10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

phospho-TNIK (Ser764) Rabbit pAb

Catalog # AP99971

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q9UKE5
Other Accession	Q9UKE5
Reactivity	Rat, Mouse
Predicted	Pig, Human, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	154943
Physical State	Liquid
Immunogen	KLH conjugated Synthesised phosphopeptide derived from human TNIK around the phosphorylation site of Ser764
Epitope Specificity	AN(p-S)KS
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. STE20 subfamily.Contains 1 CNH domain. Contains 1 protein kinase domain.
SUBUNIT	Interacts (via the CNH domain) with RAP2A (GTP-bound form preferentially); the interaction is direct and required for the activation of TNIK by RAP2A. Interacts with NEDD4; recruits RAP2A to NEDD4. Interacts with TRAF2 and NCK. Interacts with TCF7L2/TCF4 and CTNNB1; the interaction is direct. Interacts with TANC1.
Post-translational modifications	Autophosphorylated. Autophosphorylation is activated by RAP2A and induces association to the cytoskeletal fraction.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	TNIK is a MSN protein kinase that interacts with both TNF receptor-associated factor 2 (TRAF2) and the adapter protein NCK. The protein has been shown to activate the c-Jun N-terminal kinase pathway when over expressed in Phoenix-A cells. TNIK has been shown to phosphorylate gelsolin, the principal intracellular and extracellular actin-severing protein, in vitro. This and evidence from mutational studies suggest that TNIK functions in the regulation of the cytoskeleton. Northern analysis indicates TNIK expression in human heart, skeletal muscle, and brain, with lower levels of expression in kidney, liver, lung, and pancreas. ESTs have been isolated from human tissue libraries, including normal amnion, gallbladder and skin.

Additional Information

Gene ID	23043
Other Names	MRT54; 1500031A17Rik; 4831440I19Rik; C530008O15Rik; C630040K21Rik; TNIK_HUMAN; TNIK; 2.7.11.1; KIAA0551; TNIK_MOUSE; TRAF2 and NCK

	interacting kinase; TNIK (phospho-S764); p-TNIK; phospho-TNIK; TNIK (phospho-Ser764)
Dilution	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	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.

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