

Product datasheet for **RC214058**

TBX1 (NM_005992) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	TBX1 (NM_005992) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	TBX1
Synonyms:	CAFS; CATCH22; CTHM; DGCR; DGS; DORV; TBX1C; TGA; VCF; VCFS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC214058 ORF sequence, **codon optimized**.
Due to the complexity of NM_005992, the ORF clone is codon optimized for mammalian Expression.
The nucleotide sequence differs from the reference sequence, yet the amino acid sequence remains identical.

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGCACCTTAGCACCGTGACACGGGATATGGAGGCGTTTACTGCATCCAGTCTCTAGCCTTGGTGCCG
 CCGGGGATTCCCTGGCGCAGCATACCCGGGGCTGATCCTTATGGCCCTCGAGAACCTCTCCCCCCC
 TCCTCGGTACGATCCATGCGCTGCCGTGCCCCAGGTGCACAGGGCCTCCACCTCCCCACATGCTTAT
 CCCTTCGCTCCTGCAGCCGGTGCCGCTACCAGTGCAGCTGCTGAGCCAGAGGGACCTGGAGCTAGTTGTG
 CGCTGCCGCAAAAGCGCCCGTCAAGAAGAACGCCAAGGTTGCTGGCGTGTCAGTGCAGCTGGAAATGAA
 GGCCCTCTGGGACGAGTTCAATCAGCTCGGACCGAGATGATCGTTACAAAAGCCGGTCCGGAGAATGTT
 CCCACCTTTCAGGTTAACTTTTTGGGATGGATCCTATGGCAGACTACATGCTGCTGATGGATTTGTTT
 CAGTCGACGACAAGAGGTACCGTACGCTTCCACTCTAGTTCTTGGCTGGTGGCTGGGAAGGCGGATCC
 AGCCACCCCGGGCCGGTGCACATCACCTGACAGCCCGGCAAAAGGCGCGCAATGGATGAAGCAGATT
 GTTTCAATTTGACAACTCAAACGACAACAACCTGCTCGACGACAACGGCCATATTATTCTCAATTCAA
 TGACCCGATACCAGCCAAGGTTTCATGTCGTGTATGTCGACCCTCGAAAGGACTCCGAAAAATATGCCGA
 GGAGAACTTTAAGACATTTGTGTTTGGAGAGACCGGTTACCCGAGTCACTGCCTATCAGAACCATCGG
 ATAACCCAATTGAAGATTGCATCAAATCCGTTCCGCCAAAGGTTTTTCGAGACTGCGACCCGGAGGATTGGC
 CGCGCAACCATAGGCCTGGAGCCCTGCCATTGATGAGCGCATTGCCAGATCCAGAAACCCCGTGGCCAG
 CCCCACTCAGCCGTAGGCACAGAGAAGGGGCTCGTGACAGAGGAAGCGGCTGCAGCCGGGACTGCTT
 GACGTCCTGCTTAAACCCCATCCAAGAAAAGTGAGAGCCTGCGACCTCCTCATTGCAAAGACACC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC214058 representing NM_005992
 Red=Cloning site Green=Tags(s)

MHFSTVTRDMEAF TASSLSS LGAAGGFPGAASPGADPYGPREPPPPPPRYDPCAAAAPGAPGPPPPPHAY
 PFAPAAGAATSAAA EPEGPGASCAAAA KAPVKNAKVAGVSVQLEMKALWDEFNQLGTEMI VTKAGRRMF
 PTFQVKLFGMDPMADYMLLMDFVPVDDKRYRYAFHSSSWLVAGKADPATPGRVHYHPDSPAKGAQWMKQI
 VSFDKLKL TNNLLDDNGHIILNSMHR YQPRFHVVYVDP RKDSEKYAEENFKTFVFEETRFTAVTAYQNH
 RITQLKIASNPF AKGFRDCPEDWPRNHRPGALPLMSAF ARSRNPVASPTQPSGTEKGLVTEGSGLPGLL
 DVLLKPPSKKSESLRPPHCKDT

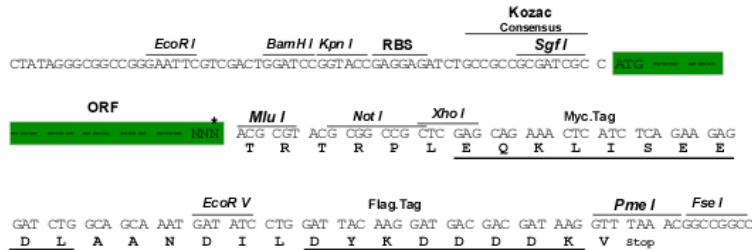
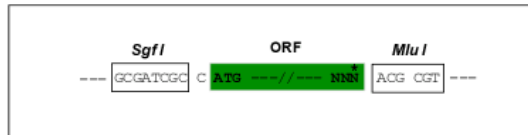
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

ACCN: NM_005992

ORF Size: 1116 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_005992.1](#), [NP_005983.1](#)
RefSeq Size: 1538 bp

RefSeq ORF: 1119 bp

Locus ID: 6899

UniProt ID: [O43435](#)

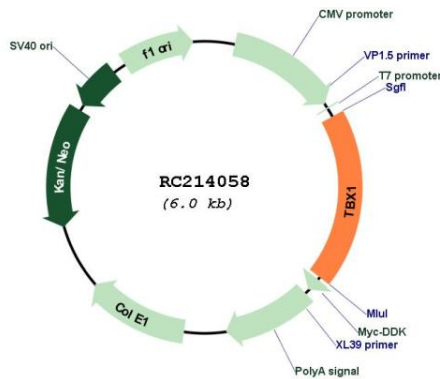
Cytogenetics: 22q11.21

Protein Families: Transcription Factors

MW: 40.4 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 product shares 98% amino acid sequence identity with the mouse ortholog. DiGeorge syndrome (DGS)/velocardiofacial syndrome (VCFS), a common congenital disorder characterized by neural-crest-related developmental defects, has been associated with deletions of chromosome 22q11.2, where this gene has been mapped. Studies using mouse models of DiGeorge syndrome suggest a major role for this gene in the molecular etiology of DGS/VCFS. Several alternatively spliced transcript variants encoding different isoforms have been described for this gene. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC214058