

## Product datasheet for **RG200226**

### Transglutaminase 2 (TGM2) (NM\_198951) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Transglutaminase 2 (TGM2) (NM_198951) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Transglutaminase 2
Synonyms:	G(h); hTG2; TG(C); TGC; tTG
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG200226 representing NM\_198951  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGCCGAGGAGCTGGTCTTAGAGAGGTGTGATCTGGAGCTGGAGACCAATGGCCGAGACCACCACACGG  
 CCGACCTGTGCCGGGAGAAGCTGGTGGTGCACGGGGCCAGCCCTTCTGGCTGACCTGCACTTTGAGGG  
 CCGCAACTACGAGGCCAGTGTAGACAGTCTCACCTTCAGTGTCTGACCGGCCAGCCCTAGCCAGGAG  
 GCCGGGACCAAGGCCGTTTTCCACTAAGAGATGCTGTGGAGGAGGGTACTGGACAGCCACCGTGGTGG  
 ACCAGCAAGACTGCACCCTCTCGCTGCAGCTCACACCCCGGCCAACGCCCCATCGGCCTGTATCGCCT  
 CAGCCTGGAGGCCTCACTGGCTACCAGGGATCCAGCTTTGTGCTGGGCCACTTCATTTTGTCTTCAAC  
 GCCTGGTCCCAGCGGATGCTGTGTACCTGGACTCGGAAGAGGAGCGGCAGGAGTATGTCCTCACCCAGC  
 AGGGCTTTATCTACCAGGGCTCGGCCAAGTTCATCAAGAACATACCTTGAATTTTGGGCAGTTGAAGA  
 TGGGATCTAGACATCTGCCTGATCCTTCTAGATGTCAACCCCAAGTTCCTGAAGAACCGCGGCCGTGAC  
 TGCTCCCGCCGCAGCAGCCCGTCTACGTGGGCCGGTGGTGGTGGCATGGTCAACTGCAACGATGACC  
 AGGGTGTGCTGCTGGGACGCTGGGACAACAACACGCGGGACGGCGTCAGCCCCATGTCCTGGATCGGCAG  
 CGTGGACATCCTGCGGCCTGGAAGAACCAGCGCTGCCAGCGCTCAAGTATGGCCAGTGTGGTCTTC  
 GCCGCCGTGGCCTGCACAGTGTGAGGTGCCTGGGCATCCCTACCCGCGCTGTGACCAACTACAACCTCG  
 CCCATGACCAGAACAGCAACCTTCTCATCGAGTACTCCGCAATGAGTTTGGGGAGATCCAGGGTGACAA  
 GAGCGAGATGATCTGGAACCTCCACTGCTGGGTGGAGTGTGGATGACCAGGCCGACCTGCAGCCGGGG  
 TACGAGGGCTGGCAGGCCCTGGACCAACGCCCCAGGAGAAGAGCGAAGGGACGTACTGCTGTGGCCAG  
 TTCCAGTTCGTGCCATCAAGGAGGGCGACCTGAGCACAAGTACGATGCGCCCTTTGTCTTTGCGGAGGT  
 CAATGCCGACGTGGTAGACTGGATCCAGCAGGACGATGGGTCTGTGCACAAATCCATCAACCGTTCCTGT  
 ATCGTTGGGCTGAAGATCAGCACTAAGAGCGTGGGCCGAGACGAGCGGGAGGATATCACCCACACCTACA  
 AATACCCAGAGGGGTCTCAGAGGAGAGGGAGGCCTTCAAGGGCGAACCACTGAACAAACTGGCCGA  
 GAAGGAGGAGACAGGGATGGCCATGCGGATCCGTGTGGGCCAGAGCATGAACATGGGCAGTACTTTGAC  
 GTCTTTGCCACATCACCAACAACCCGCTGAGGAGTACGTCTGCCGCCTCTGCTGTGCCCGCACCG  
 TCAGCTACAATGGGATCTTGGGGCCGAGTGTGGCACAAGTACCTGCTCAACCTCAACCTGGAGCCTTT  
 CTCTGGTAAAGCCCTGTGTTCTGGAGCATTGT

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG200226 representing NM\_198951  
 Red=Cloning site Green=Tags(s)

MAEELVLERCDLELETNGRDHHTADLCREKLVRRGQPFWLTLHFEGRNYEASVDSLTFVVTGPAPSQE  
 AGTKARFPLRDAVEEGDWTATVVDQDCTLSLQLTTPANAPIGLYRLSLEASTGYQGSSFVLGHFILLFN  
 AWCPADAVYLDSEERQEYVLTQQGFYIQGSAFKIKNIPWNFGQFEDGILDICLILLDVNPKFLKNAGR  
 CSRRSSPVYVGRVSGMVNCDNDQGVLLGRWDNNGDGVSPMSWIGSVDILRRWKNHGCQRVKYGCWVF  
 AAVACTVLRCLGIPTRVVTNYSNHDQNSNLLIEYFRNEFGIQQDKSEMIWNFHCVESWMTRPDLQPG  
 YEGWQALDPTPQEKSEGTGCCGVPVRAIKEGDLSTKYDAPFVFAEVNADVVDWIQQDDGVSVHKSINRSL  
 IVGLKISTKSVGRDEREDITHYKYPEGSSEEREAFTRANHLNKLAEKEETGMAMRIRVQSMNMGSDFD  
 VFAHITNNTAAEYVCRLLL CARTVSYNGILGPECGTKYLLNLEPFSGKALCSWSIC

**TRTRPLE** - GFP Tag - V

**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.

**RefSeq:** [NM\\_198951.3](#)

**RefSeq Size:** 1879 bp

**RefSeq ORF:** 1647 bp

**Locus ID:** 7052

**UniProt ID:** [P21980](#)

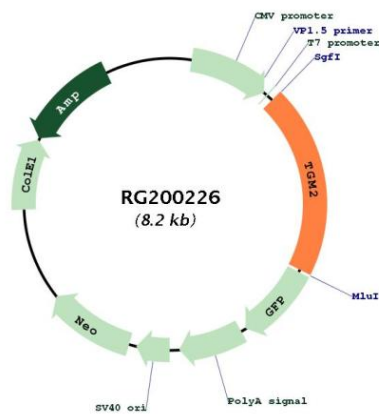
**Cytogenetics:** 20q11.23

**Protein Families:** Druggable Genome

**Protein Pathways:** Huntington's disease

**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 RG200226