

## Product datasheet for **RC219514**

### TGF beta Receptor I (TGFB1) (NM\_004612) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	TGF beta Receptor I (TGFB1) (NM_004612) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	TGF beta Receptor I
Synonyms:	AAT5; ACVRLK4; ALK-5; ALK5; ESS1; LDS1; LDS1A; LDS2A; MSSE; SKR4; tbetaR-I; TBR-i; TBRI; TGFR-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC219514 representing NM\_004612  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGAGGCGCGGTCTGCTCCGCGTCCCGGCTGCTCCTCCTCGTGTGGCGGCGCGCGCGCGCGG  
 CGGCGGCCTGCTCCCGGGGCGACGGCGTTACAGTGTTTCTGCCACCTCTGTACAAAAGACAATTTTAC  
 TTGTGTGACAGATGGGCTCTGCTTTGTCTCTGTACAGAGACCACAGACAAAGTTATACACAACAGCATG  
 TGTATAGCTGAAATTGACTTAATCCTCGAGATAGGCCGTTTGTATGTGCACCCTCTTCAAAAAGTGGT  
 CTGTGACTACAACATATTGCTGCAATCAGGACATTGCAATAAAATAGAAGTTTCAAACTACTGTAAGTC  
 ATCACCTGGCCTTGGTCTGTGGAAGTGGCAGCTGTCATTGCTGGACCAGTGTGCTTCGTCGATCTCA  
 CTCATGTTGATGGTCTATCTGCCACAACCGCACTGTCATTACCATCGAGTGCCAAATGAAGAGGACC  
 CTTTATTAGATCGCCCTTTTATTTAGAGGGTACTACGTTGAAAGACTTAATTTATGATATGACAACGTC  
 AGTTTCTGGCTCAGGTTTACCATTGCTTGTTCAGAGAACAATTGGGAGAACTATTGTGTTACAAGAAAGC  
 ATTTGGCAAAGGTCGATTTGGAGAAGTTTGGAGAGGAAAGTGGCGGGGAGAAGAAGTTGCTGTTAAGATAT  
 TCTCCTCTAGAGAAGAAGTTCGTGGTCCGTGAGGCAGAGATTTATCAAACTGTAATGTTACGTATGA  
 AAACATCTGGGATTTATAGCAGCAGACAATAAAGACAATGGTACTTGGACTCAGCTCTGGTTGGTGTA  
 GATTATCATGAGCATGGATCCCTTTTGTACTTAAACAGATACACAGTTACTGTGGAAGGAATGATAA  
 AACTTGTCTGTCCACGGCGAGCGGTCTTGCCCATCTTCACATGGAGATTGTTGGTACCCAAGGAAAGCC  
 AGCCATTGCTCATAGAGATTTGAAATCAAAGAATATCTTGGTAAAGAAGAATGGAAGTGGTGTATTGCA  
 GACTTAGGACTGGCAGTAAGACATGATTCAGCCACAGATACCATTGATATTGCTCCAAACCACAGAGTGG  
 GAACAAAAGGTACATGGCCCTGAAGTCTCGATGATTCCATAAATGAAACATTTTGAATCCTTCAA  
 ACGTGCTGACATCTATGCAATGGGCTTAGTATTCTGGGAAATGCTCGACGATGTTCCATTGGTGAATT  
 CATGAAGATTACCAACTGCCTTATTATGATCTTGTACCTTCTGACCCATCAGTTGAAGAAATGAGAAAAG  
 TTGTTTGTGAACAGAAGTTAAGGCCAAATATCCCAAACAGATGGCAGAGCTGTGAAGCCTTGAGAGTAAT  
 GGCTAAAATTATGAGAGAATGTTGGTATGCCAATGGAGCAGCTAGGCTTACAGCATTGCGGATTAAGAAA  
 ACATTATCGCAACTCAGTCAACAGGAAGGCATCAAATG

**ACGCGT**ACGCGGCGGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC219514 representing NM\_004612  
 Red=Cloning site Green=Tags(s)

