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

NEK1 Rabbit pAb

Catalog # AP98892

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q96PY6
Other Accession	Q96PY6
Reactivity	Rat
Predicted	Human, Mouse, Rabbit, Dog, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	142828
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human NEK1
Epitope Specificity	301-400/1258
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the protein kinase superfamily. NEK Ser/Thrprotein kinase family. NIMA subfamily.Contains 1 protein kinase domain.
SUBUNIT	Binds to SPERT (By similarity).
DISEASE	Defects in NEK1 are the cause of short rib-polydactylysyndrome type 2 (SRPS2) [MIM:263520]. A lethal skeletal dysplasiacharacterized by markedly short ribs, short limbs, polydactyly, andmultiple anomalies including a narrow thorax with hypoplasticlungs, extreme polysyndactyly, dysproportionate dwarfism, mediancleft lip and palate, a ventriculoseptal defect and cystic kidneys.The radiographic hallmarks include shortened and horizontal ribs,squared scapulae and elevated clavicles with lateral kinking,normal spine and pelvis configuration, and shortening of the bonesof all four extremities, with extreme reduction of tibial bonelength.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The protein encoded by this gene is a serine/threoninekinase involved in cell cycle regulation. The encoded protein isfound in a centrosomal complex with FEZ1, a neuronal protein thatplays a role in axonal development. Defects in this gene are acause of polycystic kidney disease (PKD). Several transcriptvariants encoding different isoforms have been found for this gene.[provided by RefSeq, Dec 2010].

Additional Information

Gene ID	4750
Other Names	ALS24; NY-REN-55; OFD2; SRPS2; SRPS2A; SRTD6; D8Ertd790e; kat; NEK1_HUMAN; NEK1; Never in mitosis A-related kinase 1 (NimA-related protein kinase 1); Renal carcinoma antigen NY-REN-55; 2.7.11.1; KIAA1901; NEK1_MOUSE; NIMA related kinase 1; NIMA (never in mitosis gene a)-related

	kinase 1
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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.

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