

## Product datasheet for **RC221808**

### **TBX5 (NM\_181486) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	TBX5 (NM_181486) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	TBX5
Synonyms:	HOS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC221808 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCCGACGACGAGGGCTTTGGCCTGGCGCACGCCTCTGGAGCCTGACGCAAAGACCTGCCCT  
 GCGATTCGAAACCGAGAGCGCGCTCGGGGCCCCAGCAAGTCCCGTCGTCCCCGAGGCCGCCTTCAC  
 CCAGCAGGGCATGGAGGGAATCAAAGTGTTCATGAAAGAGAACTGTGGCTAAAAATCCACGAAGTG  
 GGCACGGAATGATCATAACCAAGGCTGGAAGGCGGATGTTTCCAGTTACAAAGTGAAGGTGACGGGCC  
 TTAATCCAAAACGAAGTACATTCTTCTCATGGACATTGTACCTGCCGACGATCACAGATACAAATTCGC  
 AGATAATAAATGGTCTGTGACGGGCAAAGCTGAGCCCGCCATGCCTGGCCGCTGTACGTGACCCAGAC  
 TCCCCCGCCACCGGGCGCATTGGATGAGGCAGCTCGTCTCCTCCAGAACTCAAGCTCACCAACAACC  
 ACCTGGACCCATTTGGGCATATTATTCTAAATTCATGCACAAAACCAGCCTAGATTACACATCGTGAA  
 AGCGGATGAAAAAATGGATTTGGCTCAAAAAATACAGCGTTCTGCACTCACGTCTTTCCTGAGACTGCG  
 TTTATAGCAGTGACTTCTACCAGAACCACAAGATCACGCAATTAAGATTGAGAATAATCCCTTTGCCA  
 AAGGATTCGGGGCAGTGATGACATGGAGCTGCACAGAATGTCAAGAATGCAAAGTAAAGAAATATCCCGT  
 GGTCCCCAGGAGCACCGTGAGGCAAAAAGTGGCCTCCAACCACAGTCTTTTCCAGCAGCGAGTCTCGAGCT  
 CTCTCCACCTCATCCAATTTGGGGTCCCAATACCAGTGTGAGAATGGTGTTCGGGCCCTCCCAGGACC  
 TCCTGCCTCCACCAACCCATACCCACTGCCCCAGGAGCATAGCCAAATTTACCATTGTACCAAGAGGAA  
 AGAGGAAGAATGTTCCACCACAGACCATCCCTATAAGAAGCCCTACATGGAGACATACCCAGTGAAGAA  
 GATTCCTTCTACCGCTCTAGCTATCCACAGCAGCAGGGCCTGGGTGCCTCTACAGGACAGAGTCGGCAC  
 AGCGGCAAGCTTGCAATGATGCCAGCTCTGCGCCCCCAGCGAGCCTGTGCCAGCCTAGAGGACATCAG  
 CTGCAACACGTGGCCAAGCATGCCTTCTACAGCAGCTGCACCGTACCACCGTGCAGCCATGGACAGG  
 CTACCCTACCAGCACTTCTCCGCTCACTTCACTCGGGGCCCTGGTCCCTCGGCTGGCTGGCATGGCCA  
 ACCATGGCTCCCCACAGCTGGGAGAGGGAATGTTCCAGCACCAGACCTCCGTGGCCACCAGCCTGTGGT  
 CAGGCAGTGTGGGCTCAGACTGGCCTGCAGTCCCCTGGCACCCTTACGCCCTGAGTTCCTCTACTCT  
 CATGGCGTGCCAAGGACTCTATCCCTCATCAGTACCCTCTGTGCACGGAGTTGGCATGGTGCCAGAGT  
 GGAGCGACAATAGC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC221808 protein sequence  
 Red=Cloning site Green=Tags(s)

MADADEGFGLAHTPLEPDAKDLPCDSKPESALGAPSKSPSSPQAAFTQQGMEGIKVFHERELWLKFHEV  
 GTEMIITKAGRRMFPSYKVKVTGLNPKTKYILLMDIVPADDHRYKFADNKWSVTGKAEPAMPGRLYVHPD  
 SPATGAHWMRQLVSFQKLKLTNNHLDPFGHIILNSMHKYQPRLHIVKADENNGFGSKNTAFCTHVFPETA  
 FIAVTSYQNHKITQLKIENPFKGFGRGSDMELHRMSRMSKEYPVVPRSTVVRQKVASNHSPFSSESRA  
 LSTSSNLGSYQCENGVSGPSQDLLPPPNPYPLPQEHSQIYHCTKRKEEESTTDHPYKPKPYMETSPSEE  
 DSFYRSSYPQQQLGASyrTESAQRQACMYASSAPPSEPVPVPSLEDISCNTWPSMPSYSSCTVTTVQPMDR  
 LPYQHFSAHFTSGPLVPRLAGMANHGSPQLGEGMFQHTSVAHQPVVRQCGPQTGLQSPGTLQPPEFLYS  
 HGVPRTLSPHQYHSVHGVGMVPEWSDNS

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6105\\_f12.zip](https://cdn.origene.com/chromatograms/mk6105_f12.zip)

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_181486

**ORF Size:** 1554 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\\_181486.4](#)
**RefSeq Size:** 3828 bp

**RefSeq ORF:** 1557 bp

**Locus ID:** 6910

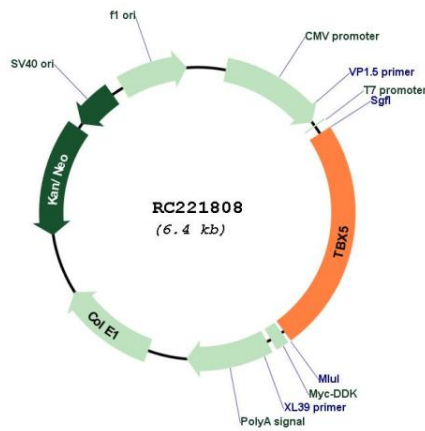
**UniProt ID:** [Q99593](#)
**Cytogenetics:** 12q24.21

**Protein Families:** Druggable Genome, Transcription Factors

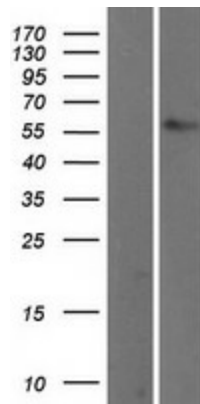
**MW:** 57.7 kDa

**Gene Summary:** This gene is a member of a phylogenetically conserved family of genes that share a common DNA-binding domain, the T-box. T-box genes encode transcription factors involved in the regulation of developmental processes. This gene is closely linked to related family member T-box 3 (ulnar mammary syndrome) on human chromosome 12. The encoded protein may play a role in heart development and specification of limb identity. Mutations in this gene have been associated with Holt-Oram syndrome, a developmental disorder affecting the heart and upper limbs. Several transcript variants encoding different isoforms have been described for this gene. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RC221808



Western blot validation of overexpression lysate (Cat# [LY403620]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221808 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).