MEAAVAAPRPRLLLLVLAIAAAAAAAAAALLPGATALQCFCHLCTKDNFTCVTDGLCFVSVTETTDKVIHNSM  
 CIAEIDLIPDRPFVCPSSKTGSVTTTYCCNQDHCNKIELPTTVKSSPGLGPVELAAVIAGPVCFVCIS  
 LMLMVIYCHNRTVIHHRVPNEEDPSLDRPFISEGTTLKDLIYDMTTSGSGSGLPLLVRQTIARTIVLQES  
 IGKGRFGEVWRGKWRGEEVAVKIFSSREERSWFREAEIYQTVMLRHENILGFIAADNKDNGTWTQLWLV  
 DYHEHGS�FDYLNRYTVEGMIKLALSTASGLAHLHMEIVGTQKPAIAHRDLKSKNILVKKNGTCCIA  
 DLGLAVRHDSATDTIDIAPNHRVGTKRYMAPEVLDDSIINMKHFESFKRADIYAMGLVFWEIARRCSIGGI  
 HEDYQLPYYDLVPSDPSVEEMRKVVCEQKLRPNIPNRWQSCEALRVMAKIMRECWYANGAARLTALRIKK  
 TLSQLSQEQEIKM

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mg2648\\_e02.zip](https://cdn.origene.com/chromatograms/mg2648_e02.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_004612

**ORF Size:** 1509 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](#)

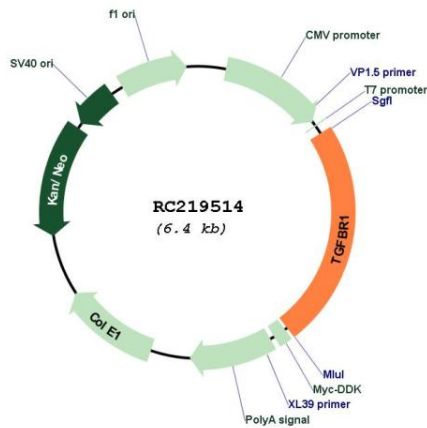
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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).

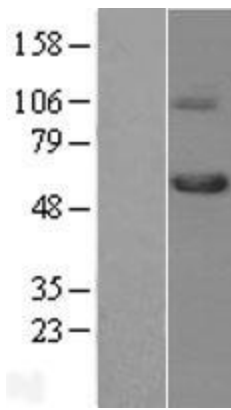
- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
  2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
  3. Close the tube and incubate for 10 minutes at room temperature.
  4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the 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:	<a href="#">NM_004612.4</a>
RefSeq Size:	6475 bp
RefSeq ORF:	1512 bp
Locus ID:	7046
UniProt ID:	<a href="#">P36897</a>
Cytogenetics:	9q22.33
Domains:	Activin_recp, pkinase, TyrKc, S_TKc, GS
Protein Families:	Druggable Genome, Protein Kinase, Transmembrane
Protein Pathways:	Adherens junction, Chronic myeloid leukemia, Colorectal cancer, Cytokine-cytokine receptor interaction, Endocytosis, MAPK signaling pathway, Pancreatic cancer, Pathways in cancer, TGF-beta signaling pathway
MW:	55.96 kDa
Gene Summary:	The protein encoded by this gene forms a heteromeric complex with type II TGF-beta receptors when bound to TGF-beta, transducing the TGF-beta signal from the cell surface to the cytoplasm. The encoded protein is a serine/threonine protein kinase. Mutations in this gene have been associated with Loeys-Dietz aortic aneurysm syndrome (LDAS). Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Aug 2008]

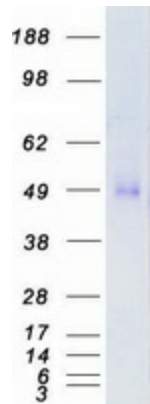
### Product images:



Circular map for RC219514



Western blot validation of overexpression lysate (Cat# [LY401457]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC219514 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified TGFBR1 protein (Cat# [TP319514]). The protein was produced from HEK293T cells transfected with TGFBR1 cDNA clone (Cat# RC219514) using MegaTran 2.0 (Cat# [TT210002]).