

Product datasheet for **MG207063**

Nek2 (NM_010892) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Nek2 (NM_010892) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Nek2
Synonyms:	AA617254; C77054
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG207063 representing NM_010892 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCGTCCCGGGTGGAGGACTACGAGGTGCTGCACAGCATCGGCACCGGCTCCTACGGCCGCTGTCAGA
AGATTCGGAGGAAGAGCGACGGCAAGATCCTGGTGTGAAAGAGCTTGACTATGGCTCCATGACGGAGGT
GGAGAAGCAGATGCTTGTGTCTGAAGTGAACCTGCTTCGGGAGCTGAAACATCCAAACATCGTCCGTTAC
TATGATCGCATTATTGACCGAACCAACAACCCTGTACATCGTAATGGAATACTGTGAGGGAGGGGACC
TGGCTAGTGTCATTTCAAAGGGACCAAGGATAGACAGTACTTGAAGAAGAGTTTGTCTTCGAGTGAT
GACTCAGTTGACGCTGGCCCTGAAAGAGTGTACAGAAGGAGCGATGGTGGCCACACTGTGCTTACCGG
GACCTGAAGCCAGCCAATGTCTTCTGGACAGCAAACAATGTCAAGCTGGGGGACTTTGGACTAGCTA
GAATATTAATACGACACGAGTTTTGCAAAAACGTTTGTGGCACACCCATTACATGTCTCCTGAAACA
GATGAGCTGCTTATCCAGTAACGAGAAGTCGGACATCTGGTCTTGGGCTGCCTGCTGTATGAGCTGTGT
GCCTAATGCCTCCCTTACAGCTTTCAACAAAAAGAGCTAGCTGGGAAAAATCAGGGAAGGGAGGTTCA
GGCGCATCCCCTACCGCTACTCTGATGGCTTGAATGACCTCATCACTCGGATGCTGAATTTAAAGGACTA
CCATCGACCTTCAGTGAAGAAAATCTGGAGAGCCCTTTGATAGCAGACATGGTTGCAGAAGAGCAAAGG
AGAAATCTGGAGAGGAGGACGGCCTCAGGCAGCCTTCAAGCTGCCGGACTCCAGCCCTGTGCTGA
GCGAGCTCAAGTTGAAGGAAAGGCAACTGCAGGATCGAGAGCAAGCACTCAGAGCTCGGGAGGACATTCT
GGAGCAGAAGGAACGTGAACTTTGTATTGAGAGAGACTTGCAGAGGACAAACTGGCCAGAGCCGAGAGC
CTGATGAAGAACTACAGCCTGCTGAAGGAGCACAGGCTCCTATGTCTGGCTGGTGGCCAGAACTTGATC
TTCCATCCTCAGCCATGAAGAAGAAGGTTCAATTTCCAGGGGAAAGCAAAGAGAACCAGCAAGGAGTGA
GAATTCGAGAGTACCTTGCCAAGTCCAAGTGCAGGGACCTGAAGAAGAGGCTTCATGCTGCCAGCTG
CGGGCTCAAGCCCTGGCTGATATTGAAAAAACTACCAGCTAAAGAGCAGGCAGATCCTGGGCATGCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >MG207063 representing NM_010892
 Red=Cloning site Green=Tags(s)

MPSRVEDYEVLSIGTGSYGRCQKIRRKSDGKILVWKELDYGSMTVEKQMLVSEVNLLRELKHPNIVRY
 YDRIIDRTNTTL YIVMEYCEGGDLASVISKGTKDRQYLEEEFVLRVMTQLTLALKECHRRSDGGHTVLHR
 DLKPANVFLDSKHNKVLGDFGLARILNHDTSFAKTFVGTPTYMSPEQMSCLSSNEKSDIWSLGCLLYELC
 ALMPPFTAFNQKELAGKIREGRFRRIPIRYSDGLNDLITRMLNLKDYHRPSVEEILESPLIADMVAEEQR
 RNLERRGRRSGEPSKLPDSSPVLSELKLERQLQDREQALRAREDILEQKERELCIRERLAEDKLARAES
 LMKNYSLKKEHRLCLAGPELDLPSSAMKKKVFHFGESKENTARSENSESYLAKSKCRDLKKRLHAAQL
 RAQALADIEKNYQLKSRQILGMR

TRTRPLE - GFP Tag - V

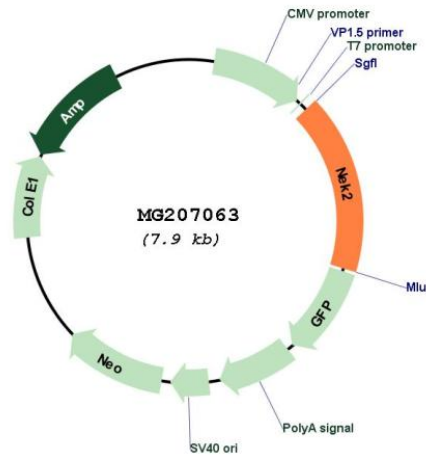
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:

NM_010892

ORF Size:	1329 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:	<ol style="list-style-type: none">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_010892.1 , NP_035022.1
RefSeq Size:	3130 bp
RefSeq ORF:	1332 bp
Locus ID:	18005
UniProt ID:	O35942
Cytogenetics:	1 96.94 cM
Gene Summary:	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]