

## Product datasheet for **RG223640**

### GGT1 (NM\_013430) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	GGT1 (NM_013430) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GGT1
Synonyms:	CD224; D22S672; D22S732; GGT; GGT 1; GGTD; GTG
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG223640 representing NM\_013430  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGAAGAAGAAGTTAGTGGTCTGGCCTGCTGGCCGTGGTCTGGTCTGGTTCATTGTGCGCCTCTGTC  
 TCTGGCTGCCCTCAGCCTCCAAGGAACCTGACAACCATGTGTACACCAGGGCTGCCGTGGCCGCGGATGC  
 CAAGCAGTGCTCGAAGATTGGGAGGGATGCACTGCGGGACGGTGGCTCTGCGGTGGATGCAGCCATTGCA  
 GCCCTGTTGTGTGGGGCTCATGAATGCCACAGCATGGGCATCGGGGGTGGCCTTCTCCTCACCATCT  
 ACAACAGCACCACAGAAAAGCTGAGGTCAACGCCCCGAGGTGGCCCCAGGCTGGCCTTTGCCAC  
 CATGTTCAACAGCTCGGAGCAGTCCCAGAAGGGGGGCTGTGGTGGCGGTGCCTGGGGAGATCCGAGGC  
 TATGAGCTGGCACACCAGCGCATGGCGGCTGCCCTGGGCTCGCCTCTCCAGCCCAGCATCCAGCTGG  
 CCCGCCAGGGCTTCCCCGTGGGCAAGGGCTTGGCGGCAGCCCTGAAAAACAAGCGGACCGTCATCGAGCA  
 GCAGCCTGTCTTGTGTGAGGTGTCTGCCGGGATAGAAAGGTGCTTCGGGAGGGGAGAGACTGACCCTG  
 CCGCAGCTGGCTGACACCTACGAGACGCTGGCCATCGAGGGTGCCAGGCCTTACAACGGCAGCCTCA  
 CGGCCAGATTGTGAAGGACATCCAGGCGGCCGGGGCATTGTGACAGCTGAGGACCTGAACAACCTACCG  
 TGCTGAGCTGATCGAGCACCCGCTGAACATCAGCCTGGGAGACGTGGTGTGTACATGCCAGTGCGCCG  
 CTCAGCGGGCCCGTGTGGCCCTCATCCTCAACATCCTCAAAGGGTACAACCTTCTCCCGGAGAGCGTGG  
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 GACCCTGCTTGGGGACCCCAAGTTTGGGATGTGACTGAGGTGGTCCGCAACATGACCTCCGAGTTCTTC  
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 ACACGCCGATGACGGGGCAGTCTCACCTGTCTGCTGCGCAGAGGACGGCAGTGTGTCCGCCAC  
 CAGCACCATCAACCTCTACTTTGGCTCCAAGGTCCGCTCCCGGTCAGCGGGATCCTGTTCAATAATGAA  
 ATGGACGACTTACGCTCTCCAGCATACCAACGAGTTTGGGGTACCCCCCTCACCTGCCAATTTTCATCC  
 AGCCAGGGAAGCAGCCGCTCTCGTCCATGTGCCGACGATCATGGTGGGCCAGGACGGCCAGGTCCGGAT  
 GGTGGTGGGAGCTGTGGGGGCACACAGATCACCACGGCCACTGCACTGGCCATCATCTACAACCTCTGG  
 TTCGGCTATGACGTGAAGCGGGCCGTGGAGGAGCCCCGGCTGCACAACCAGCTTCTGCCAACGTACGA  
 CAGTGGAGAGAAACATTGACCAGGCAGTACTGCAGCCCTGGAGACCCGGCACCATCACACCAGATCGC  
 GTCCACCTTCATCGCTGTGGTGAAGCCATCGTCCGACGGCTGGTGGCTGGGCAGCTGCCTCGGACTCC  
 AGGAAAGCGGGGAGCCTGCCGGCTAC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

