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NME7 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8084a

Product Information

Application	IHC-P, WB, E
Primary Accession	Q9Y5B8
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB3728
Calculated MW	42492
Antigen Region	25-55

Additional Information

Gene ID	29922
Other Names	Nucleoside diphosphate kinase 7, NDK 7, NDP kinase 7, nm23-H7, NME7
Target/Specificity	This NME7 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 25-55 amino acids from the N-terminal region of human NME7.
Dilution	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	NME7 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NME7 (HGNC:20461)
Function	Possesses an intrinsic kinase activity (PubMed: 24807905, PubMed:34764205). Phosphorylates GSK3B at 'Ser-9', leading to the activation of Wnt/beta-catenin signaling (PubMed:34764205). Additionally, exhibits a 3'-5'-DNA exonuclease activity that removes single nucleotides from the 3'

	terminus of single-stranded DNA substrates and digests overhanging mismatched 3' termini from double- stranded DNA substrates, possibly participating in DNA nucleolytic processing (PubMed:16313181). In vitro, does not seem to have nucleoside diphosphate kinase activity (PubMed:16313181, PubMed:24807905). Functional component of the gamma-tubulin ring complex, implicated in the regulation of its microtubule-nucleating activity in centrosomes, in a kinase activity-dependent manner (PubMed:24807905). May maintain primary cilium assembly and ciliary microtubule stability (PubMed:39824631). Part of the dynein-decorated doublet microtubules (DMTs) in cilia axoneme, required for motile cilia beating (PubMed:36191189).
Cellular Location	Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Nucleus. Cytoplasm. Cytoplasm, cytoskeleton, spindle. Cytoplasm, cytoskeleton, cilium axoneme. Cytoplasm, cytoskeleton, flagellum axoneme {ECO:0000250|UniProtKB:Q5E9Y9}. Cell projection, cilium. Cytoplasm, cytoskeleton, cilium basal body. Note=Localizes to centrosomes through its assembly into gamma-tubulin ring complex. The centrosomal content of NME7 varies during the cell cycle, being highest in mitosis and lowest in early G1 (PubMed:24807905). Localizes at the cilium basal body during cilium assembly (By similarity) {ECO:0000250|UniProtKB:Q9QXL8, ECO:0000269|PubMed:24807905}
Tissue Location	Expressed in airway epithelial cells.

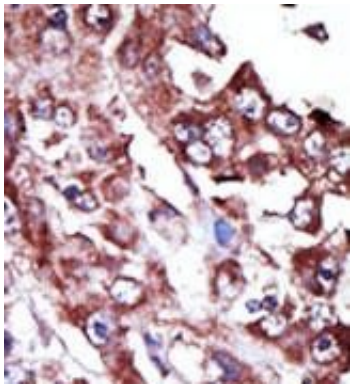
Background

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the g phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains. The STE group (homologs of yeast Sterile 7, 11, 20 kinases) consists of 50 kinases related to the mitogen-activated protein kinase (MAPK) cascade families (Ste7/MAP2K, Ste11/MAP3K, and Ste20/MAP4K). MAP kinase cascades, consisting of a MAPK and one or more upstream regulatory kinases (MAPKKs) have been best characterized in the yeast pheromone response pathway. Pheromones bind to Ste cell surface receptors and activate yeast MAPK pathway.

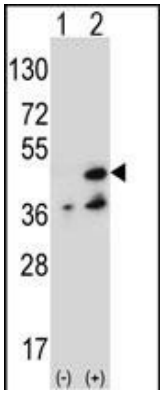
References

Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).

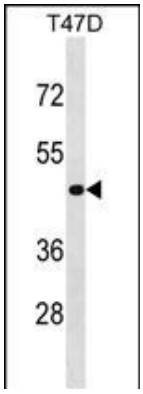
Images



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.



Western blot analysis of NME7 (arrow) using rabbit polyclonal NME7 Antibody (V40) (Cat. #AP8084a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the NME7 gene.



NME7 Antibody (V40) (Cat. #AP8084a) western blot analysis in T47D cell line lysates (35ug/lane).This demonstrates the NME7 antibody detected the NME7 protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.