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

NEK1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP8072b

Specification

NEK1 Antibody (C-term) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	Q96PY6
Other Accession	P51954
Reactivity	**Human**
Predicted	**Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**1165-1196**

NEK1 Antibody (C-term) - Additional Information

Gene ID 4750

Other Names
Serine/threonine-protein kinase Nek1, Never in mitosis A-related kinase 1, NimA-related protein kinase 1, Renal carcinoma antigen NY-REN-55, NEK1, KIAA1901

Target/Specificity
This NEK1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1165-1196 amino acids from the C-terminal region of human NEK1.

Dilution
WB~~1:500
IHC-P~~1:50~100

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
NEK1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

NEK1 Antibody (C-term) - Protein Information

Name NEK1

Synonyms KIAA1901

Function Phosphorylates serines and threonines, but also appears to possess tyrosine kinase activity (PubMed:20230784). Involved in DNA damage checkpoint control and for proper DNA damage repair (PubMed:20230784). In response to injury that includes DNA damage, NEK1 phosphorylates VDAC1 to limit mitochondrial cell death (PubMed:20230784). May be implicated in the control of meiosis (By similarity). Involved in cilium assembly (PubMed:21211617).

Cellular Location
Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome {ECO:0000250|UniProtKB:P51954}. Cytoplasm. Note=Associated with the pericentriolar material (PubMed:21211617). Localizes to centrosome during interphase and mitosis (By similarity). Translocated from cytoplasm to discrete nuclear foci at sites of DNA damage (PubMed:15604234) {ECO:0000250|UniProtKB:P51954, ECO:0000269|PubMed:15604234, ECO:0000269|PubMed:21211617}

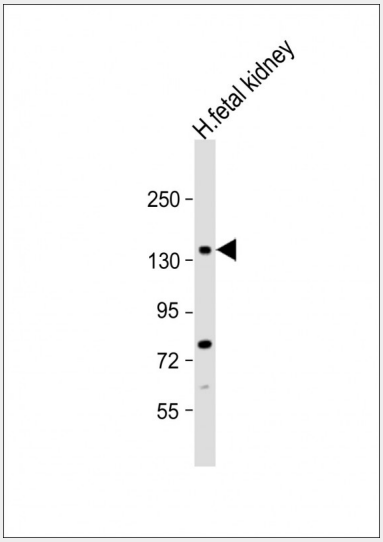
Tissue Location
High fetal expression in the brain and kidney.

NEK1 Antibody (C-term) - Protocols

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

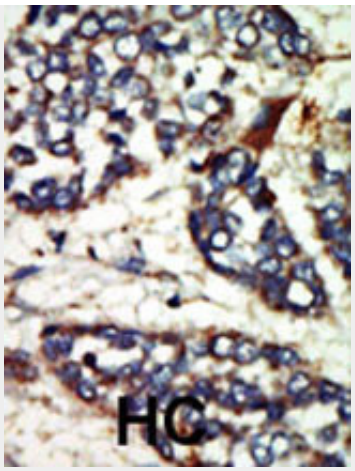
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

NEK1 Antibody (C-term) - Images



Anti-NEK1 Antibody (C-term) at 1:500 dilution + human fetal kidney lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 143 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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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 DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

NEK1 Antibody (C-term) - 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.

NEK1 Antibody (C-term) - References

Surpili, M.J., et al., Biochemistry 42(51):15369-15376 (2003).
Scanlan, M.J., et al., Int. J. Cancer 83(4):456-464 (1999).
Letwin, K., et al., EMBO J. 11(10):3521-3531 (1992).