

## Product datasheet for **RG216206**

### Microsomal Glutathione S transferase 1 (MGST1) (NM\_145792) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Microsomal Glutathione S transferase 1 (MGST1) (NM\_145792) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** MGST1  
**Synonyms:** GST12; MGST; MGST-I  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG216206 representing NM\_145792  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGTTGACCTCACCCAGGTAATGGATGATGAAGTATTCATGGCTTTTGCATCCTATGCAACAATTATTC  
 TTTCAAAAATGATGCTTATGAGTACTGCAACTGCATTCTATAGATTGACAAGAAAGGTTTTTGCCAAATCC  
 AGAAGACTGTGTAGCATTGGCAAAGGAGAAAAATGCCAAGAAGTATCTTCGAACAGATGACAGAGTAGAA  
 CGTGTACGCAGAGCCACCTGAATGACCTTAAAAATATTATTCATTTCTTGAATTGGCCTCCTGTATT  
 CCTTGAGTGGTCCCGACCCCTACAGCCATCCTGCACCTCAGACTATTTGTCGGAGCACGGATCTACCA  
 CACCATTGCATATTTGACACCCCTCCCCAGCCAAATAGAGCTTTGAGTTTTTTGTTGGATATGGAGTT  
 ACTCTTCCATGGCTTACAGTTGCTGAAAAGTAAATTGTACCTG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG216206 representing NM\_145792  
 Red=Cloning site Green=Tags(s)

MVDLTQVMDEVFMAFASYATIILSKMMLMSTATAFYRLTRKVFANPEDCVAFGKGENAKKYLRTDDRVE  
 RYRRAHLNDLENIIPFLGIGLLYSLSGPDPSTAILHFRLFVGARIYHTIAYLTPLPQPNRALSFFVGYGV  
 TLSMAYRLLKSKLYL

**TRTRPLE** - GFP Tag - V

**Restriction Sites:** SgfI-MluI

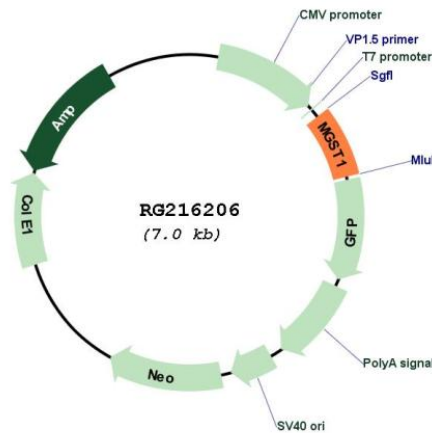


[View online »](#)

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:** NM\_145792

**ORF Size:** 465 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.

|                               |   |
|-------------------------------|---|
| <b>Components:</b>            | 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>RefSeq:</b>                | <u>NM_145792.2</u>  |
| <b>RefSeq Size:</b>           | 909 bp  |
| <b>RefSeq ORF:</b>            | 468 bp  |
| <b>Locus ID:</b>              | 4257  |
| <b>UniProt ID:</b>            | <u>P10620</u>   |
| <b>Cytogenetics:</b>          | 12p12.3   |
| <b>Domains:</b>               | MAPEG   |
| <b>Protein Families:</b>      | Druggable Genome, Transmembrane   |
| <b>Protein Pathways:</b>      | Drug metabolism - cytochrome P450, Glutathione metabolism, Metabolism of xenobiotics by cytochrome P450   |
| <b>Gene Summary:</b>          | The MAPEG (Membrane Associated Proteins in Eicosanoid and Glutathione metabolism) family consists of six human proteins, two of which are involved in the production of leukotrienes and prostaglandin E, important mediators of inflammation. Other family members, demonstrating glutathione S-transferase and peroxidase activities, are involved in cellular defense against toxic, carcinogenic, and pharmacologically active electrophilic compounds. This gene encodes a protein that catalyzes the conjugation of glutathione to electrophiles and the reduction of lipid hydroperoxides. This protein is localized to the endoplasmic reticulum and outer mitochondrial membrane where it is thought to protect these membranes from oxidative stress. Several transcript variants, some non-protein coding and some protein coding, have been found for this gene. [provided by RefSeq, May 2012] |