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

NEK9 Antibody (C-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8079b

Specification

NEK9 Antibody (C-term) - Product Information

Application	**IHC-P, WB,E**
Primary Accession	Q8TD19
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**107168**
Antigen Region	**846-877**

NEK9 Antibody (C-term) - Additional Information

Gene ID 91754

Other Names
Serine/threonine-protein kinase Nek9, Nercc1 kinase, Never in mitosis A-related kinase 9, NimA-related protein kinase 9, NimA-related kinase 8, Nek8, NEK9, KIAA1995, NEK8, NERCC

Target/Specificity
This NEK9 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 846-877 amino acids from the C-terminal region of human NEK9.

Dilution
IHC-P~~1:50~100
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 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
NEK9 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

NEK9 Antibody (C-term) - Protein Information

Name NEK9 {ECO:0000303|PubMed:12840024, ECO:0000312|HGNC:HGNC:18591}

Function Pleiotropic regulator of mitotic progression, participating in the control of spindle dynamics and chromosome separation (PubMed:12101123, PubMed:12840024, PubMed:14660563, PubMed:19941817). Phosphorylates different histones, myelin basic protein, beta-casein, and BICD2 (PubMed:11864968). Phosphorylates histone H3 on serine and threonine residues and beta-casein on serine residues (PubMed:11864968). Important for G1/S transition and S phase progression (PubMed:12840024, PubMed:14660563, PubMed:19941817). Phosphorylates NEK6 and NEK7 and stimulates their activity by releasing the autoinhibitory functions of Tyr-108 and Tyr-97 respectively (PubMed:12840024, PubMed:14660563, PubMed:19941817, PubMed:26522158).

Cellular Location
Cytoplasm. Nucleus

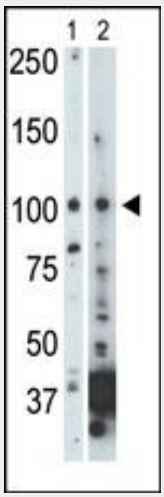
Tissue Location
Most abundant in heart, liver, kidney and testis. Also expressed in smooth muscle cells and fibroblasts

NEK9 Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

NEK9 Antibody (C-term) - Images



The anti-NEK9 Pab (Cat. #AP8079b) is used in Western blot to detect NEK9 in 293 cell lysate (Lane 1) and mouse heart tissue lysate (Lane 2).

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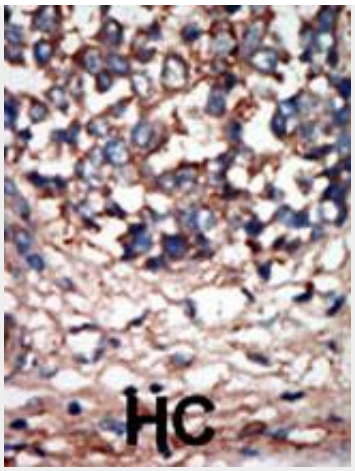

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast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

NEK9 Antibody (C-term) - Background

NEK9, a member of the NIMA subfamily of Ser/Thr protein kinases, is a pleiotropic regulator of mitotic progression, participating in the control of spindle dynamics and chromosome separation. It phosphorylates different histones (serine and threonine residues on H3), myelin basic protein, beta-casein (serine residues), and BICD2. NEK9 is activated during mitosis by intramolecular autophosphorylation. Activity and autophosphorylation is activated by manganese >> magnesium ions, and is sensitive to increasing concentration of detergents. This protein is not cell-cycle regulated but activity is higher in G0-arrested cells. NEK is part of a homodimer that binds to Ran GTPase, and exhibits a greater affinity for Ran-GDP over Ran-GTP. Interaction is also noted with NEK6 and NEK7 family members. This cytoplasmic protein is most abundant in heart, liver, kidney and testis, and is also expressed in smooth muscle cells and fibroblasts. Expression varies mildly across the cell cycle, with highest expression observed in G1 and stationary-phase cells.

NEK9 Antibody (C-term) - References

Tan,B.C. et al. J. Biol. Chem. 279 (10), 9321-9330 (2004)
Belham,C. et al. J. Biol. Chem. 278 (37), 34897-34909 (2003)
Roig, J. et al. Genes Dev. 16(13):1640-1658 (2002).
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Strausberg, R.L. et al. Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).