

Anti-NUAK1 antibody



Description	Unconjugated Rabbit polyclonal to NUAK1
Model	STJ190113
Host	Rabbit
Reactivity	Human, Mouse
Applications	ELISA, WB
Immunogen	Synthesized peptide derived from human NUAK1 protein.
Immunogen Region	530-610aa
Gene ID	9891
Gene Symbol	NUAK1
Dilution range	WB 1:500-2000 ELISA 1:5000-20000
Specificity	NUAK1 Polyclonal Antibody detects endogenous levels of protein.
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.
Purification	NUAK1 antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	NUAK family SNF1-like kinase 1 AMPK-related protein kinase 5 ARK5 Omphalocele kinase 1
Molecular Weight	72 kDa

Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid form in PBS containing 50% glycerol, and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:14311 OMIM:608130
Alternative Names	NUAK family SNF1-like kinase 1 AMPK-related protein kinase 5 ARK5 Omphalocele kinase 1
Function	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 .
Sequence and Domain Family	The GILK motif mediates interaction with PPP1CB.
Cellular Localization	Nucleus Cytoplasm
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 NUAK1. Phosphorylated by STK38L upon stimulation with IGF1.