

Product datasheet for MR231703

Nek1 (NM_001293638) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
 Product Name: Nek1 (NM_001293638) Mouse Tagged ORF Clone
 Tag: Myc-DDK
 Symbol: Nek1
 Synonyms: D8Ertd790e; kat
 Vector: pCMV6-Entry (PS100001)
 E. coli Selection: Kanamycin (25 ug/mL)
 Cell Selection: Neomycin
 ORF Nucleotide Sequence: >MR231703 representing NM_001293638
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGAGAAGTATGTGAGACTGCAGAAGATTGGAGAAGGTTCAATTTGGAAAAGCTGTTCTTGTAAATCGA
 CAGAGGATGGCAGACATTATGTCATCAAGGAAATTAACATCTCAAGAATGTCTGATAAAGAAAGGCAAGA
 ATCAAGGAGAGAAGTTGCTGTATTGGCAAACATGAAGCATCCAAATATTGTCCAATATAAAGAATCATT
 GAAGAAAATGGCTCTCTACATAGTAATGGATTACTGTGAAGGAGGTGATTTGTTTAAACGAATAAATG
 CTCAGAAAAGGCGCTCTGTTTCAAGAAGACCAGATTTTGGACTGGTTTGTGCAGATATGTTTGGCTCTGAA
 GCATGTACATGATAGAAAATTCTTACCAGACATAAAGTCACAGAACATATTTCTAACCAAAGATGGG
 ACAGTGCAGCTTGGAGATTTTGGAAATGCTCGAGTTCTTAATAGTACTGTAGAGCTGGCTCGAAGTTGCA
 TAGGCACTCCATACTACTTGTACCTGAAATCTGTGAAAACAAGCCTTATAACAATAAAGTGACATTTG
 GGCTTTGGGCTGTGTCTTTATGAGTTGTGTACACTTAAACATGCATTTGAAGCTGGAAACATGAAAAAC
 CTGGTACTGAAGATAATCTCCGGATCCTTCTCCAGTGTCTCCACATTACTCCTATGATCTCCGACGT
 TGCTGTCTCAGTTATTTAAAAGAAATCCTAGGGATAGACCATCAGTCAACTCCATATTGGAGAAAGTTT
 TATAGCTAAACGAATCGAAAAGTTTCTCTCCCTCAGCTTATTGCAGAAGAATTTGTCTAAAAACACTT
 TCAAAGTTTGGACCACAGCCTCTCCAGGTAAAAGACCAGCATCAGGACAAGGTGTGAGTTCTTTTGTCC
 CTGCTCAGAAAATCACAAGCCTGCTGCTAAATACGGAGTGCCTTTAACATATAAGAAGTATGGAGATAA
 AAAGTTACTTGAGAAAAAACCCCAAAACATAAACAGGCCCATCAAATCCCGTGAAGAAAATGAAT
 TCTGGAGAAGAAAGGAAGAAAATGTCTGAGGAAGCAGCAAAAAAAGAAGTTGGAATTTATTGAGAAAG
 AAAAGAAGCAAAAGGATCAGATTAGTTCTGAAGGCTGAGCAGATGAAGCGCAAGAGAAGCAGCGGTT
 GGAGAGGATAAATAGGGCCAGGGAACAAGGATGGAGGAATGTTTTAAGGGCTGGTGAAGCGGTGAAGTA
 AAGGCTTCTTTTTTGGCATTGGAGGGGCTGTCTCCATCACCGTGTCTCTCGAGGCCAGTATGAAC
 ATTACCATGCCATTTTTGACCAATGCAGCGGCTAAGAGCAGAAGATAATGAAGCAAGATGGAAGGGGGG
 AATCTATGGTCGATGGCTCCAGAAAGGCAAAAAGGACACTTAGCTGTAGAGAGAGCCAACCAAGTGGA
 GAATTCCTACAGCGTAAACGAGAAGCTATGCAGAAATAAGCCCGAGCCGAAGGACACGTGGGACTCCTGC



[View online >](#)

