

Product datasheet for **MC229448**

Nek1 (NM_001293639) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Nek1 (NM_001293639) Mouse Untagged Clone
Tag: Tag Free
Symbol: Nek1
Synonyms: D8Ertd790e; kat
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >MC229448 representing NM_001293639
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGAGAAGTATGTGAGACTGCAGAAGATTGGAGAAGTTTCATTTGGAAAAGCTGTTCTTGTTAAATCGA
 CAGAGGATGGCAGACATTATGTCATCAAGGAAATTAACATCTCAAGAATGTCTGATAAAGAAAGGCAAGA
 ATCAAGGAGAGAAGTTGCTGTATTGGCAAACATGAAGCATCCAAATATTGTCCAATATAAAGAATCATT
 GAAGAAAATGGCTCTCTACATAGTAATGGATTACTGTGAAGGAGGTGATTTGTTTAAACGAATAAATG
 CTCAGAAAAGGCGCTCTGTTTCAAGAAGACCAGATTTTGGACTGGTTTGTGCAGATATGTTTGGCTCTGAA
 GCATGTACATGATAGAAAATTCTTACCAGAGACATAAAGTCACAGAACATATTTCTAACCAAAGATGGG
 ACAGTGCAGCTTGGAGATTTTGGAAATGCTCGAGTTCTTAATAGTACTGTAGAGCTGGCTCGAACTTGCA
 TAGGCACTCCATACTACTTGTACCTGAAATCTGTGAAAACAAGCCTTATAACAATAAAGTGACATTTG
 GGCTTTGGGCTGTGTCTTTATGAGTTGTGTACACTTAAACATGCATTTGAAGCTGGAAACATGAAAAAC
 CTGGTACTGAAGATAATCTCCGGATCCTTCTCCAGTGTCTCCACATTACTCCTATGATCTCCGCAGCT
 TGCTGTCTCAGTTATTTAAAAGAAATCCTAGGGATAGACCATCAGTCAACTCCATATTGGAGAAAGTTT
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 TCAAAGTTTGGACCACAGCCTCTCCAGGTAAAAGACCAGCATCAGGACAAGGTGTGAGTTCTTTTGTCC
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 AAAGTTACTTGAGAAAAAACCCCAAAACATAAACAGGCCCATCAAATCCCGTGAAGAAAATGAAT
 TCTGGAGAAGAAAGGAAGAAAATGTCTGAGGAAGCAGCAAAAAAAGAAGTTGGAATTTATTGAGAAAG
 AAAAGAAGCAAAAGGATCAGATTAGTTCTGAAGGCTGAGCAGATGAAGCGCAAGAGAAGCAGCGGGC
 TTCCTTTTTGGCATTGGAGGGGCTGTCTCCATCACCGTGTCTCCTCGAGGCCAGTATGAACATTAC
 CATGCCATTTTTGACAAATGCAGCGGCTAAGAGCAGAAGATAATGAAGCAAGATGGAAGGGGGAAATCT
 ATGGTTCGATGGCTCCAGAAAGGCAAAAAGGACTTAGCTGTAGAGAGAGCCAACCAAGTGAAGAAT
 CCTACAGCGTAAACGAGAAGCTATGCAGAATAAAGCCCGAGCCGAAAGGACACGTGGTTTATTTGGCAAGA
 CTGAGGCAAAATAAGACTACAAAATTTAATGAGCGCAACAGATTAAGCCAAACTTCGTGGTGAGAATA



