

## Product datasheet for **RC217714**

### NEK3 (NM\_002498) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	NEK3 (NM_002498) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NEK3
Synonyms:	HSPK36
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC217714 representing NM\_002498  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGATGACTACATGGTCTGAGAATGATTGGGGAGGGCTCCTTCGGCAGAGCTCTTTGGTTTCAGCATG  
 AAAGCAGTAATCAGATGTTTGCATGAAAGAAATAAGGCTTCCAAGTCTTTCTCTAATACACAGAATTC  
 TAGGAAGGAGGCTGTTCTTTTAGCCAAAATGAAACACCCTAATATTGTTGCCTTCAAAGAATCATTGAA  
 GCTGAAGGACACTTGATATTGTGATGGAATACTGTGATGGAGGGATCTAATGCAAAAGATTAACAGC  
 AGAAAGGAAAGTTATTTCTGAAGACATGATACTTAATTGGTTTACCCAATGTGCCTTGGAGTAAATCA  
 CATTCAACAAGAACGTGTGCTACACAGAGATATCAAGTCCAAGAATATCTTCTCACTCAGAATGGAAAA  
 GTGAAATTGGGAGACTTTGGATCTGCCGCTTCTCTCCAATCCGATGGCATTGCTTGTACCTATGTGG  
 GAACTCCTTATTATGTGCCTCCAGAAATTTGGGAAAACCTGCCTTATAACAATAAAAGTGACATCTGGTC  
 CTTGGGTTGCATCCTGTATGAACTCTGTACCCTTAAGCATCCATTCAGGCAAATAGTTGGAAAAATCTT  
 ATCCTCAAAGTATGTCAAGGGTGCATCAGTCCACTGCCGCTCATTACTCTATGAACTTCAGTTCCTAG  
 TCAAGCAGATGTTTAAAAGGAATCCCTCACATCGCCCTCGGCTACAACGCTTCTCTCGAGGCATCGT  
 AGCTCGGCTTGTCCAGAAGTGCTTACCCCCGAGATCATCATGGAATATGGTGAGGAAGTATTAGAAGAA  
 ATAAAAAATTCGAAGCATAACACACCAAGAAAAAACAACCCAGCAGAATCAGGATAGCTTTGGGAA  
 ATGAAGCAAGCACAGTGAAGAGGAAGAACAAGATAGAAAGGGTAGCCATACTGATTTGGAAAGCATTAA  
 TGAAAAATTTAGTTGAAAGTGATTGAGAAGAGTAACAGAGAAGAAAAAGGTAATAAGTCAGTCCATCTG  
 AGGAAAGCCAGTTCACCAAATCTTCATAGACGACAGTGGGAGAAAAATGTACCAATACAGCTCTTACAG  
 CTTTGGAAAAATGCATCCATACTCACCTCCAGTTTAAACAGCAGAGGACGATAGAGGTGGTTCTGTAATAAA  
 GTACAGCAAAAAATACTACTCGTAAGCAGTGGCTCAAAGAGACCCCTGACACTTTGTTGAACATCCTTAAG  
 AATGCTGATCTCAGCTTGGCTTTTCAAACATACACAATATATAGACCAGTTTCAAGGGTTCTTGAAGG  
 GCCCCTGTCTGAAGAAACAGAAGCATCGGACAGTGTGATGGAGGTACGATTCTGTCATTTTGGATCC  
 AGAGCGACTTGAGCCTGGGCTAGATGAGGAGGACCGACTTTGAGGAGGAAGATGACAACCCCGACTGG  
 GTGTCAGAGCTGAAGAAGCGAGCTGGATGGCAAGGCTGTGCGACAGA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC217714 representing NM\_002498  
 Red=Cloning site Green=Tags(s)

MDDYMLRMIGESFGRALLVQHESSNQMFAMKEIRLPKSFNTQNSRKEAVLLAKMKHPNIVAFKESFE  
 AEGHLYIVMEYCDGGDLMQIKIQKGLFPEDMILNWFQMC LGVNHIHKRVLHRDIKSKNIFLTQNGK  
 VKLGDFGSARLLSNPMAFACTYVGTPTYYPPEIWENLPYNNKSDIWSLGCILYELCTLKHPFQANSWKNL  
 ILKVCQGCISPLPSHYSYELQFLVKQMFKRNP SHRPSATLLSRGIVARLVQKCLPPEIIMEYGEEVLEE  
 IKNSKHNTPRKKNPSRIRIALGNEASTVQEEEQDRKGSHTDLESINENLVESALRRVNREEKGNKSVHL  
 RKASSPNLHRRQWEKNVPNTALALENASILTSSLTAEDDRGGSVIKYSKNTRKQWLKETPDLLNILK  
 NADLSLAFQTYTIYRPGSEGFLKGPLSEETEASDSVDGGHDSVILDPERLEPGLDEEDTDFEEDDNPDW  
 VSELKKRAGWQGLCDR

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6521\\_d12.zip](https://cdn.origene.com/chromatograms/mk6521_d12.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**

**ACCN:** NM\_002498

**ORF Size:** 1518 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\\_002498.3](#)
**RefSeq Size:** 2332 bp

**RefSeq ORF:** 1521 bp

**Locus ID:** 4752

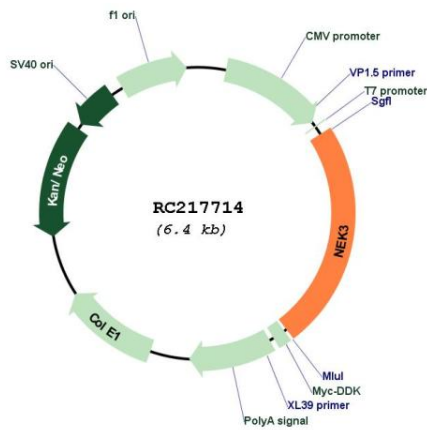
**UniProt ID:** [P51956](#)
**Cytogenetics:** 13q14.3

**Protein Families:** Druggable Genome, Protein Kinase

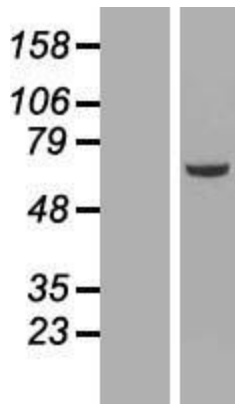
**MW:** 57.5 kDa

**Gene Summary:** This gene encodes a member of the NimA (never in mitosis A) family of serine/threonine protein kinases. The encoded protein differs from other NimA family members in that it is not cell cycle regulated and is found primarily in the cytoplasm. The kinase is activated by prolactin stimulation, leading to phosphorylation of VAV2 guanine nucleotide exchange factor, paxillin, and activation of the RAC1 GTPase. Two functional alleles for this gene have been identified in humans. The reference genome assembly (GRCh38) represents a functional allele that is associated with the inclusion of an additional coding exon in protein-coding transcripts, compared to an alternate functional allele that lacks the exon. [provided by RefSeq, Sep 2019]

**Product images:**



Circular map for RC217714



Western blot validation of overexpression lysate (Cat# [LY419289]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC217714 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).