

## Product datasheet for **MC200695**

### **Nek2 (BC010302) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Nek2 (BC010302) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Nek2
Synonyms:	AA617254; C77054
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Fully Sequenced ORF:** >BC010302  
 CCGACGCGTGGGCGGACGGTGGGCGGTTGGCCTGCAGCGGGCGAGCCTGGGCTCCGAGCGGCGCGGTGGT  
 GTGGTTGCCAGGGTGGCCGCTCGCCATGCCGTCCCAGGGTGGAGGACTACGAGGTGCTGCACAGCATCGGC  
 ACCGGCTCCTACGGCCGCTGTCAGAAGATTCGGAGGAAGAGCGACGGCAAGATCCTGGTGTGAAAGAGC  
 TTGACTATGGCTCCATGACGGAGGTGGAGAAGCAGATGCTTGTGTCTGAAGTGAACCTGCTTCGGGAGCT  
 GAAACATCCAAACATCGTCCGTTACTATGATCGCATTATTGACCGAACCAACAACCCTGTACATCGTA  
 ATGGAATACTGTGAGGGAGGGGACCTGGCTAGTGTGCTTTCAAAGGGGACCAAGGATAGACAGTACTTGG  
 AAGAAGAGTTTGTCTTCGAGTGATGACTCAGTTGACGCTGGCCCTGAAAGAGTGTACAGAAAGGAGCGA  
 TGGTGGCCACACTGTGCTTACCAGGACCTGAAGCCAGCCAATGTCTTCTGGACAGCAACACAATGTC  
 AAGCTGGGGGACTTTGGACTAGCTAGAATATTAATCACGACACGAGTTTGCAAAAACGTTTGTGGCA  
 CACCCTATTACATGTCTCCTGAACAGATGAGCTGCTTATCCTACAACGAGAAGTCGGACATCTGGTCCTT  
 GGGCTGCCTGCTGTATGAGCTGTGTGACTAATGCCTCCCTTACAGCTTCAACCAAAAAGAGCTAGCT  
 GGGAAAATCAGGGAAGGGAGGTTCAGGCGCATCCCCTACCCTACTCTGATGGCTGAATGACCTCATCA  
 CTCGGATGCTGAATTTAAGGACTACCATCGACCTTCAGTGAAGAAATCTGGAGAGCCCTTTGATAGC  
 AGACATGGTTGCAGAAGAGCAAAGGAGAAATCTGGAGAGGAGAGGACGGCGCTCAGGCGAGCCTTGAAG  
 CTGCCGACTCCAGCCCTGTGCTGAGCGAGCTCAAGTTGAAGGAAAGGCAACTGCAGGATCGAGAGCAAG  
 CACTCAGAGCTCGGGAGGACATTCTGGAGCAGAAGGAACGTGAACCTTGTATTGAGAGAGACTTGCAGA  
 GGCAAACTGGCCAGAGCCGAGAGCCTGATGAAGAACTACAGCCTGCTGAAGGAGCACAGGCTCCTATGT  
 CTGGCTGGTGGCCAGAACTTGATCTTCCATCCTCAGCCATGAAGAAGAAGGTTCAATTTCCACGGGGAAA  
 GCAAAGAGAACACCGCAAGGAGTGAGAATCTGAGAGCTACCTTGCCAAGTCCAAGTGCAGGGACCTGAA  
 GAAGAGGCTTTCATGCTGCCAGCTGCGGGCTCAAGCCCTGGCTGATATTGAAAAAACTACCAGCTAAAG  
 AGCAGGCAGATCCTGGGCATGCGCTAGGCCGGCAAGGCATGGAGCTGGTTCAGTGTGACTACTGACAACC  
 CACTAGAGATTTGGTATTCAGCTGCTGCTGTTTGTGTGCTGGTCTGTGGGCAGGAACCTTTGCTGTG  
 GTGAGCTCGTGGCATTGCTTGTGGTCTGCAAAATGGATGTGTGTGCTGCTTCTAATGCTCCTGTGTGAA  
 AAGCAAGCTGTCTTTGCTGGTGGTGGCTTTTGTATCCTGTGTGATTACTACTTGAATATGAGATG  
 GGGCACTATAGATACTATAGATCTTAGGAGAAAATAATGTTAGGGAAAGAATATTTAACCTGGAGGGCTC  
 AGAGAGGCTCACACGCTGAGTGATACCGCTTCACTGTGGTTTCCAAGTGAAGCCTCAGCGGGTCCATGA  
 CCTCACTGCTAACGGGATGCGTATGGCAGGGCCACAGGGTTCATGTGTCAGAGGTGTTGTAATGTTACAG  
 GGAGAGACCCAGCCTCTGGCCTGACCTCCTGATGAGAAGCCACTACCAGCATTCCCATTCCAGGACGCT  
 CACTGTGCCAGTTAACATCAGATTAGAAGTGGAGGGGAGGGGAGGGCGAGGGCTGAAGCTTTTAGGATTT  
 GCCTTAGGGAAGCGCGTCCATGGCCCTCAGCACGCTGCTGTCTGCATCCTAGGCAGGCACTGGGGACA  
 GGAGGCTCTGGGAGCCCTGAGAGCCCCCTCCTGCTGTGTGCAGGGCCTGTCCCCGCTGTCTGTATCTGA  
 CCTCTAGGTCAGTTGATGACATTAGTTAAGTGTCTGTACCTACAAGTATAAGCCAAAAGTCCGAAAT  
 GCCTCAGAGTCACACATGTTGGTCCCAACATTTAATTTCTGAAGAGAACTGTCTTCAGAAAAGTTGGTCT  
 ATTTAAGGTGACTGGGAAAAGGAGGTTTCTTTGCTCTGTGTCCACAGTCCCTTGAGATGGCTTCAGA  
 AGAGAACAGTGTTCAGTGTGCGTTATCGAGGGCCCTGTATGCCTTCACTGTGTGAGGGCCAGATTGCTG  
 TTTGTCTACGGTTTCTTGAAGACCTCAGCTCAGCAGAAAGGAGTTCATTTGCCCTAACAAGTACTGTTGG  
 CTGAGAGGGGAGGTCAGAAGCATGTAATGCCATTCGTTTTCATGGCTAAACACACAGACTCCTTGCATTTT  
 AAAATTCGTGCCTTTACTTCTGGAGCTATAATAACGTGCTTGGGTGTGTGACTTGGCCAGGTTGGCTT  
 TCGCAATGCTTTATGAAACTCTGCTGTTGGCACTTGCAGCTGTAGAAGCTGTGCGAGGGATTACTACT  
 TACGGTTATAGCATCTGGGGTCTCTTGCAGCTGCAATGCCTGGGATCTTTTGAACCTCTGACTTTTTTCAG  
 TAGCAGCTTGAATGTTAAAATATGGTGAAGCCTTCTCTGTGAAGGAAGGGCCTGACAATCTGCCAGCA  
 GGGAAAAGACTGGGAACTCAGTGCAGTGGTTTTCTGCTTTCCCTTCTCCTTTGGTCTATAGTGATACT  
 GACAGCAATACAAAGTAAAATCTGTGTATATAAAAATCCTAAGTATGAGGTCTTAAATGTTCTGGAATTT  
 TAGAAAAACTTAATTGGATGCAATTGTTATAATTAACAAGTCATCTTATTTATAAATTTTCCAATATA  
 ATATAAATCTATTTTGTGGAAATTA

