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NEK6 Rabbit pAb

Catalog # AP97771

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q9HC98
Other Accession	Q9HC98
Reactivity	Rat
Predicted	Pig, Human, Mouse, Rabbit, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	35714
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human NEK6
Epitope Specificity	81-180/313
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. NEK Ser/Thr protein kinase family. NIMA subfamily. Contains 1 protein kinase domain.
SUBUNIT	Interacts with STAT3 and RPS6KB1 (By similarity). Interacts with NEK9, predominantly in mitosis. Interacts with KIF11 (via C-terminus). Interacts with APBB1 (via WW domain). Interacts with ANKRA2, ATF4, ARHGAP33, CDC42, CIR1, PRAM1, PTN, PRDX3, PIN1, RAD26L, RBBP6, RPS7 and TRIP4.
Post-translational modifications	Autophosphorylated. Phosphorylation at Ser-206 is required for its activation. Phosphorylated upon IR or UV-induced DNA damage. Phosphorylated by CHEK1 and CHEK2. Interaction with APBB1 down-regulates phosphorylation at Thr-210.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The protein encoded by this gene is a kinase required for progression through the metaphase portion of mitosis. Inhibition of the encoded protein can lead to apoptosis. This protein also can enhance tumorigenesis by suppressing tumor cell senescence. Several transcript variants encoding a few different isoforms have been found for this gene.

Additional Information

Gene ID	10783
Other Names	SID6-1512; 1300007C09Rik; NEK6_HUMAN; NEK6; Never in mitosis A-related kinase 6 (NimA-related protein kinase 6); Protein kinase SID6-1512; 2.7.11.34; NEK6_MOUSE; NEK6_RAT; NIMA related kinase 6; NIMA (never in mitosis gene a)-related kinase 6; putative serine-threonine protein kinase
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	NEK6 (HGNC:7749)
Function	Protein kinase which plays an important role in mitotic cell cycle progression (PubMed:11516946, PubMed:14563848). Required for chromosome segregation at metaphase-anaphase transition, robust mitotic spindle formation and cytokinesis (PubMed:19414596). Phosphorylates ATF4, CIRSR, PTN, RAD26L, RBBP6, RPS7, RPS6KB1, TRIP4, STAT3 and histones H1 and H3 (PubMed:12054534, PubMed:20873783). Phosphorylates KIF11 to promote mitotic spindle formation (PubMed:19001501). Involved in G2/M phase cell cycle arrest induced by DNA damage (PubMed:18728393). Inhibition of activity results in apoptosis. May contribute to tumorigenesis by suppressing p53/TP53-induced cancer cell senescence (PubMed:21099361). Phosphorylates EML4 at 'Ser-144', promoting its dissociation from microtubules during mitosis which is required for efficient chromosome congression (PubMed:31409757).
Cellular Location	Cytoplasm. Nucleus. Nucleus speckle. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle pole. Note=Colocalizes with APBB1 at the nuclear speckles. Colocalizes with PIN1 in the nucleus. Colocalizes with ATF4, CIRSR, ARHGAP33, ANKRA2, CDC42, NEK9, RAD26L, RBBP6, RPS7, TRIP4, RELB and PHF1 in the centrosome. Localizes to spindle microtubules in metaphase and anaphase and to the midbody during cytokinesis
Tissue Location	Ubiquitous, with highest expression in heart and skeletal muscle.

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