

## Product datasheet for **RG208750**

### Glutathione S Transferase alpha 1 (GSTA1) (NM\_145740) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Glutathione S Transferase alpha 1 (GSTA1) (NM_145740) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Glutathione S Transferase alpha 1
Synonyms:	GST-epsilon; GST2; GSTA1-1; GTH1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG208750 representing NM_145740 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCAGAGAAGCCCAAGCTCCACTACTTCAATGCACGGGGCAGAATGGAGTCCACCCGGTGGCTCCTGG  
CTGCAGCTGGAGTAGAGTTTGAAGAGAAATTTATAAAATCTGCAGAAGATTTGGACAAGTTAAGAAATGA  
TGGATATTTGATGTTCCAGCAAGTGCCAATGGTTGAGATTGATGGGATGAAGCTGGTGCAGACCAGAGCC  
ATTCTCAACTACATTGCCAGCAAATACAACCTCTATGGGAAAGACATAAAGGAGAGAGCCCTGATTGATA  
TGTATATAGAAGGTATAGCAGATTTGGGTGAAATGATCCTCCTTCTGCCGTATGTCCACCTGAGGAAAA  
AGATGCCAAGCTTGCCTTGATCAAAGAGAAAAATAAAAAATCGCTACTTCCCTGCCTTTGAAAAAGTCTTA  
AAGAGCCATGGACAAGACTACCTTGTGGCAACAAGCTGAGCCGGGCTGACATTCATCTGGTGGAACTTC  
TCTACTACGTCGAGGAGCTTGACTCCAGTCTTATCTCCAGCTTCCCTCTGCTGAAGGCCCTGAAAACCGAG  
AATCAGCAACCTGCCACAGTGAAGAAGTTTCTACAGCCTGGCAGCCCAAGGAAGCTCCCATGGATGAG  
AAATCTTTAGAAGAAGCAAGGAAGATTTTCAGGTTT

**ACGCGT**ACGCGGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG208750 representing NM\_145740  
 Red=Cloning site Green=Tags(s)

MAEKPKLHYFNARGRMESTRWLLAAAGVEFEKFIKSAEDLDKLRNDGYLMFQQVPMVEIDGMKLVQTRA  
 ILNYIASKYNLYGKDIKERALIDMYIEGIADLGEMILLPVCPEEKDAKLALIKEKIKNRYFPAFEKVL  
 KSHGQDYLVGKLSRADIHLVELLYVEELDSSLSISSFPLLKALKTRISNLPTVKKFLQPGSPRKPPMDE  
 KSLEEARKIFRF

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_145740

**ORF Size:** 666 bp

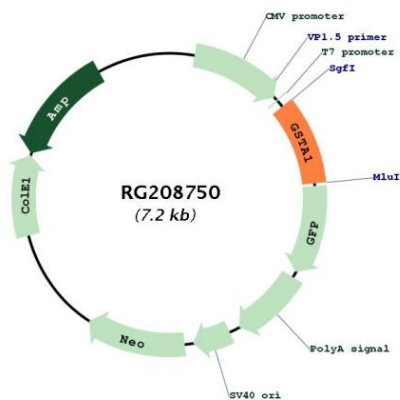
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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>RefSeq:</b>	<a href="#">NM_145740.5</a>
<b>RefSeq Size:</b>	1046 bp
<b>RefSeq ORF:</b>	669 bp
<b>Locus ID:</b>	2938
<b>UniProt ID:</b>	<a href="#">P08263</a>
<b>Cytogenetics:</b>	6p12.2
<b>Domains:</b>	GST_N, GST_C
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Drug metabolism - cytochrome P450, Glutathione metabolism, Metabolism of xenobiotics by cytochrome P450
<b>Gene Summary:</b>	<p>This gene encodes a member of a family of enzymes that function to add glutathione to target electrophilic compounds, including carcinogens, therapeutic drugs, environmental toxins, and products of oxidative stress. This action is an important step in detoxification of these compounds. This subfamily of enzymes has a particular role in protecting cells from reactive oxygen species and the products of peroxidation. Polymorphisms in this gene influence the ability of individuals to metabolize different drugs. This gene is located in a cluster of similar genes and pseudogenes on chromosome 6. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jan 2016]</p>

Product images:



Circular map for RG208750