AAAACCTGGCATCTCTGTATGGAGGCAGGCCAGCTCTTCAAGAGGAGGGAAGCCAAGGAACAATGAGGA
AGAGGTTTATTTGGCAAGACTGAGGCAAAATAAGACTACAAAATTTAATGAGCGCCAACAGATTAAGCC
AAACTTCGTGGTGAAGTAAAGAAGCTGATGGTACCAAAGGACAAGAAGCAACTGAAGAGACTGACATGA
GGCTCAAAAAGATGGAGTCACTTAAGGCCGCAAAACAATGCACGTGCTGCTGTACTAAAAGAACAGCTGGA
GCGAAAAAGAAAGGAAGCTTATGAAAGAGAAAAGAAAGTATGGGAAGAACATTTGGTGGCGAGGGTAAAA
AGCTCAGATGTTCTCTGCCTTTGGAACCTCTTGAACAGGTGGTCTCCATCAAAGCAGCAGGTGAAGC
CTGTCAATTTCTGTGACTTCAGCTTTGAAAGAAGTGGCCCTGGATGGAAGTTTAACTGATACCCAGGAAGA
AGAAATGGAAAAGAGTAACAGTGTCTATTTCAAGTAAGCGAGAAATCCTGGTAGGCTAAATGAAAATCCT
AAAGCTCAAGAGGATGAAAAGGAAAAGCAGCATCACTCAGGTTCTTGTGAGACCGTTGGTCAAAAAGATG
AGAGAGATGATGAGACAGAAAATGCCATTTCTCTGATCGCAAGAAGTGGGAGATGGGAGGTGAGCTTGT
GATTCCTCTCGATGCAGTGACACTGGATACATCCTTCTCTGCAACCGAAAAACATACTGTGGGAGAGGTT
ATTAATTAGATTCTAATGGCTCTCAAGAAAAGTCTGGGGGAAAAACCTACAGATTCTGTGCTGAAGA
TACTTGGAGAAGCTGAATTACAGCTACAGACAGAACTACTAGAAAACACATCTTTAAAAGTGAGGTTTA
TGCTGAAGAGGAGAACTACAACCCTTACTTACTGAAGAAGAGAATCTGCAGTGCATTTCAAAGAATA
AATCCATCAGCTACTGTTGATTCTACTGAAACGAAAAGTCAAAGTTTACTGAGGTGTCTCCACAAATGT
CAGAAGGAAATGTGGAAGAACCTGATGATTTGGAACAGAAAGTTCTACAAGAGCCAAGTAGCACACACAC
AGATGGGAGTTTGCACCTGTTCTAATGATGTGTGGACTAGAGAGAAGGAAGCAGCTAAGGAAACTGAG
TTGGAAGATAAGGTTGCTGTGCAGCAGAGTGAAGTTTGTGAAGATAGAATTCCAGGGAACGTGGACCAAT
CCTGTAAGGATCAGAGAGATCCTGCAGTAGACGATTCTCCGCAGTCTGGCTGTGATGTAGAGAAGTCAGT
ACAGCCAGAATCGATTTCCAGAAAGTGGTTCATTCTAAGGACTTGAAGTTAGTTTCCAGGCAGTTCATTGC
TCACCAGAAGAACCAATCCAATTCGATCTCACTCTGATTCTCCACAAAACTAAGAGCAAGAATTCCT
TACTGATTGGACTTTCAACTGGTCTGTTGATGCAAACAATCAAAGATGCTGAGGACCTGCTCACTTCC
AGATCTTTCCAAGCTGTTCAAGAACCTAATGGACGTTCCACTGTGGGGACGTTTCAAGACAGTCTT
GAAATCGATGAGCTGGAAGATGAACCAATTAAGAAGGGCCTTCTGATTCCGAAGACACTGTATTTGAAG
AAACTGACACAGATTTACAAGAGCTTCAGGCCTCAATGGAGCAGCTGCTTAGGGAGCAACCAGGTGACGA
ATACAGTGAGGAGGAAGAGTCTGTTTTAAAAGCAGCGATGTGGAGCAGACAGCAAGAGGGACAGATGCC
CCAGACGAGGAGGACAACCCAGCAGCGAAAGCGCCCTGAACGAGGAATGGCACTCAGATAATAGTGACG
CTGAGACCACTAGTGAATGTGAATATGACAGTGTCTTTAACCATTTAGAGGAACTAAGACTTCAGTTGGA
GCAAGAAATGGGCTTTGAAAAGTCTTTGAGGTTTATGAGAAAGTAAAGGCTATTCATGAGGATGAAGAT
GAAAATATTGAAATTTGTTCAACAATAGTTGAGAATATTTGGGCAATGAGCACCAGCATCTCTATGCCA
AGATTCTGCATTTAGTCATGGCAGATGGAGCCTATCAGGAAGATAATGATGAA

ACGCGTACGCGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR231703 representing NM_001293638
 Red=Cloning site Green=Tags(s)

```
MEKYVRLQKIGEGSFGKAVLVKSTEDGRHYVIKEINISRMSDKERQESRREVAVLANMKHPNIVQYKESF
EENGLYIVMDYCEGGDLFKRINAQKALFQEDQILDWFVQICLALKHVHDKILHRDIKSQNFILTKDG
TVQLGDFGIARVLNSTVELARTCIGTPYYLSPEICENKPYNNKSDI WALGCVLYELCTLKHAF EAGNMKN
LV LKIIISGSFPPVSPHYSYDLRSLLSQLFKRNPDRPSVNSILEKGFIAKRIEKFLSPQLIAEEFCLKTL
SKFGPQPLPGKRPASGQGVSSFVPAQKITKPAKYGVPLTYKKGDKLLEKPPPKHKQAHQIPVKMMN
SGEERKKMSEEAAKRRLEFIEKEKKQKQDQIRFLKAEQMKRQEQRLERINRAREQGRNVLRAGGSGEV
KASFFGIGGAVSPSPCSPRGQYEHYHAIFDQMQR LRAEDNEARWGGIYGRWLP ERQKGLHAVERANQVE
EFLQRKREAMQNKARAEGHVGLLQNLASLYGGRPSSSRGGKPRNNEEVYLARLRQIRLQNFNERQQIKA
KLRGENKEADGTKQEATEETDMRLKMMESLKAQTNARA AVLKEQLERKRKEAYEREKVVWEHLVARVK
SSDVPLPELLETTGGSPSKQVQKPVISVTSALKEVGLDGLSDTDQEEEMKSN SAISSKREILRRLNENL
KAQEDEKEKQHHS GSCE TVGHKDEREYETENAISSDRKKWEMGGQLVIPLDAVTLDTSF SATEKHTVGEV
IKLDSNGSPRKVWGKNPTD SVLKILGEAELQLQTELENTSFKSEVYAE EENYKPLLTEENLQCISKEI
NPSATVDSSTETKSPKFTVSPQMSEGNVEEPDDLETEVLQEPSSTHTDGLPPV LNDVWTRKEAAKETE
LEDKVAVQQSEVCE DRIPGNVDQSKCDQRDP AVDDSPQSGCDVEKSVQPE SIFQKVVHSKDLNLVQAVHC
SPEEPIPIRSHSDSPPKTKSKNSLLIGLSTGLFDANNPKMLR TC SL PDL SKLFR LMDVPTVGDVHQDSL
EID ELED EPIKEGPS DSEDTVFEETD TDLQELQASMEQLLREQP GDEYSEEEESVLKSSDVEQTARGTDA
PDEEDNPSS ESALNEEWSHSDNSDAETTSECEYDSVFNHLEELRLHLEQEMGF EKFFEVYEKVKAIHED EDE
ENIEICSTIVENILGNEHQHL YAKILHLVMADGAYQEDNDE
```

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

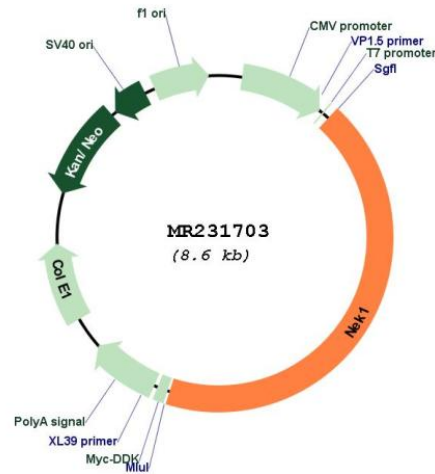
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001293638

ORF Size: 3693 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_001293638.1](#), [NP_001280567.1](#)

RefSeq Size: 5503 bp

RefSeq ORF: 3696 bp

Locus ID: 18004

UniProt ID: [P51954](#)

Cytogenetics: 8 30.91 cM

MW: 140.1 kDa

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]