

## Product datasheet for **RG224762**

### **nkx6.1 (NKX6-1) (NM\_006168) Human Tagged ORF Clone**

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** nkx6.1 (NKX6-1) (NM\_006168) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** nkx6.1  
**Synonyms:** NKX6.1; NKX6A  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG224762 representing NM\_006168  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGTTAGCGGTGGGGCAATGGAGGGCACCCGGCAGAGCGCATTCTGCTCAGCAGCCCTCCCCTGGCCG  
 CCCTGCACAGCATGGCCGAGATGAAGACCCCGTGTACCCTGCCGCGTATCCCCGCTGCCTGCCGGCC  
 CCCCTCCTCCTCGTCCTCGTCGTCTCTCTCTCGTCGCCCTCCCCGCTCTGGGCACCCACAACCCAGGC  
 GGCTGAAGCCCCGGCCACGGGGGGCTCTCATCCCTCGGCAGCCCCCGCAGCAGCTCTCGGCCGCCA  
 CCCACACGGCATCAACGATATCCTGAGCCGGCCCTCCATGCCCGTGGCCTCGGGGGCCGCCCTGCCCTC  
 CGCTCGCCCTCCGGTTCCTCCTCCTCTTCTCGTCCGCTCTGCCTCCTCCGCTCTGCCCGCCG  
 GCGGTGCTGCCGCGCCGACGCCCGCCCTATCCCCGGCGGGGCTGCTGGCCGACTGCCACGCTTTA  
 GCAGCCTGAGCCCGCCGCGCCGCGCCGGGCTCTACTTCAGCCCCAGCCGCGGGCGGTGGCCGCGT  
 GGGCCGGTACCCAAGCCGCTGGCTGAGCTGCCTGGCCGACGCCATCTTCTGGCCCGAGTGATGCAG  
 AGCCCGCCCTGGAGGGACGCACGCCTGGCTGTACCCCTCATCAAGGATCCATTTTGTGGACAAAGACG  
 GGAAGAGAAAACACGAGACCCACTTTTTCCGGACAGCAGATCTTCGCCTGGAGAAGACTTTTCAACA  
 AACAAAATACTTGGCGGGGCCGAGAGGGCTCGTTTGGCTATTCTGTTGGGATGACAGAGAGTCAGGTC  
 AAGTCTGGTTCCAGAACCGCCGACCAAGTGGAGGAAGAAGACGCTGCCGAGATGGCCACGGCCAAGA  
 AGAAGCAGGACTCGGAGACAGAGCGCTCAAGGGGGCTCGGAGAACGAGGAAGAGGACGACGACTACAA  
 TAAGCCTCTGGATCCCAACTCGGACGACGAGAAAATCACGCAGCTGTTGAAGAAGCACAAAGTCCAGCAGC  
 GGCGGGCGCGGCCCTCTACTGCACGCTCCGAGCCGGAGAGCTCATCC

AG**CGGACCG**ACGCGTACGCGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG224762 representing NM\_006168  
Red=Cloning site Green=Tags(s)

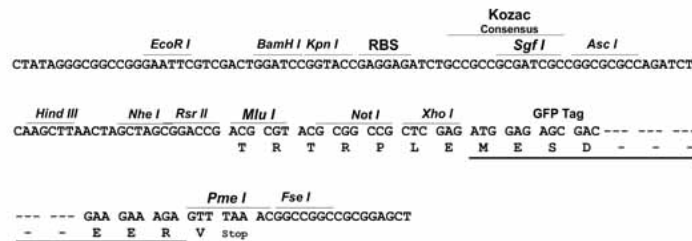
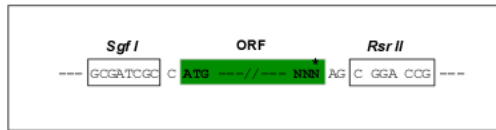
```
MLAVGAMEGTRQSAFLLSSPPLAALHSMAMKTPLYPAAYPPLPAGPPSSSSSSSSSSSSPPLGTHNPG
GLKPPATGGLSSLGSPQQLSAATPHGINDILSRPSMPVASGAALPSASPSGSSSSSSSSASASSASAAA
AAAAAAAAAASSPAGLLAGLPRFSSLSPPPPPGLYFSPSAAAVAAGRYPKPLAELPGRTPIFWPGVMQ
SPPWRDARLACTPHQGSILLDKDGRKRKTRPTFSGQQIFALEKTFEQTKYLAGPERARLAYSLGMTESQV
KVWFQNRRTKWRKKHAAEMATAKKKQDSETERLKGASENEEEDDDYNKPLDPNSDDEKITQLLKKHKSSS
GGGGLLLLHASEPESSS
```

SGPTRRRLE - GFP Tag - V

**Restriction Sites:** SgfI-RsrII

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



**ACCN:** NM\_006168

**ORF Size:** 1101 bp

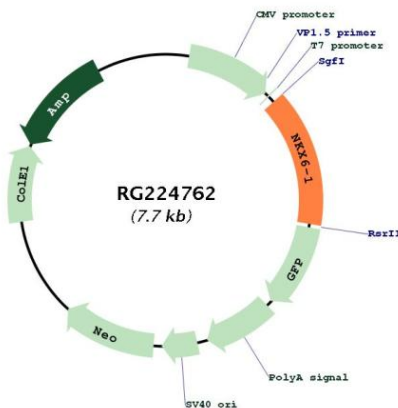
**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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\\_006168.2](#), [NP\\_006159.2](#)
- RefSeq Size:** 1116 bp
- RefSeq ORF:** 1104 bp
- Locus ID:** 4825
- UniProt ID:** [P78426](#)
- Cytogenetics:** 4q21.23
- Protein Families:** Transcription Factors
- Protein Pathways:** Maturity onset diabetes of the young
- Gene Summary:** In the pancreas, NKX6.1 is required for the development of beta cells and is a potent bifunctional transcription regulator that binds to AT-rich sequences within the promoter region of target genes lype et al. (2004) [PubMed 15056733].[supplied by OMIM, Mar 2008]

**Product images:**



Circular map for RG224762