**Restriction Sites:** RsrII-NotI

**ACCN:** BC010302

**Insert Size:** 1332 bp

<b>OTI Disclaimer:</b>	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).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">BC010302</a> , <a href="#">AAH10302</a>
<b>RefSeq Size:</b>	3106 bp
<b>RefSeq ORF:</b>	1332 bp
<b>Locus ID:</b>	18005
<b>Cytogenetics:</b>	1 96.94 cM
<b>Gene Summary:</b>	Protein kinase which is involved in the control of centrosome separation and bipolar spindle formation in mitotic cells and chromatin condensation in meiotic cells. Regulates centrosome separation (essential for the formation of bipolar spindles and high-fidelity chromosome separation) by phosphorylating centrosomal proteins such as CROCC, CEP250 and NINL, resulting in their displacement from the centrosomes. Regulates kinetochore microtubule attachment stability in mitosis via phosphorylation of NDC80. Involved in regulation of mitotic checkpoint protein complex via phosphorylation of CDC20 and MAD2L1. Plays an active role in chromatin condensation during the first meiotic division through phosphorylation of HMGA2. Phosphorylates: PPP1CC; SGO1; NECAB3 and NPM1. Essential for localization of MAD2L1 to kinetochore and MAPK1 and NPM1 to the centrosome. Phosphorylates CEP68 and CNTLN directly or indirectly (By similarity). NEK2-mediated phosphorylation of CEP68 promotes CEP68 dissociation from the centrosome and its degradation at the onset of mitosis (By similarity). Phosphorylates and activates NEK11 in G1/S-arrested cells. Involved in the regulation of centrosome disjunction (By similarity).[UniProtKB/Swiss-Prot Function]