

Rabbit NuaK1 Polyclonal Antibody | anti-NuaK1 antibody

Phospho-NuaK1 (Ser600) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA329739	Rabbit	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (90%), Chicken (100%), Xenopus (90%)	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

NuaK1; Polyclonal Antibody; Phospho-NuaK1 (Ser600) Antibody; AMP activated protein kinase family member 5; AMPK related protein kinase 5; AMPK-related protein kinase 5; NUA family SNF1 like kinase; NUA family SNF1-like kinase 1; Nuak1; NUA1_HUMAN; Omphalocele kinase 1; Probable serine/threonine protein kinase KIAA0537; anti-NuaK1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (90%), Chicken (100%), Xenopus (90%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-NuaK1 (Ser600) Antibody detects endogenous levels of NuaK1 only when phosphorylated at Ser600. Tissue Specificity: Expressed at high levels in heart and brain, and at lower levels in skeletal muscle, kidney, ovary, placenta, lung and liver. Highly up-regulated in colorectal cancer cell lines.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-NuaK1 antibody	ELISA (Peptide ELISA), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human NuaK1 around the phosphorylation site of Ser600.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Ubiquitinated with 'Lys-29'- and 'Lys-33'-linked polyubiquitins which appear to impede LKB1-mediated phosphorylation. Deubiquitinated by USP9X. Phosphorylated at Thr-211 by STK11/LKB1 in complex with STE20-related adapter-alpha (STRADA) pseudo kinase and CAB39. Not dephosphorylated by the myosin PP1 complex when regulating its activity, due to the presence of PPP1R12A, which prevents myosin PP1 from dephosphorylating NUA1. Phosphorylated by STK38L upon stimulation with IGF1.
Subunit Structure	Interacts (via GILK motif) with PPP1CB; the interaction is direct and bridges NUA1 and PPP1R12A. Interacts with CDKN1A.
Similarity	The GILK motif mediates interaction with PPP1CB. Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. SNF1 subfamily.
Subcellular Location	Nucleus. Cytoplasm.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IHC (Immunohistochemistry)
At 1/200 staining Human kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue 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 antibody.



IHC (Immunohistochemisry)
At 1/200 staining Mouse kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue 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 antibody.



IHC (Immunohiostchemistry)
Staining Rat kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue 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 antibody.



WB (Western Blot)
Western blot analysis NuaK1 (Phospho-Ser600) using HeLa whole cell lysates. -/+ means absence or presence of N peptide¼non-phospho peptide) and P peptide(phospho peptide).

ADDITIONAL INFORMATION

Related Product Information for anti-NuaK1 antibody	Serine/threonine-protein kinase involved in various processes such as cell adhesion, regulation of cell ploidy and senescence, cell proliferation and tumor progression. Phosphorylates ATM, CASP6, LATS1, PPP1R12A and p53/TP53. Acts as a regulator of cellular senescence and cellular ploidy by mediating phosphorylation of 'Ser-464' of LATS1, thereby controlling its stability. Controls cell adhesion by regulating activity of the myosin protein phosphatase 1 (PP1) complex. Acts by mediating phosphorylation of PPP1R12A subunit of myosin PP1: phosphorylated PPP1R12A then interacts with 14-3-3, leading to reduced dephosphorylation of myosin MLC2 by myosin PP1. May be involved in DNA damage response: phosphorylates p53/TP53 at 'Ser-15' and 'Ser-392' and is recruited to the CDKN1A/WAF1 promoter to participate to transcription activation by p53/TP53. May also act as a tumor malignancy-associated factor by promoting tumor invasion and metastasis under regulation and phosphorylation by AKT1. Suppresses Fas-induced apoptosis by mediating phosphorylation of CASP6, thereby suppressing the activation of the caspase and the subsequent cleavage of CFLAR. Regulates UV radiation-induced DNA damage response mediated by CDKN1A. In association with STK11, phosphorylates CDKN1A in response to UV radiation and contributes to its degradation which is necessary for optimal DNA repair.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	7662170
NCBI GeneID	9891
NCBI Accession #	NP_055655
NCBI GenBank Nucleotide #	NM_014840
UniProt Accession #	O60285; Q96KA8; A7MD39
Molecular Weight	23,824 Da
NCBI Official Full Name	NUAK family SNF1-like kinase 1
NCBI Official Synonym Full Names	NUAK family, SNF1-like kinase, 1
NCBI Official Symbol	NUAK1
NCBI Official Synonym Symbols	ARK5
NCBI Protein Information	NUAK family SNF1-like kinase 1; AMP-activated protein kinase family member 5; AMPK-related protein kinase 5; omphalocele kinase 1
UniProt Protein Name	NUAK family SNF1-like kinase 1

UniProt Gene Name	NUAK1
UniProt Synonym Gene Names	ARK5; KIAA0537; OMPHK1; ARK5
UniProt Entry Name	NUAK1_HUMAN

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.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/nuak1-antibody-peptide-elisa-immunohistochemistry-western-blot-elisa/329739>