

## Product datasheet for **MG215941**

### Qtrt1 (NM\_021888) Mouse Tagged ORF Clone

#### Product data:

<b>Product Type:</b>	Expression Plasmids
<b>Tag:</b>	TurboGFP
<b>Symbol:</b>	Qtrt1
<b>Synonyms:</b>	2610028E17Rik; Tgt
<b>Mammalian Cell Selection:</b>	Neomycin
<b>Vector:</b>	pCMV6-AC-GFP (PS100010)
<b>E. coli Selection:</b>	Ampicillin (100 ug/mL)

**ORF Nucleotide Sequence:** >MG215941 representing NM\_021888  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGGCGCGGTAGGCAGCCAGGTTTCGCTTTCGCTCCACGAATAATGCGGCTGGTTCGCTGAGTGCA  
GTCGCTCCGGAGCTCGGGCGGGTTCGCTGCGGCTGCCGCATGGAACGGTAGCCACCCCTGTGTTTCATGCC  
TGTGGGTACACAGGCCACCATGAAGGGTATCACCACGGAGCAGCTGGACTCCCTGGGCTGCCGCATCTGC  
TTGGGCAACACCTACCATCTGGGGCTGAGGCCGGGACCGAGCTGATCCGGAAGCCAGGGTCTTCACG  
GCTTCATGAATTGGCCCCACAATCTGCTGACGGATAGCGGGCGCTTCCAGATGGTGTCCCTCTTCCCT  
GTCCGAGGTGACGGAGGAGGGCTCCACTTCCGCTCGCCCTACGATGGAGAAGAGACTTTTGAGCCCA  
GAGAGGTTCGTTGGAGATCCAGAATGCTCTGGGCTCGGACATCATCATGCAGTTAGACCATGTGGTTCGCA  
GCACAGTGACAGGCCCTTAGTGGAGGAGCCATGCACAGGTCAGTCCGCTGGTGGACAGATGCATCGC  
AGCCCATAAAGCACC CGACAAGCAGAACCTCTTTGCCATCATCCAGGGTGGACTGAATGCTGATCTTCGG  
ACCACTTGTCTGAAAGAGATGACCAAGAGAGATGTGCCGGGCTTCGCCATCGGAGGTCTGAGTGGAGGAG  
AAAGCAAGGCACAGTTCTGGAAGATGGTGGCGTTGAGCACCTCCATGCTGCCTAAGGACAAGCCACGATA  
CCTGATGGGGTGGCTATGCCACCGATTGGTGGTCTGCGTGGCTCTTGGATGTGACATGTTTCGACTGT  
GTGTACCCACACGGACAGCGCGCTTTGGATCCGCCCTTGTGCCACTGGGAACCTTCAGTTGAAGAAGA  
AGCAGTATGCCAAGGATTTTCAGCCCCATAAACCTGAGTGTCCCTGTCCACCTGCCAGACGCACAGCCG  
AGCCTTCTGCATGCCCTGCTACACAGTGACAACACTACAGCACTACACCACCTAACCGTGCACAACATT  
GCCTATCAGCTGCAGCTCCTGAGTCCGTCGCGCAGCAGTATCTTGAACAGCGCTTTCCTGACTTTGTAC  
GAAACTTCATGCGCACTATGTATGGTGACCACAGCCTCTGTCTGCCTGGGCCGTTGAAGCACTGGCCTC  
TGTGGGAATCATGCTCACA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



**Protein Sequence:** >MG215941 representing NM\_021888  
 Red=Cloning site Green=Tags(s)

MAAVGSPGSLSEAPRIMRLVAECSRSGARAGELRLPHGTVATPVFMPVGTQATMKGITTEQLDSLGCRI  
 LGNTYHLGLRPGPELIRKAQGLHGFMNWPHNLLTDSGGFQMVSLFSLSEVTEEGVHFRSPYDGEETLLSP  
 ERSVEIQNALGSDIIMQLDHVVSSTVTGPLVEEAMHRSVRWLDRCIAAHKHPDKQNLFAIIQGGLNADLR  
 TTCLKEMTKRDVPGFAIGGLSGGESKAQFWKMVALSTSMPLPKDKPRYLMGVGYATDLVVCVALGCDMFDC  
 VYPTRTARFGSALVPTGNLQLKKKQYAKDFSPIINPEPCPCPTCQTHSRAFLHALLHSDNTTALHHLTVHNI  
 AYQLQLLSAVRSSILEQRFDPDFVRNFMRTMYGDHSLCPAWEALASVGIMLT

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_021888

**ORF Size:** 1209 bp

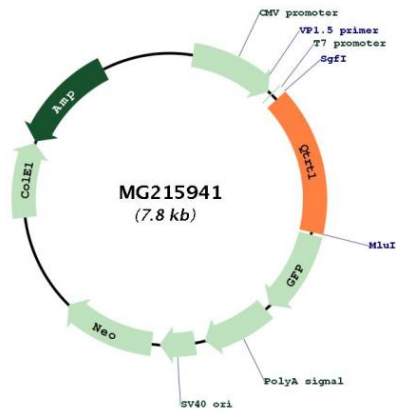
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_021888.2</a> , <a href="#">NP_068688.2</a>
<b>RefSeq Size:</b>	1328 bp
<b>RefSeq ORF:</b>	1212 bp
<b>Locus ID:</b>	60507
<b>UniProt ID:</b>	<a href="#">Q9JMA2</a>
<b>Cytogenetics:</b>	9 A3
<b>Gene Summary:</b>	<p>Catalytic subunit of the queuine tRNA-ribosyltransferase (TGT) that catalyzes the base-exchange of a guanine (G) residue with queuine (Q) at position 34 (anticodon wobble position) in tRNAs with GU(N) anticodons (tRNA-Asp, -Asn, -His and -Tyr), resulting in the hypermodified nucleoside queuosine (7-(((4,5-cis-dihydroxy-2-cyclopenten-1-yl)amino)methyl)-7-deazaguanosine) (PubMed:19414587, PubMed:29862811). Catalysis occurs through a double-displacement mechanism. The nucleophile active site attacks the C1' of nucleotide 34 to detach the guanine base from the RNA, forming a covalent enzyme-RNA intermediate. The proton acceptor active site deprotonates the incoming queuine, allowing a nucleophilic attack on the C1' of the ribose to form the product (By similarity). [UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for MG215941