

Product datasheet for **RC200226**

Transglutaminase 2 (TGM2) (NM_198951) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	Myc-DDK
Symbol:	Transglutaminase 2
Synonyms:	G(h); hTG2; TG(C); TGC; tTG
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC200226 representing NM_198951
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGC**

ATGGCCGAGGAGCTGGTCTTAGAGAGGTGTGATCTGGAGCTGGAGACCAATGGCCGAGACCACACCGG
 CCGACCTGTGCCGGGAGAAGCTGGTGGTGCACGGGGCCAGCCCTTCTGGCTGACCTGCACTTTGAGGG
 CCGCAACTACGAGGCCAGTGTAGACAGTCTCACCTTCAGTGTCTGACCGGCCAGCCCCAGCCAGGAG
 GCCGGGACCAAGGCCGTTTCCACTAAGAGATGCTGTGGAGGAGGGTGAAGTGGACAGCCACCGTGGTGG
 ACCAGCAAGACTGCACCTCTCGCTGCAGCTCACACCCCGGCCAACGCCCCATCGGCCTGTATCGCCT
 CAGCCTGGAGGCTCCACTGGCTACCAGGGATCCAGCTTTGTGCTGGGCCACTTCATTTTCTCTTCAAC
 GCCTGGTGGCCAGCGGATGCTGTGTACCTGGACTCGGAAGAGGAGCGGCAGGAGTATGTCCTCACCCAGC
 AGGGCTTTATCTACCAGGGCTCGGCCAAGTTCATCAAGAACATACCTTGAATTTTGGGCAGTTGAAGA
 TGGGATCTAGACATCTGCCTGATCCTTCTAGATGTCAACCCCAAGTTCCTGAAGAAGCGCGCCGTGAC
 TGCTCCCGCCGACGAGCCCCGTCTACGTGGGCCGGGTGGTGAAGTGGCATGGTCAACTGCAACGATGACC
 AGGGTGTGCTGCTGGGACGCTGGGACAACAACACGCGGACGGCGTCAGCCCCATGTCCTGGATCGGCAG
 CGTGGACATCCTGCGGCGCTGGAAGAACCACGGCTGCCAGCGCGTCAAGTATGGCCAGTGTGGTCTTC
 GCCGCCGTGGCCTGCACAGTGTGAGGTGCCTGGGCATCCCTACCCGCGCTGTGACCAACTACAACCTCGG
 CCCATGACCAGAACAGCAACCTTCTCATCGAGTACTTCCGCAATGAGTTTGGGGAGATCCAGGGTGACAA
 GAGCGAGATGATCTGGAACCTCCACTGCTGGGTGGAGTCTGGATGACCAGGCCGACCTGCAGCCGGGG
 TACGAGGGCTGGCAGGCCCTGGACCAACGCCCCAGGAGAAGAGCGAAGGGACGTAAGTGTGTGGCCAG
 TTCCAGTTCGTGCCATCAAGGAGGGCGACCTGAGCACCAAGTACGATGCGCCCTTTGTCTTTGCGGAGGT
 CAATGCCGACGTGGTAGACTGGATCCAGCAGGACGATGGGTCTGTGCACAAATCCATCAACCGTTCCCTG
 ATCGTTGGGCTGAAGATCAGCACTAAGAGCGTGGGCCGAGACGAGCGGGAGGATATCACCCACACCTACA
 AATACCCAGAGGGGTCTCAGAGGAGAGGGAGGCTTCAAGGGCGAACCACCTGAACAACTGGCCGA
 GAAGGAGGAGACAGGGATGGCCATGCGGATCCGTGTGGGCCAGAGCATGAACATGGGCAGTGACTTTGAC
 GTCTTTGGCCACATACCAACAACACCGCTGAGGAGTACGTCTGCCGCCCTCTGCTGTGCCCCGACCG
 TCAGCTACAATGGGATCTTGGGGCCGAGTGTGGCACCAAGTACCTGCTCAACCTCAACCTGGAGCCTTT
 CTCTGGTAAAGCCCTGTGTTCTGGAGCATTGT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC200226 representing NM_198951
 Red=Cloning site Green=Tags(s)

