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Phospho-TNIK(S764) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3276A

Product Information

Application	WB, DB, IHC-P, E
Primary Accession	Q9UKE5
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	154943

Additional Information

Gene ID	23043
Other Names	TRAF2 and NCK-interacting protein kinase, TNIK, KIAA0551
Target/Specificity	This TNIK Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S764 of human TNIK.
Dilution	WB~~1:1000 DB~~1:500 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Phospho-TNIK(S764) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TNIK (HGNC:30765)
Synonyms	KIAA0551
Function	Serine/threonine kinase that acts as an essential activator of the Wnt signaling pathway. Recruited to promoters of Wnt target genes and required to activate their expression. May act by phosphorylating TCF4/TCF7L2. Appears to act upstream of the JUN N- terminal pathway. May play a role in the response to environmental stress. Part of a signaling complex composed

	of NEDD4, RAP2A and TNIK which regulates neuronal dendrite extension and arborization during development. More generally, it may play a role in cytoskeletal rearrangements and regulate cell spreading. Phosphorylates SMAD1 on Thr-322. Activator of the Hippo signaling pathway which plays a pivotal role in organ size control and tumor suppression by restricting proliferation and promoting apoptosis. MAP4Ks act in parallel to and are partially redundant with STK3/MST2 and STK4/MST2 in the phosphorylation and activation of LATS1/2, and establish MAP4Ks as components of the expanded Hippo pathway (PubMed:26437443).
Cellular Location	Nucleus. Cytoplasm. Recycling endosome. Cytoplasm, cytoskeleton. Note=Associated with recycling endosomes and the cytoskeletal fraction upon RAP2A overexpression
Tissue Location	Expressed ubiquitously. Highest levels observed in heart, brain and skeletal muscle. Expressed in normal colonic epithelia and colorectal cancer tissues.

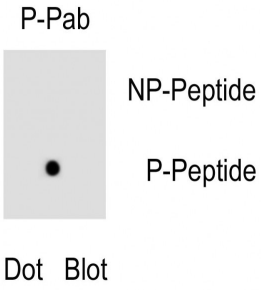
Background

TNIK is a stress-activated serine/threonine kinase that may play a role in the response to environmental stress. This protein appears to act upstream of the JUN N-terminal pathway, and may play a role in cytoskeletal regulation.

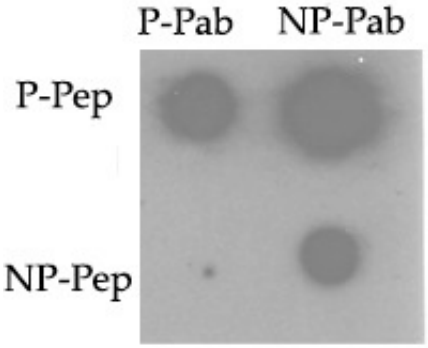
References

Taira, K., et al., J. Biol. Chem. 279(47):49488-49496 (2004).
Fu, C.A., et al., J. Biol. Chem. 274(43):30729-30737 (1999).
Yonekura, H., et al., Nucleic Acids Res. 27(13):2591-2600 (1999).

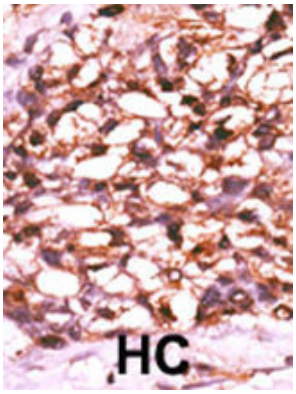
Images



Dot blot analysis of anti-TNIK(S764) Antibody Phospho-specific Pab (Cat. #AP3276a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0. 5ug per ml.



Dot blot analysis of Phospho-TNIK-pS764 Pab (Cat. #AP3276a) and TNIK-pS764 Pab (AP7970d)on nitrocellulose membrane. 50ng of Phospho-peptide (BP3276a) or Non Phospho-peptide (BP7970d) per dot were adsorbed. Antobodies working concentration was 0.5ug per ml. P-Pab: phosphorylated antibody; NP-Pab: non-phophorylated antibody; P-Pep: phospho-peptide; NP-Pep: non-phospho-peptide.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Citations

- Characterization of the ERG-regulated Kinome in Prostate Cancer Identifies TNIK as a Potential Therapeutic Target.
- The psychiatric disease risk factors DISC1 and TNIK interact to regulate synapse composition and function.