

NEK7 Antibody (Kinase Domain)
Rabbit Polyclonal Antibody
Catalog # ALS10888**Specification****NEK7 Antibody (Kinase Domain) - Product Information**

Application	IHC-P
Primary Accession	Q8TDX7
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	35kDa KDa
Dilution	IHC-P ~ ~ N/A

NEK7 Antibody (Kinase Domain) - Additional Information**Gene ID** 140609**Other Names**

Serine/threonine-protein kinase Nek7, 2.7.11.1, Never in mitosis A-related kinase 7, NimA-related protein kinase 7, NEK7

Target/Specificity

Human NEK7. BLAST analysis of the peptide immunogen showed no homology with other human proteins.

Reconstitution & Storage

Long term: -70°C; Short term: +4°C

Precautions

NEK7 Antibody (Kinase Domain) is for research use only and not for use in diagnostic or therapeutic procedures.

NEK7 Antibody (Kinase Domain) - Protein Information**Name** NEK7 {ECO:0000303|PubMed:11701951, ECO:0000312|HGNC:HGNC:13386}**Function**

Protein kinase which plays an important role in mitotic cell cycle progression (PubMed: 17101132, PubMed: 19941817, PubMed: 31409757). Required for microtubule nucleation activity of the centrosome, robust mitotic spindle formation and cytokinesis (PubMed: 17586473, PubMed: 19414596, PubMed: 19941817, PubMed: 26522158, PubMed: 31409757).

target="_blank">31409757). Phosphorylates EML4 at 'Ser-146', promoting its dissociation from microtubules during mitosis which is required for efficient chromosome congression (PubMed:31409757). Phosphorylates RPS6KB1 (By similarity). Acts as an essential activator of the NLRP3 inflammasome assembly independently of its kinase activity (PubMed:26642356, PubMed:36442502, PubMed:39173637). Acts by unlocking NLRP3 following NLRP3 translocation into the microtubule organizing center (MTOC), relieving NLRP3 autoinhibition and promoting formation of the NLRP3:PYCARD complex, and activation of CASP1 (PubMed:26642356, PubMed:31189953, PubMed:36442502, PubMed:39173637). Serves as a cellular switch that enforces mutual exclusivity of the inflammasome response and cell division: interaction with NEK9 prevents interaction with NLRP3 and activation of the inflammasome during mitosis (PubMed:26642356, PubMed:31189953).

Cellular Location

Nucleus {ECO:0000250|UniProtKB:Q9ES74}. Cytoplasm. Cytoplasm, cytoskeleton, spindle pole. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Note=Present at centrosome throughout the cell cycle (PubMed:17586473). Also detected at spindle midzone of the anaphase cells and eventually concentrates at the midbody (PubMed:17586473). Interaction with ANK3 prevents its translocation to the nucleus (By similarity). {ECO:0000250|UniProtKB:Q9ES74, ECO:0000269|PubMed:17586473}

Tissue Location

Highly expressed in lung, muscle, testis, brain, heart, liver, leukocyte and spleen. Lower expression in ovary, prostate and kidney. No expression seen in small intestine

Volume

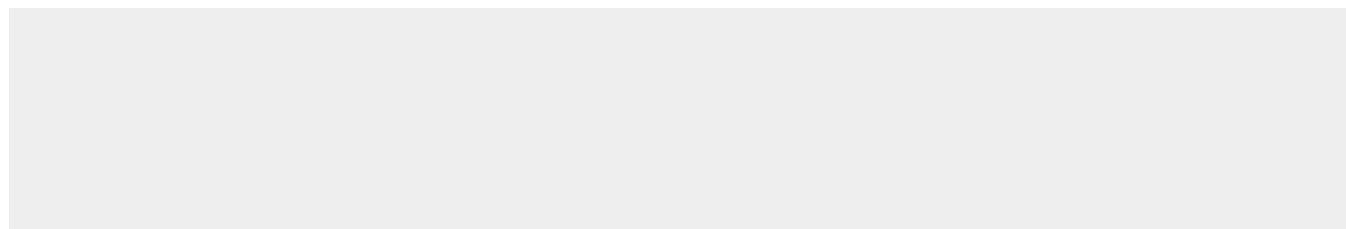
50 µl

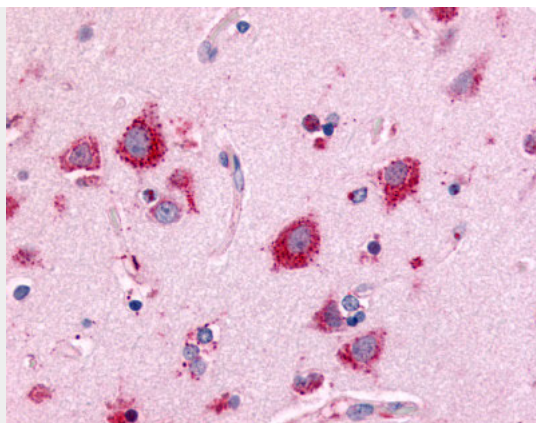
NEK7 Antibody (Kinase Domain) - Protocols

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

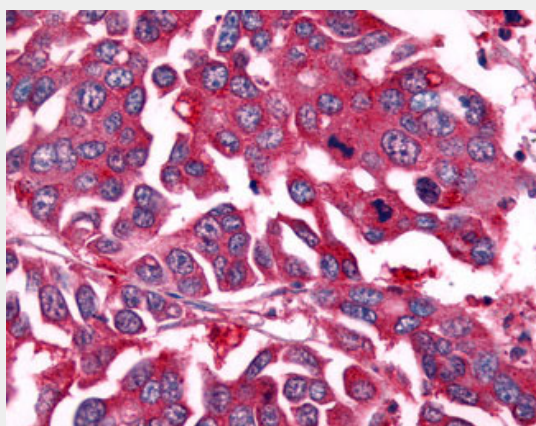
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

NEK7 Antibody (Kinase Domain) - Images





Anti-NEK7 antibody ALS10888 IHC of human brain, neurons and glia.



Anti-NEK7 antibody IHC of human Colon, Carcinoma.

NEK7 Antibody (Kinase Domain) - Background

Protein kinase which plays an important role in mitotic cell cycle progression. Required for microtubule nucleation activity of the centrosome, robust mitotic spindle formation and cytokinesis. Phosphorylates RPS6KB1.

NEK7 Antibody (Kinase Domain) - References

Kimura M.,et al.Cytogenet. Cell Genet. 94:33-38(2001).
Melton D.,et al.Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.
Gregory S.G.,et al.Nature 441:315-321(2006).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
Belham C.,et al.J. Biol. Chem. 278:34897-34909(2003).