

Rabbit TNK2 Polyclonal Antibody | anti-TNK2 antibody

TNK2 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326736	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

TNK2; Polyclonal Antibody; TNK2 Antibody; Acetate kinase 1; Acetokinase 1; ACK 1; ACK; ACK-1; ACK1; ACK1_HUMAN; Activated Cdc42 associated kinase 1; Activated CDC42 kinase 1; Activated p21cdc42Hs kinase; FLJ44758; FLJ45547; p21cdc42Hs; TNK 2; Tyrosine kinase non receptor 2; Tyrosine kinase non receptor protein 2; Tyrosine kinase non-receptor protein 2; anti-TNK2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	TNK2 antibody detects endogenous levels of total TNK2
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	1086
Applicable Applications for anti-TNK2 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human TNK2
Subcellular Location	Cell Membrane. Nucleus. Endosome. Cell Junction > Adherens Junction. Cytoplasmic Vesicle Membrane. The Tyr-284 phosphorylated form is expressed both in the membrane and nucleus. Co-localizes with EGFR on the endosomes.
Tissue Specificity	The Tyr-284 phosphorylated form shows a significant increase in expression in breast cancers during the progressive stages i.e. normal to hyperplasia (ADH), ductal carcinoma in situ (DCIS), invasive ductal carcinoma (IDC) and lymph node metastatic (LNMM) stages. It also shows a significant increase in expression in prostate cancers during the progressive stages.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



IF (Immunofluorescence)

AAA326736 staining HepG2 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) Ab, diluted at 1/600, was used as the secondary antibody.



WB (Western Blot)

Western blot analysis of K562 whole cell lysates, using TNK2 Antibody. The lane on the left is treated with the antigen-specific peptide.



IHC (Immunohistochemistry)

AAA326736 at 1/100 staining Human breast cancer 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.

ADDITIONAL INFORMATION

Related Product Information for anti-TNK2 antibody

Description: This gene encodes a tyrosine kinase that binds Cdc42Hs in its GTP-bound form and inhibits both the intrinsic and GTPase-activating protein (GAP)-stimulated GTPase activity of Cdc42Hs. This binding is mediated by a unique sequence of 47 amino acids C-terminal to an SH3 domain. The protein may be involved in a regulatory mechanism that sustains the GTP-bound active form of Cdc42Hs and which is directly linked to a tyrosine phosphorylation signal transduction pathway. Several alternatively spliced transcript variants have been identified from this gene, but the full-length nature of only two transcript variants has been determined.

Function: Non-receptor tyrosine-protein and serine/threonine-protein kinase that is implicated in cell spreading and migration, cell survival, cell growth and proliferation. Transduces extracellular signals to cytosolic and nuclear effectors. Phosphorylates AKT1, AR, MCF2, WASL and WWOX. Implicated in trafficking and clathrin-mediated endocytosis through binding to epidermal growth factor receptor (EGFR) and clathrin. Binds to both poly- and mono-ubiquitin and regulates ligand-induced degradation of EGFR, thereby contributing to the accumulation of EGFR at the limiting membrane of early endosomes. Downstream effector of CDC42 which mediates CDC42-dependent cell migration via phosphorylation of BCAR1. May be involved both in adult synaptic function and plasticity and in brain development. Activates AKT1 by phosphorylating it on 'Tyr-176'. Phosphorylates AR on 'Tyr-267' and 'Tyr-363' thereby promoting its recruitment to androgen-responsive enhancers (AREs). Phosphorylates WWOX on 'Tyr-287'. Phosphorylates MCF2, thereby enhancing its activity as a guanine nucleotide exchange factor (GEF) toward Rho family proteins. Contributes to the control of AXL receptor levels. Confers metastatic properties on cancer cells and promotes tumor growth by negatively regulating tumor suppressor such as WWOX and positively regulating pro-survival factors such as AKT1 and AR. Phosphorylates WASP (PubMed:20110370).

Subunit Structure: Interacts with NEDD4 (via WW3 domain). NEDD4L and EGF promote association with NEDD4 (By similarity). Homodimer. Interacts with AR, CDC42, WWASL and WWOX. Interacts with CSPG4 (activated). Interacts with MERTK (activated); stimulates autophosphorylation. May interact (phosphorylated) with HSP90AB1; maintains kinase activity. Interacts with NPHP1. Interacts with SNX9 (via SH3 domain). Interacts with SRC (via SH2 and SH3 domain). Interacts with EGFR, and this interaction is dependent on EGF stimulation and kinase activity of EGFR. Interacts (via kinase domain) with AKT1. Part of a collagen stimulated complex involved in cell migration composed of CDC42, CRK, TNK2 and BCAR1/p130cas. Interacts with BCAR1/p130cas via SH3 domains. Forms complexes with GRB2 and numerous receptor tyrosine kinases (RTK) including LTK, AXL or PDGFRL, in which GRB2 promotes RTK recruitment by TNK2.

Post-translational Modifications: Autophosphorylation regulates kinase activity. Phosphorylation on Tyr-518 is required for interaction with SRC and is observed during association with clathrin-coated pits. Polyubiquitinated by NEDD4 and NEDD4L. Degradation can be induced by EGF and is lysosome-dependent (By similarity).

Similarity: The EBD (EGFR-binding domain) domain is necessary for interaction with EGFR. The SAM-like domain is necessary for NEDD4-mediated ubiquitination. Promotes membrane localization and dimerization to allow for autophosphorylation. The UBA domain binds both poly- and mono-ubiquitin. Belongs to the protein kinase superfamily. Tyr protein kinase family.

NCBI AND UNIPROT INFORMATION

NCBI GI #	58331191
NCBI GeneID	10188
NCBI Accession #	NP_001010938.1
NCBI GenBank Nucleotide #	NM_001010938.1
UniProt Accession #	Q07912; Q6ZMQ0; Q8N6U7; Q96H59
Molecular Weight	Observed: 114 kDa Predicted: 115 kDa
NCBI Official Full Name	activated CDC42 kinase 1 isoform 2
NCBI Official Synonym Full Names	tyrosine kinase non receptor 2
NCBI Official Symbol	TNK2
NCBI Official Synonym Symbols	ACK; ACK1; ACK-1; p21cdc42Hs
NCBI Protein Information	activated CDC42 kinase 1
UniProt Protein Name	Activated CDC42 kinase 1
UniProt Gene Name	TNK2
UniProt Synonym Gene Names	ACK1; ACK-1

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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