

Product datasheet for **RG217714**

NEK3 (NM_002498) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NEK3 (NM_002498) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	NEK3
Synonyms:	HSPK36
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG217714 representing NM_002498
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGATGACTACATGGTCTGAGAATGATTGGGGAGGGCTCCTTCGGCAGAGCTCTTTGGTTTCAGCATG
 AAAGCAGTAATCAGATGTTTGCATGAAAGAAATAAGGCTTCCAAGTCTTTCTCTAATACACAGAATTC
 TAGGAAGGAGGCTGTTCTTTTAGCCAAAATGAAACACCCTAATATTGTTGCCTTCAAAGAATCATTGAA
 GCTGAAGGACACTTGTATATTGTGATGGAATACTGTGATGGAGGGATCTAATGCAAAAGATTAACAGC
 AGAAAGGAAAGTTATTTCTGAAGACATGATACTTAATTGGTTTACCCAATGTGCCTTGGAGTAAATCA
 CATTCAACAAGAAACGTGTGCTACACAGAGATATCAAGTCCAAGAATATCTTCTCACTCAGAATGGAAAA
 GTGAAATTGGGAGACTTTGGATCTGCCGCTTCTCTCCAATCCGATGGCATTGCTTGTACCTATGTGG
 GAACTCCTTATTATGTGCCTCCAGAAATTTGGGAAAACCTGCCTTATAACAATAAAAGTGACATCTGGTC
 CTTGGGTTGCATCTGTATGAACTCTGTACCCTTAAGCATCCATTTAGGCAAATAGTTGGAAAAATCTT
 ATCCTCAAAGTATGTCAAGGGTGCATCAGTCCACTGCCGCTCATTACTCTATGAACTTCAAGTTCCTAG
 TCAAGCAGATGTTTAAAAGGAATCCCTCACATCGCCCTCGGCTACAACGCTTCTCTCGAGGCATCGT
 AGCTCGGCTTGTCCAGAAGTGCTTACCCCCGAGATCATCATGGAATATGGTGAGGAAGTATTAGAAGAA
 ATAAAAAATTCGAAGCATAACACACCAAGAAAAAACAACCCAGCAGAATCAGGATAGCTTTGGGAA
 ATGAAGCAAGCACAGTGAAGAGGAAGAACAAGATAGAAAGGGTAGCCATACTGATTTGGAAAGCATTAA
 TGAAAATTTAGTTGAAAGTGCAATTGAGAAGAGTAAACAGAGAAGAAAAAGGTAATAAGTCAGTCCATCTG
 AGGAAAGCCAGTTCACCAAATCTTCATAGACGACAGTGGGAGAAAAATGTACCAATACAGCTCTTACAG
 CTTTGGAAAAATGCATCCATACTCACCTCCAGTTTAAACAGCAGAGGACGATAGAGGTGGTTCTGATAAAA
 GTACAGCAAAAAATACTACTCGTAAGCAGTGGCTCAAAGAGACCCCTGACACTTTGTTGAACATCCTTAAG
 AATGCTGATCTCAGCTTGGCTTTTCAAACATACACAATATATAGACCAGTTTCAAGGGTTCTTGAAG
 GCCCCTGTCTGAAGAAACAGAAGCATCGGACAGTGTGATGGAGGTACGATTCTGTCATTTTGGATCC
 AGAGCGACTTGAGCCTGGGCTAGATGAGGAGGACCGACTTTGAGGAGGAAGATGACAACCCCGACTGG
 GTGTCAGAGCTGAAGAAGCGAGCTGGATGGCAAGGCTGTGCGACAGA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG217714 representing NM_002498
 Red=Cloning site Green=Tags(s)

MDDYMLVLRMIGEGSFRALLVQHESNQMFAMKEIRLPKSFNTQNSRKEAVLLAKMKHPNIVAFKESFE
 AEGHLYIVMEYCDGGDLMQKIKQKGLFPEDMILNWFQMC LGVNHIHKKRVLHRDIKSKNIFLTQNGK
 VKLGDGFSARLLSNPMAFACTYVGPYYVPEI WENLPYNNKSDIWSLGCILYELCTLKHPFQANSWKNL
 ILKVCQGCISPLPSHYSYELQFLVKQMFKRNP SHRPSATLLSRGIVARLVQKCLPPEIIMEYGEEVLEE
 IKNSKHNTPRKKTNP SRIRIALGNEASTVQEEEQDRKGSHTDLESINENLVESALRRVNRREEKGNKSVHL
 RKASSPNLHRRQWEKNVPNTALTAENASILTSSLTAEDDRGGSVIKYSKNTTRKQWLKETPDTLLNILK
 NADLSLAFQTYTIYRPGSEGFLKGPLSEETEASDSVDGGHDSVILDPERLEPGLDEEDTDFEEEDDPDW
 VSELKKRAGWQGLCDR

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:

Cloning sites used for ORF Shutting:



Kozac
Consensus

EcoR I BamH I Kpn I RBS Sgf I Asc I

CTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGSAGATCTGCCGCCGATCGCCGGCGCCAGATCT

Hind III Nhe I Rsr II Mlu I Not I Xho I GFP Tag

CAAGCTTAACTAGCTAGCGGACCG ACG CGT ACG CGG CTC GAG ATG GAG AGC GAC --- --- ---

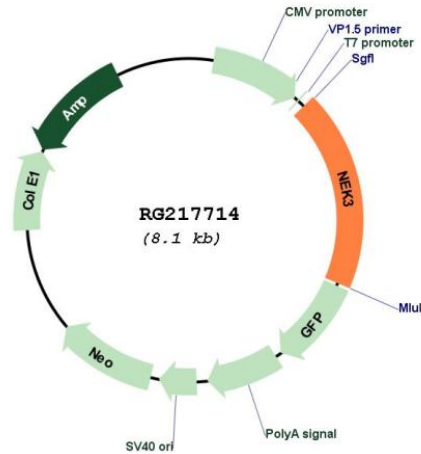
T R T R P L E M E S D - - -

Pme I Fse I

--- --- GAA GAA AGA GTT TAA ACGGCCGGCCGGGAGCT

- - - E E R V Stop

Plasmid Map:



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

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]