

Product datasheet for **SC323443**

NEK2 (NM_002497) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NEK2 (NM_002497) Human Untagged Clone
Tag:	Tag Free
Symbol:	NEK2
Synonyms:	HsPK21; NEK2A; NLK1; PPP1R111; RP67
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene ORF within SC323443 sequence for NM_002497 edited (data generated by NextGen Sequencing)

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ATGCCTTCCCAGGCGGAGGACTATGAAGTGTGTACACCATTGGCACAGGCTCCTACGGC
CGCTGCCAGAAGATCCGGAGGAAGAGTGATGGCAAGATATTAGTTTGGATGGAAC TTGAC
TATGGCTCCATGACAGAAGCTGAGAAACAGATGCTTGTCTGAAGTGAATTTGCTTCGT
GAAGTGAACATCCAAACATCGTTCTACTATGATCGGATTATTGACCGGACCAATACA
CACTGTACATTGTAATGGAATATTGTGAAGGAGGGGATCTGGCTAGTGAATTACAAAG
GGAACCAAGGAAAGCAATACTTAGATGAAGAGTTTGTCTTCGAGTGATGACTCAGTTG
ACTCTGGCCCTGAAGGAATGCCACAGACGAAGTATGGTGGTCATACCGTATTGCATCGG
GATCTGAAACCAGCCAATGTTTTCTGGATGGCAAGCAAAACGTCAAGCTTGGAGACTTT
GGGCTAGCTAGAATATTAACCACGACACGAGTTTGC AAAACATTTGTTGGCACACCT
TATTACATGTCTCCTGAACAAATGAATCGCATGCTCTACAATGAGAAATCAGATATCTGG
TCATTGGGCTGCTGTATGAGTTATGTGCATTAATGCCTCCATTTACAGCTTTTAGC
CAGAAAGAAGCTCGCTGGGAAAATCAGAGAAGGCAATTCAGGCGAATCCATACCGTTAC
TCTGATGAATTGAATGAAATTATTACGAGGATGTTAAACTTAAAGGATTACCATCGACCT
TCTGTTGAAGAAATTCCTGAGAACCTTTAATAGCAGATTTGGTTGCAGACGAGCAAGA
AGAAATCTTGAGAGAAGAGGGCGACAATTAGGAGAGCCAGAAAAATCGCAGGATCCAGC
CCTGTATTGAGTGAGCTGAAACTGAAGGAAATTCAGTTACAGGAGCGAGAGCGAGCTCTC
AAAGCAAGAGAAGAAAGATTGGAGCAGAAAAGAACAGGAGCTTTGTGTTCTGTGAGAGACTA
GCAGAGGACAAACTGGCTAGAGCAGAAAATCTGTTGAAGAACACAGCTTGCTAAAGGAA
CGGAAGTTCCTGTCTCTGGCAAGTAATCCAGAACTTCTAATCTTCCATCCTCAGTAATT
AAGAAGAAAGTTCATTTCAAGTGGGAAAAGTAAAGAGAACATCATGAGGAGTGAGAATTC
GAGAGTCAGCTCACATCTAAGTCCAAGTCAAGGACCTGAAGAAAAGGCTTCACGCTGCC
CAGCTGCGTGCTCAAGCCCTGTCAGATATTGAGAAAAATTACCAACTGAAAAGCAGGCAG
ATCCTGGGCATGCGCTAG

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Clone variation with respect to NM_002497.3
 15 t=>g;110 a=>t;111 a=>g;504 t=>c;1269 g=>t;1317 a=>g

5' Read Nucleotide Sequence: >OriGene 5' read for mutant NM_002497 unedited

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ACCGCCGTTTCAGCAATGGGCGGTAGGCGGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAA
CCGTGAGAATTTTGAATACGACTCACTATAGGGCGGCCGGAATTCGGCACAGGGCGGGTCAGTGCTG
CTCGGGGGCTTCTCCATCCAGGTCCCTGGAGTTCTCTGGTCCCTGGAGCTCCGCACCTGGCGGCGCAACCT
GCGTGAGGCAGCGGACTCTGGCGACTGGCCGGCCATGCCTTCCCGGGCGGAGGACTATGAAGTGTGTA
CACCATTTGGCACAGGCTCCTACGGCCGCTGCCAGAAAGATCCCGGAGGAAAGAGTGATGGGCAAGATAT
TAGTTTGGATGGAACTTTGACTATGGGCTCCCATGACAGAAAGCTGAAGAAAACAGAATGCCTTTGTTT
CCTGAAAGTGATTTTGCCTCCTTGACCTGAACCATCAAACCATCCGTTCCGTTACTATGATCCGGATTA
TGGACCGGACAATATAAACACATGGTCCATTGAAAGGAAAAATTGAAAGGAGGGGATCTGGCTATGGAAT
TTACAGGGGAACCAAGGAAAGGATTATTTATAAAAAGATTTTGTGTTTTCGAGTATAACTCTTGACTCTGG
GCCCGAGAGAGAGCCCCAGGAAAATGTTAGTGGGCCACCCCTATTGCGTGGTCTCTGACCCGCGACTG
TGTTCTCTAGATGAGCACAACGCTAGCGCGTGGACACTTGGCGCCTACTATATAACCCGAGCGAGTTTG
TCAAACACTTGTGTCCACACATAATACTCTGTCAATGATACATATGCTCACTGAATCATATCTGAATGGC
GCTCGGTGATATGGCTAAGCCATAGCTTGACAGAACTCTGGATAAGAGACGCAATTACGTTCTGAGTATG
GATTCAG

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Kinase Domain Sequence: >SC323443 kinase domain raw sequence. By performing [BLASTX](#) analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation

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CCCTGMGCAATGGGCGGTAGGCGGTGACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTC
AGAATTTTGAATACGACTCACTATAGGGCGGCCGGAATTCGGCACAGGGCGGGTCAGTGCTGCTCGG
GGGCTTCTCCATCCAGGTCCCTGGAGTTCTGTGCTCCCTGGAGCTCCGCACCTGGCGGCGCAACCTGCGTG
AGGCAGCGGACTCTGGCGACTGGCCGGCCATGCCTTCCCGGGCG

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Restriction Sites:	Please inquire
ACCN:	NM_002497
Insert Size:	2210 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	This kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." Cell. 2008 May p536-548.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_002497.2 , NP_002488.1
RefSeq Size:	2130 bp
RefSeq ORF:	1338 bp
Locus ID:	4751
UniProt ID:	P51955
Cytogenetics:	1q32.3
Domains:	pkinase, TyrKc, S_TKc
Protein Families:	Druggable Genome, Protein Kinase
Gene Summary:	<p>This gene encodes a serine/threonine-protein kinase that is involved in mitotic regulation. This protein is localized to the centrosome, and undetectable during G1 phase, but accumulates progressively throughout the S phase, reaching maximal levels in late G2 phase. Alternatively spliced transcript variants encoding different isoforms with distinct C-termini have been noted for this gene. [provided by RefSeq, Feb 2011]</p> <p>Transcript Variant: This variant (1) represents the predominant transcript, and encodes the longest isoform (1, also known as NEK2A). The C-terminus (aa 399-445) of this isoform was shown to be responsible for its nucleolar localization (PMID:15161910). Isoforms 1 and 2 (which differ at the C-terminus) have also been reported to exhibit distinct pattern of expression during mitosis (PMID:11742531).</p>