MAEELVLERCDLELETNGRDHHTADLCREKLVVRRGQPFWLTLHFEGRNYEASVDSLTFSSVVTGPAPSQE
 AGTKARFPLRDAVEEGDWTATVVDQDCTLSLQLTTPANAPIGLYRLSLEASTGYQGSSFVLGHFILLFN
 AWC PADAVYLDSEERQEYVLTQQGFIYQGS AKFIKNIPWNFGQFEDGILDICLILLDVNPKFLKNAGRD
 CSRRSSPVYVGRVSGMVNCDQGVLLGRWDNNGYDGVSPMSWIGSV DILRRWKNHGCQRVKYGCWVF
 AAVACTVLRCLGIPTRVVTNYS AHDQNSNLLIEYFRNEFG EIQGDKSEMIWNFHCWVESWMTRPDLQPG
 YEGWQALDPTPQEKSEGT YCCGPVPVRAIKEGDLSTKYDAPFVFAEVNADVVDWIQQDDGSVHKSINRSL
 IVGLKISTKSVGRDEREDITHYKYPEGSSEEREAFTRANHLNKLAEKEETGMAMRIRVGQSMNMGSDFD
 VFAHITNNTAEEYVCRLLLCARTVSYNGILGPECCKYLLNLNLEPFSGKALCSWSIC

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

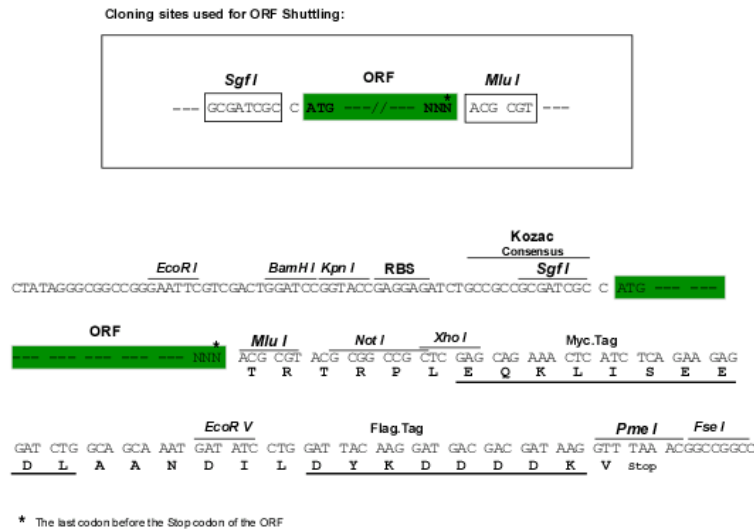
Chromatograms:

https://cdn.origene.com/chromatograms/mg2417_d03.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_198951

ORF Size: 1644 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_198951.3](#)

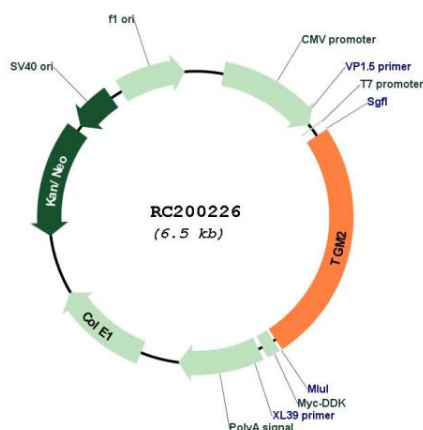
RefSeq Size: 1879 bp

RefSeq ORF: 1647 bp

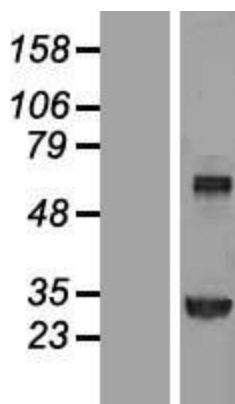
Locus ID: 7052

UniProt ID:	P21980
Cytogenetics:	20q11.23
Protein Families:	Druggable Genome
Protein Pathways:	Huntington's disease
MW:	61.5 kDa
Gene Summary:	Transglutaminases are enzymes that catalyze the crosslinking of proteins by epsilon-gamma glutamyl lysine isopeptide bonds. While the primary structure of transglutaminases is not conserved, they all have the same amino acid sequence at their active sites and their activity is calcium-dependent. The protein encoded by this gene acts as a monomer, is induced by retinoic acid, and appears to be involved in apoptosis. Finally, the encoded protein is the autoantigen implicated in celiac disease. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

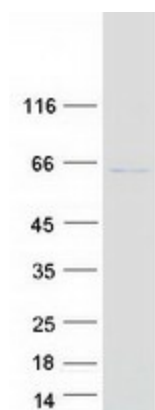
Product images:



Circular map for RC200226



Western blot validation of overexpression lysate (Cat# [LY403699]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200226 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified TGM2 protein (Cat# [TP300226]). The protein was produced from HEK293T cells transfected with TGM2 cDNA clone (Cat# RC200226) using MegaTran 2.0 (Cat# [TT210002]).