0000312|HGNC:HGNC:17847}

Target/Specificity	Ubiquitously expressed with highest levels observed in peripheral blood leukocytes.
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

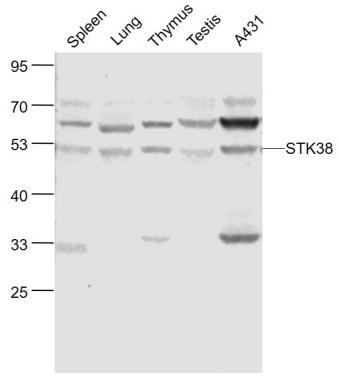
Protein Information

Name	STK38 {ECO:0000303|PubMed:17906693, ECO:0000312|HGNC:HGNC:17847}
Function	Serine/threonine-protein kinase that acts as a negative regulator of MAP3K1/2 signaling (PubMed:12493777, PubMed:15197186, PubMed:17906693, PubMed:7761441). Converts MAP3K2 from its phosphorylated form to its non-phosphorylated form and inhibits autophosphorylation of MAP3K2 (PubMed:12493777, PubMed:15197186, PubMed:17906693, PubMed:7761441). Acts as an ufmylation 'reader' in a kinase-independent manner: specifically recognizes and binds mono-ufmylated histone H4 in response to DNA damage, promoting the recruitment of SUV39H1 to the double-strand breaks, resulting in ATM activation (PubMed:32537488).
Cellular Location	Nucleus. Cytoplasm. Chromosome Note=Localizes to DNA double-strand breaks in response to DNA damage
Tissue Location	Ubiquitously expressed with highest levels observed in peripheral blood leukocytes.

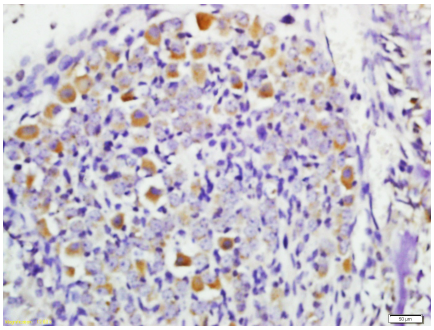
Background

STK38 belongs to the NDR family of serine/threonine protein kinases. NDR kinases require the phosphorylation of conserved Ser/Thr residues for activation. NDR family members have two unique stretches of primary sequence: an N-terminal regulatory (NTR) domain and an insert of several residues between subdomains VII and VIII of the kinase domain. The kinase domain insert functions as an auto-inhibitory sequence (AIS), while binding of the co-activator MOB (Mps-one binder) proteins to the NTR domain releases NDR kinases from inhibition of autophosphorylation. STK38 negatively regulates the activation of MEKK1/2 by direct interaction with the catalytic domain of MEKK1/2. The negative regulation of MEKK1/2 is not due to its phosphorylation by STK38.

Images



Sample:
Spleen (Mouse) Lysate at 40 ug
Lung (Mouse) Lysate at 40 ug
Thymus (Mouse) Lysate at 40 ug
Testis (Mouse) Lysate at 40 ug
A431(Human) Cell Lysate at 30 ug
Primary: Anti-STK38 (AP58405) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 51 kD
Observed band size: 51 kD



Tissue/cell: mouse embryo tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;
Incubation: Anti-STK38 Polyclonal Antibody, Unconjugated(AP58405) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining