

# NEK7 Rabbit mAb

Catalog # AP75793

## Product Information

Application	WB, IP
Primary Accession	<a href="#">Q8TDX7</a>
Reactivity	Mouse, Rat
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	34551

## Additional Information

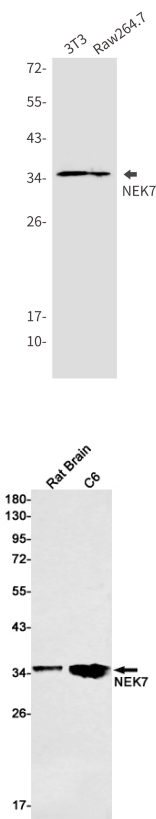
Gene ID	140609
Other Names	NEK7
Dilution	WB~~1/500-1/1000 IP~~1/20
Format	50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

## Protein Information

Name	NEK7 {ECO:0000303   PubMed:11701951, ECO:0000312   HGNC:HGNC:13386}
Function	<p>Protein kinase which plays an important role in mitotic cell cycle progression (PubMed:<a href="#">17101132</a>, PubMed:<a href="#">19941817</a>, PubMed:<a href="#">31409757</a>). Required for microtubule nucleation activity of the centrosome, robust mitotic spindle formation and cytokinesis (PubMed:<a href="#">17586473</a>, PubMed:<a href="#">19414596</a>, PubMed:<a href="#">19941817</a>, PubMed:<a href="#">26522158</a>, PubMed:<a href="#">31409757</a>). Phosphorylates EML4 at 'Ser-146', promoting its dissociation from microtubules during mitosis which is required for efficient chromosome congression (PubMed:<a href="#">31409757</a>). Phosphorylates RPS6KB1 (By similarity). Acts as an essential activator of the NLRP3 inflammasome assembly independently of its kinase activity (PubMed:<a href="#">26642356</a>, PubMed:<a href="#">36442502</a>, PubMed:<a href="#">39173637</a>). 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:<a href="#">26642356</a>, PubMed:<a href="#">31189953</a>, PubMed:<a href="#">36442502</a>, PubMed:<a href="#">39173637</a>). 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:<a href="#">26642356</a>, PubMed:<a href="#">31189953</a>).</p>

<b>Cellular Location</b>	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 ANKS3 prevents its translocation to the nucleus (By similarity). {ECO:0000250 UniProtKB:Q9ES74, ECO:0000269 PubMed:17586473}
<b>Tissue Location</b>	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

Images



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