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AAGAAGCTGATGGTACCAAAGGACAAGAAGCAACTGAAGAGACTGACATGAGGCTCAAAAAGATGGAGTC
 ACTTAAGCGCAAACAAATGCACGTGCTGCTGACTAAAAGAAGCTGGAGCGAAAAAGAAAGGAGCT
 TATGAAAGAGAAAAAGAAAGTATGGGAAGAACATTTGGTGGCGAGGGTAAAAAGCTCAGATGTTCTCTGC
 CTTTGGAACTTCTTGAACAGGTGGTTCCTCATCAAAGCAGCAGGTGAAGCCTGTCAATTTCTGTGACTTC
 AGCTTTGAAAGAAGTGGGCTGGATGGAAGTTAACTGATACCCAGGAAGAAGAAATGAAAAAGAGTAAC
 AGTGCTATTTCAAGTAAGCGAGAAATCCTGCCTAGGCTAAATGAAAATCTTAAAGCTCAAGAGGATGAAA
 AGGAAAAGCAGCATCACTCAGGTTCTTGTGAGACCGTTGGTCACAAAGATGAGAGAGAGTATGAGACAGA
 AAATGCCATTTCTCTGATCGCAAGAAGTGGGAGATGGGAGGTCAGCTTGTGATTCTCTCGATGCAGTG
 AACTGGATACATCCTTCTCTGCAACCGAAAAACATACTGTGGGAGAGGTTATTAATTAAGATTCTAATG
 GCTCTCCAAGAAAAGTCTGGGGAAAAACCTACAGATTCTGTGCTGAAGATACTTGAGAAAGCTGAATT
 ACAGCTACAGACAGAAGTACTAGAAAACACATCTTTTAAAAGTGAGGTTTATGCTGAAGAGGAGAAGTAC
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 ATTCTACTGAAACGAAAAGTCAAAGTTTACTGAGGTGTCTCCACAAATGTCAGAAAGAAATGTGGAAGA
 ACCTGATGATTTGAAACAGAAGTTCTACAAGAGCCAAGTAGCACACACACAGATGGGAGTTTGCCACCT
 GTTCTTAATGATGTGTGGACTAGAGAGAAGGAAGCAGCTAAGGAACTGAGTTGGAAGATAAGGTTGCTG
 TGCAGCAGAGTGAAGTTTGTGAAGATAGAATCCAGGGAACGTGGACCAATCCTGTAAAGGATCAGAGAGA
 TCCTGCAGTAGACGATTCTCCGAGTCTGGCTGTGATGTAGAGAAGTCAGTACAGCCAGAATCGATTTTC
 CAGAAAAGTGGTTCATTCTAAGGACTTGAAGTCTAGTTTCAGGCAGTTCATTGCTCACCAGAAGAACCAATTC
 CAATTCGATCTCACTCTGATTCTCCACCAAAAACCTAAGAGCAAGAATTCCTTACTGATTGGACTTTCAAC
 TGGTCTGTTTGTGCAACAATCCAAAGATGCTGAGGACCTGCTCACTCCAGATCTTTCCAAGCTGTTT
 AGAACCTAATGGACGTTCCCACTGTGGGGACGTTTCAAGACAGTCTTGAATCGATGAGCTGGAAG
 ATGAACCAATTAAGAAGGGCTTCTGATCCGAAGACACTGTATTTGAAGAACTGACACAGATTTACA
 AGAGCTTCAGGCCTCAATGGAGCAGTCTTGGGAGCAACCAGGTGACGAATACAGTGAAGGGAAGAG
 TCTGTTTTAAAAAGCAGCGATGTGGAGCAGACAGCAAGAGGGACAGATGCCCCAGACGAGGAGGACAACC
 CCAGCAGCGAAAAGCGCCCTGAACGAGGAATGGCACTCAGATAATAGTGACGCTGAGACCCTAGTGAATG
 TGAATATGACAGTGTCTTTAACCATTTAGAGGAACTAAGACTTCACTTGGAGCAAGAAAATGGGCTTTGAA
 AAGTTCTTTGAGGTTTATGAGAAAGTAAAGGCTATTTCATGAGGATGAAGATGAAAATATTGAAATTTGTT
 CAACAATAGTTGAGAATATTTGGGCAATGAGCACCAGCATCTCTATGCCAAGATTCTGCATTTAGTCAT
 GGCAGATGGAGCCTATCAGGAAGATAATGATGAATAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM_001293639
- Insert Size:** 3537 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:** Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
- 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:

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_001293639.1](#), [NP_001280568.1](#)

RefSeq Size: 5344 bp

RefSeq ORF: 3537 bp

Locus ID: 18004

UniProt ID: [P51954](#)

Cytogenetics: 8 30.91 cM

Gene Summary: Phosphorylates serines and threonines, but also appears to possess tyrosine kinase activity (PubMed:1382974). Involved in DNA damage checkpoint control and for proper DNA damage repair (PubMed:18843199). In response to injury that includes DNA damage, NEK1 phosphorylates VDAC1 to limit mitochondrial cell death (By similarity). May be implicated in the control of meiosis (PubMed:1382974). Involved in cilium assembly (By similarity).
[UniProtKB/Swiss-Prot Function]
Transcript Variant: This variant (4) lacks three alternate in-frame exons, compared to variant 1. The encoded protein (isoform 4) is shorter, compared to isoform 1.