

## Rabbit anti-Human NEK2 Polyclonal Antibody | anti-NEK2 antibody

NEK2 Antibody

|                               |                       |                            |                                                                  |
|-------------------------------|-----------------------|----------------------------|------------------------------------------------------------------|
| CATALOG #<br><b>AAA323528</b> | HOST<br><b>Rabbit</b> | REACTIVITY<br><b>Human</b> | APPLICATIONS<br><b>ELISA, Immunohistochemistry, Western Blot</b> |
|-------------------------------|-----------------------|----------------------------|------------------------------------------------------------------|

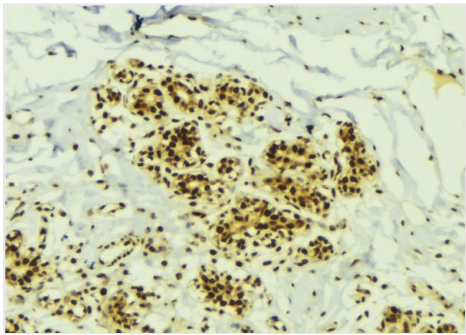
### PRODUCT SYNONYMS

NEK2; Polyclonal Antibody; NEK2 Antibody; HSPK 21; HsPK21; NEK 2; NEK2\_HUMAN; NEK2A; Never in mitosis A-related kinase 2; NIMA (never in mitosis gene a) related kinase 2; NimA like protein kinase 1; NIMA related kinase 2; NimA related protein kinase 2; NimA-like protein kinase 1; NimA-related protein kinase 2; NLK 1; NLK1; Serine/threonine-protein kinase Nek2; anti-NEK2 antibody

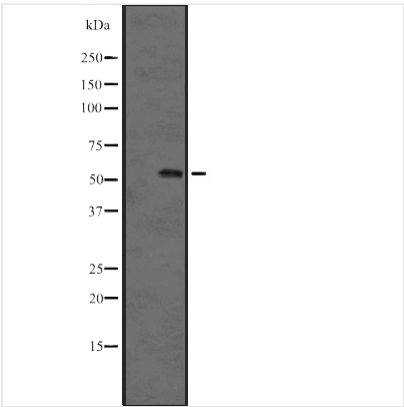
### PRODUCT SPECIFICATIONS

|                                                |                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| Host                                           | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Reactivity                                     | Human                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Clonality                                      | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                              |
| Isotype                                        | IgG                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Specificity                                    | NEK2 antibody detects endogenous levels of total NEK2                                                                                                                                                                                                                                                                                                                                                                   |
| Purity/Purification                            | The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.                                                                                                                                                                                                                                                                                                                           |
| Form/Format                                    | Liquid<br>Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.                                                                                                                                                                                                                                                                                                                           |
| Concentration                                  | 1mg/ml (varies by lot)                                                                                                                                                                                                                                                                                                                                                                                                  |
| Sequence Length                                | 388                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Applicable Applications for anti-NEK2 antibody | ELISA, IHC (Immunohistochemistry), WB (Western Blot)                                                                                                                                                                                                                                                                                                                                                                    |
| Immunogen                                      | A synthesized peptide                                                                                                                                                                                                                                                                                                                                                                                                   |
| Subcellular Location                           | Cytoplasm. Predominantly Cytoplasmic; Nucleus > Nucleolus. Has a nucleolar targeting/retention activity via a coiled-coil domain at the C-terminal end and Nucleus. Chromosome > Centromere. Chromosome > Centromere > Kinetochore. Co-localizes with SGOL1 and MAD1L1 at the kinetochore. Not associated with kinetochore in the interphase but becomes associated with it upon the breakdown of the nuclear envelope. |
| Tissue Specificity                             | Isoform 1 and isoform 2 are expressed in peripheral blood T-cells and a wide variety of transformed cell types. Isoform 1 and isoform 4 are expressed in the testis. Up-regulated in various cancer cell lines, as well as primary breast tumors.                                                                                                                                                                       |
| Conjugation                                    | Unconjugated                                                                                                                                                                                                                                                                                                                                                                                                            |

IMAGES



**IHC (Immunohistochemistry)**  
AAA323528 at 1/100 staining Human breast cancer tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



**WB (Western Blot)**  
Western blot analysis of NEK2 expression in A431 whole cell lysate, The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

