

## Product datasheet for **MG225776**

### **Tcf3 (NM\_001164147) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Tcf3 (NM_001164147) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Tcf3
Synonyms:	A1; AA408400; ALF2; AW209082; bHLHb21; E2A; E12; E12/E47; E47; KA1; ME2; Pan1; Pan2; TCF-3; Tcfe2a
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG225776 representing NM\_001164147  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGATGAACCACTCTCAGAGAATGGCACCCGTGGGCTCTGACAAGAACTGAGTGACCTCCTGGACTTCA  
 GCATGATGTTCCCGCTACCTGTGGCCAATGGGAAGAGCCGGCCCGCTCCCTCGGGGAACCCAGTTTGC  
 AGGCTCAGGACTGGAGGACCGACCCAGCTCAGGCTCCTGGGGCAGCAGTGACCAGAACAGTTCTTCTTT  
 GACCTAGCCGGACATACAGCGAAGGTGCCACTTCAGTGACTCCACAGCAGCCTGCCGCTTCCACGT  
 TCCTAGGAGCTGGGCTTGGAGGCAAGGGCAGTGAGCGAATGCCTATGCCACCTTTGGGAGAGACCCAG  
 TGTTGGCACCTTGAGTCAGGCTGGCTTCTGCCAGGTGAGCTGAGCCTCAGCAGTCCCGGCCACTGTCC  
 CCATCGGGCATCAAGAGCAGTCCAGTATTACCCCTCATTCCCAGCAACCCTCGTCGGAGAGCTGCAG  
 ATGGTGGCTTGGCAGATACTCAGCCGAAGAAGTCCGGAAGTTCGGCTGGTCTCCCTTCTCGGTGTA  
 TCCGCCAGCTCAGGTGACAGCTACAGCAGGGATGCTGCAGCCTACCCCTCCGCCAAGACCCCCAGCAGC  
 GCTTACCCCTCCCTTCTACGTGGCAGATGGCAGCCTGCACCCATCAGCTGAGCTCTGGAGTACGCCTA  
 GCCAGGTGGGCTTTGGGCCATGCTAGGTGACGGCTTCCCCTCTGCCCTTGACCCGTCAGCCGGCAGCAGCTC  
 CGTGGGCAGTGGTACCTTTGGGGCCTCCAGCAGCAGGATCGCATGGGCTACCAGCTGCATGGATCTGAG  
 GTTAATGGCTCGCTCCAGCTGTATCCAGCTTTTCGGCTGCCCTGGCACTTACAGTGGGACTTCCGGCC  
 ACACGCCCCCTGTGAGTGGGGCCGACGTGAAAGCCTCCTAGGCACCCGAGGGACTACAGCCAGCAGCTC  
 AGGGGATGCCCTTGGGAAGGCACTGGCCTCGATCTACTCCCGGATCACTCCAGCAATAATTTCTCACCT  
 AGCCCCCAACGCCTGTGGGTTACCCAGGGCCTGCCAGGACATCACAGTGGCCCCGGCAGGAGCGC  
 CCAGTGCCTTATCCCCAACTACGATGCAAGTCTCCATGGCCTGAGCAAGATGGAGGACCGCTTGGACGA  
 GGCCATCCATGTCTGCGAAGCCACGCTGTTGGCACCGCTAGCGATCTCCATGGGCTTTTGCCTGGCCAT  
 GGCGCACTGACCACGAGCTTACCCGCCCCATGCTACTGGGCGGGCGCATGCCGCTGGTTCGGGGGAA  
 GCCATCTGAGGAGGGCCTCACAAAGTGGGGCCAGTCTTTTGCATAACCATGCCAGCCTCCCAGCCAGCC  
 CAGTTCCTCCCTGACCTCTCACAGAGACTCCCGACTCTATAGTGGACTCGGGAGGGCAGGCACAACA  
 GCGGGTGCACGAGATCAAGCGGGAGGAGAAAGAGGATGAGGAAATCGCATCAGTAGCCGACGCCGAAG  
 AGGACAAGAAGGACCTGAAGTCCCACGCACGCGCACCAGCCAGACGAGGACGAGGACGACCTTCTCCC  
 CCCAGAGCAGAAGCGGAGCGGGAGAAGGAGCGCCGGTGGCCAATAATGCCGAGAGCGCTGCGGGTC  
 CGCGACATCAATGAGGCCTTAAGGAGCTCGGCCGATGTGCCAGCTGCACCTCAGCAGCGAGAAGCCGC  
 AGACCAAAGTGCATCCTGCACCAGGCGTGGCCGTCATCCTCAGCCTGGAGCAGCAGGTGCGGAGAACG  
 CAACCTGAACCCAAAGCAGCCTGCTTGAAGCGGAGGGAGGAGGAGAAGGTGTCTGGCGTGGTTCGGGGAC  
 CCACAGCTGGCCCTGTCAGCCGCCACCCGGGCTGGGTGAGGCCACAACCCAGCCGGGCACCTG

**ACGCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>MG225776 representing NM\_001164147  
 Red=Cloning site Green=Tags(s)

MMNQSQRMAPVGSDELSDLLDFSMFPLPVANGKSRPASLGGTQFAGSGLEDRPSSGWSGSSDQNSSSF  
 DPSRTYSEGAHFSDSHSLPPSTFLGAGLGGKGSERNAYATFGRDTSVGTLSQAGFLPGELSLSSPGPLS  
 PSGIKSSQYYPFSPNPRRAADGGLADTQPKKVRKVPPLPSSVYPPSSGDSYSRDAAYPSAKTPSS  
 AYPSPFYVADGSLHPSAELWSTPSQVGFPM LGDSSPLPLAPGSSSVGSGTFGLLQQQDRMGYQLHGSE  
 VNGSLPAVSSFSAAPGTYSGTSHTPPVSGAAESLLGTRGTTASSSGDALGKALASIYSPDHSSNFPSP  
 SPSTPVGSPQGLPGTSQWPRAGAPSALSPNYDAGLHGLSKMEDRLDEAIHVLRSHAVGTASDLHGLLPGH  
 GALTTSTFTGPM SLGGRHAGLVGGSHPEEGLTSGASLLHNHASLPSQSSLPDL SQRPPDSYSGLGRAGTT  
 AGASEIKREEKEDEEIASVADA EEDKKDLKVPRTTRSPDEDEDDLPEEQKAEREKERRVANNARERLRV  
 RDINEAFKELGRMCQLHLSSEKPTKLLILHQAVAVILSLEQQVRERNLNPKAACLKRREEEKVSGVVG  
 PQLALSAHPGLGEAHPAGHL

**TRTRPLE** – GFP Tag – V

Restriction Sites: Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



```

          Kozac
          Consensus
          SgfI
          AscI
EcoRI   BamHI KpnI   RBS
CTATAGGCGCGCCGGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCCGCCGATCGCCGGCGCCAGATCT

HindIII  NheI  RsrII  MluI   NotI   XhoI   GFP Tag
CAAGCTTAAGTACTAGCTAGCGGACCG  ACG CGT  ACG CGG  CCG CTC GAG  ATG GAG  AGC GAC  - - - - -
          T  R  T  R  P  L  E  M  E  S  D  -  -  -

          PmeI  FseI
          - - - GAA GAA AGA GTT TAA ACGGCCGGCCGGGAGCT
          - - - E  E  R  V  Stop
    
```

ACCN: NM\_001164147

ORF Size: 1959 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\\_001164147.1](#), [NP\\_001157619.1](#)

**RefSeq Size:** 3320 bp

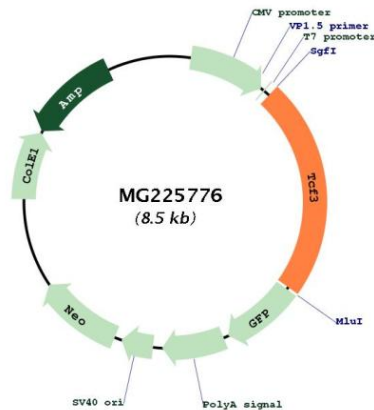
**RefSeq ORF:** 1962 bp

**Locus ID:** 21423

**Cytogenetics:** 10 39.72 cM

**Gene Summary:** Transcriptional regulator. Involved in the initiation of neuronal differentiation. Heterodimers between TCF3 and tissue-specific basic helix-loop-helix (bHLH) proteins play major roles in determining tissue-specific cell fate during embryogenesis, like muscle or early B-cell differentiation. Dimers bind DNA on E-box motifs: 5'-CANNTG-3'. Binds to the kappa-E2 site in the kappa immunoglobulin gene enhancer. Binds to IEB1 and IEB2, which are short DNA sequences in the insulin gene transcription control region.[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MG225776