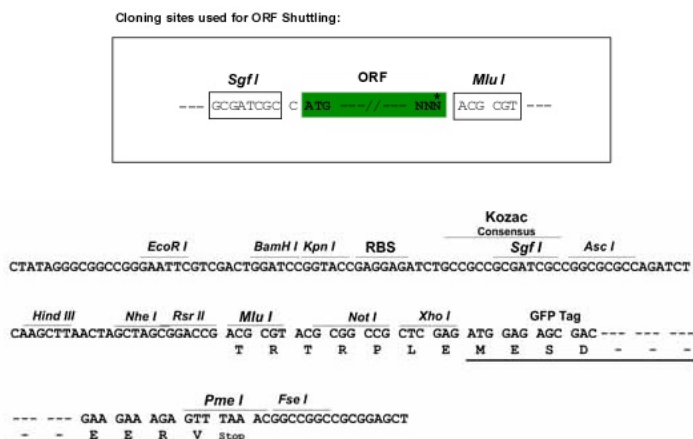
>RG223640 representing NM\_013430  
 Red=Cloning site Green=Tags(s)

MKKKLVLVLLAVVLVIVGLCLWLPSASKEPDNHVYTRAAVAADAKQCSKIGRDALRDGGSAVDAAIA  
 ALLCVGLMNAHSMGIGGLFLTIYNSTTRKAEVINAREVAPRLAFATMFNSSEQSQKGLSVAVPGEIRG  
 YELAHQRHGRLPWARLFQPSIQLARQGFVPGKGLAAALENKRTVIEQQPVLCEVFCRDRKVLREGERLTL  
 PQLADTYETLIEGAQAFYNGSLTAQIVKDIQAAGGIVTAEDLNRYRAELIEHPLNISLGDVVLVYMPSP  
 LSGPVLALILNILKGYNFSRESVESPEQKGLTYHRIVEAFRFAYAKRTLLGDPKFVDVTEVVRNMTSEFF  
 AAQLRAQISDDTTHPISYKPEFYTPDDGGTAHL SVVAEDGSAVSATSTINLYFGSKVRSVPVSGILFNNE  
 MDDFSSPSITNEFGVPPSPANFIQPGKQPLSSMCPTIMVGQDQVQVMVGAAGGTQITTALAIINLW  
 FGYDVKRAVEEPRLNQLLPNVTTVERNIDQAVTAALETRHHHTQIASTFIQVAVVQAVVRTAGGWAAASDS  
 RKGGEPAFY

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_013430

**ORF Size:** 1707 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\\_013430.2](#), [NP\\_038347.2](#)

**RefSeq Size:** 2381 bp

**RefSeq ORF:** 1710 bp

**Locus ID:** 2678

**UniProt ID:** [P19440](#)

**Cytogenetics:** 22q11.23

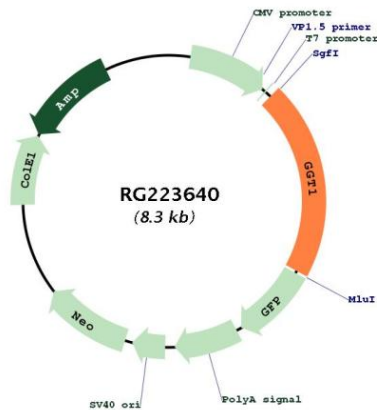
**Domains:** G\_glu\_transpept

**Protein Families:** Protease, Transmembrane

**Protein Pathways:** Arachidonic acid metabolism, Cyanoamino acid metabolism, Glutathione metabolism, Metabolic pathways, Selenoamino acid metabolism, Taurine and hypotaurine metabolism

**Gene Summary:** The enzyme encoded by this gene is a type I gamma-glutamyltransferase that catalyzes the transfer of the glutamyl moiety of glutathione to a variety of amino acids and dipeptide acceptors. The enzyme is composed of a heavy chain and a light chain, which are derived from a single precursor protein. It is expressed in tissues involved in absorption and secretion and may contribute to the etiology of diabetes and other metabolic disorders. Multiple alternatively spliced variants have been identified. There are a number of related genes present on chromosomes 20 and 22, and putative pseudogenes for this gene on chromosomes 2, 13, and 22. [provided by RefSeq, Jan 2014]

**Product images:**



Circular map for RG223640