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| <b>Related Product Information for anti-NEK2 antibody</b> | <p>Function: Protein kinase which is involved in the control of centrosome separation and bipolar spindle formation in mitotic cells and chromatin condensation in meiotic cells. Regulates centrosome separation (essential for the formation of bipolar spindles and high-fidelity chromosome separation) by phosphorylating centrosomal proteins such as CROCC, CEP250 and NINL, resulting in their displacement from the centrosomes. Regulates kinetochore microtubule attachment stability in mitosis via phosphorylation of NDC80. Involved in regulation of mitotic checkpoint protein complex via phosphorylation of CDC20 and MAD2L1. Plays an active role in chromatin condensation during the first meiotic division through phosphorylation of HMG A2. Phosphorylates: PPP1CC; SGO1; NECAB3 and NPM1. Essential for localization of MAD2L1 to kinetochore and MAPK1 and NPM1 to the centrosome. Phosphorylates CEP68 and CNTLN directly or indirectly (PubMed:24554434). NEK2-mediated phosphorylation of CEP68 promotes CEP68 dissociation from the centrosome and its degradation at the onset of mitosis (PubMed:25704143). Involved in the regulation of centrosome disjunction (PubMed:26220856).</p> <p>Subunit Structure: Isoform 1, isoform 2 and isoform 4 form homo-and heterodimers. Interacts with NECAB3 and HMG A2 (By similarity). Isoform 1 interacts with CDC20, CTNB1, MAD1L1, MAPK, NEK11, NPM1, NDC80, PCNT and SGO1 (PubMed:14978040, PubMed:15358203, PubMed:15388344, PubMed:15161910, PubMed:17621308, PubMed:18086858, PubMed:18297113, PubMed:20599736, PubMed:20034488). Isoform 1 interacts with STK3/MST2 (via SARAH domain) and SAV1 (via SARAH domain) (PubMed:21076410). Isoform 1 and isoform 2 interact with MAD2L1 (PubMed:20034488). Isoform 1 and isoform 4 interact with PPP1CA and PPP1CC (PubMed:15659832, PubMed:17283141). Interacts with CEP68; the interaction leads to phosphorylation of CEP68. Interacts with CNTLN; the interaction leads to phosphorylation of CNTLN (PubMed:24554434). Isoform 1 interacts with CEP85 (PubMed:26220856).</p> <p>Post-translational Modifications: Activated by autophosphorylation. Protein phosphatase 1 represses autophosphorylation and activation of isoform 1 by dephosphorylation. Phosphorylation by STK3/MST2 is necessary for its localization to the centrosome.</p> <p>Similarity: The leucine-zipper domain is required for its dimerization and activation. Belongs to the protein kinase superfamily. NEK Ser/Thr protein kinase family. NIMA subfamily.</p> |
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NCBI AND UNIPROT INFORMATION

|                           |                                                                |
|---------------------------|----------------------------------------------------------------|
| NCBI GI #                 | 323510688                                                      |
| NCBI GeneID               | 4751                                                           |
| NCBI Accession #          | NP_001191111.1                                                 |
| NCBI GenBank Nucleotide # | NM_001204182.1                                                 |
| UniProt Accession #       | P51955; Q53FD6; Q511Z9; Q5VXZ1; Q6NZX8; Q7Z634; Q86XH2; Q96QN9 |
| Molecular Weight          | Observed: 52 kDa<br>Predicted: 52 kDa                          |
| NCBI Official Full Name   | serine/threonine-protein kinase Nek2 isoform 3                 |

|                                  |                                            |
|----------------------------------|--------------------------------------------|
| NCBI Official Synonym Full Names | NIMA related kinase 2                      |
| NCBI Official Symbol             | NEK2                                       |
| NCBI Official Synonym Symbols    | NLK1; RP67; NEK2A; HsPK21; PPP1R111        |
| NCBI Protein Information         | serine/threonine-protein kinase Nek2       |
| UniProt Protein Name             | Serine/threonine-protein kinase Nek2       |
| UniProt Gene Name                | <b>NEK2</b>                                |
| UniProt Synonym Gene Names       | NEK2A; NLK1; NimA-related protein kinase 2 |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/nek2-antibody-immunohistochemistry-western-blot-elisa/323528>