

## Product datasheet for **SC119838**

### **GSTM1 (NM\_000561) Human Untagged Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	GSTM1 (NM_000561) Human Untagged Clone
Tag:	Tag Free
Symbol:	GSTM1
Synonyms:	GST1; GSTM1-1; GSTM1a-1a; GSTM1b-1b; GTH4; GTM1; H-B; MU; MU-1
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_000561, the custom clone sequence may differ by one or more nucleotides

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ATGCCCATGATACTGGGGTACTGGGACATCCGCGGGCTGGCCACGCCATCCGCCTGCTCCTGGAATACA  
CAGACTCAAGCTATGAGGAAAAGAAGTACACGATGGGGGACGCTCCTGATTATGACAGAAGCCAGTGGCT  
GAATGAAAAATTCAAGCTGGGCTGGACTTTCCCAATCTGCCCTACTTGATTGATGGGGCTCACAAGATC  
ACCCAGAGCAACGCCATCTTGTGCTACATTGCCCGCAAGCACAACCTGTGTGGGGAGACAGAAGAGGAGA  
AGATTCGTGTGGACATTTGGAGAACCAGACCATGGACAACCATATGCAGCTGGGCATGATCTGCTACAA  
TCCAGAATTTGAGAACTGAAGCCAAAGTACTTGGAGAACTCCCTGAAAAGCTAAAGCTCTACTCAGAG  
TTTCTGGGGAAGCGGCCATGGTTTGCAGGAAACAAGATCACTTTTGTAGATTTTCTCGTCTATGATGTCC  
TTGACCTCCACCGTATATTTGAGCCAAGTGCTTGGACGCCTTCCCAAATCTGAAGGACTCATCTCCCG  
CTTTGAGGGCTTGAGAAGATCTCTGCCTACATGAAGTCCAGCCGCTTCTCCCAAGACCTGTGTTCTCA  
AAGATGGCTGTCTGGGGCAACAAGTAG
```



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**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_000561 unedited  
 GCATAATTGTATACGACTCATATAGGCGGCNCGGAATTCGCACGAGGTGCAGAATCCAC  
 AGCAACCAGCACCATGCCCATGACACTGGGGTACTGGAACATCCGCGGGCTGGCCATTC  
 CATCCGCTGCTCCTGGAATACACAGACTCAAGCTACGAGGAAAAGAAGTACACGATGGG  
 GGACGCTCCTGATTATGACAGAAGCCAGTGGCTGAATGAAAAATCAAGCTGGGCCTGGA  
 CTTTCCAATCTGCCCTACTTGATTGATGGGACTCACAAAGATCACCCAGAGCAACGCCAT  
 CCTGGGTACATTGCCCGCAAGCACAACTGTGCGGGGAATCAGAAAAGGAGCAGATTCCG  
 CGAAGACATTTTGAGAAACCAGTTTATGGACAGCCGTATGCAGCTGGCCAAACTCTGCTA  
 TGACCCAGATTTTGAGAACTGAAACCAGAATACCTGCAGGCACTCCCTGAAATGCTGAA  
 GCTCTACTCACAGTTTCTGGGAAGCAGCCATGGTTTCTTGGGGACAAGATCACCTTTGT  
 GGATTTTACGCTTATGATGTCTTGAGAGAAACCAAGTATTTGAGCCAGCTGCCTGGA  
 TGCCTTCCCAAACCTGAAGGACTTCATCTCCCGATTTGAGGGCTTGAGAAAGATCTCTGC  
 CTACATGAAGTCCAGCCGCTTCTCCAGACCTGTGTTACAAAAGATGGCTGTCTGGGGC  
 AACAGTANGGCCCTGAAGCCAGGAGGTGGGAGTGAGGAGCCATACTCAGCCTGCTGC  
 CCCAGCTGTGCAGCGCANCTGGACTCTGCATCCCAGCACCTGCCTNCTCGNTCCTTTCTN  
 CTGTTATTCCCATCTTACTCCCAAGACTCATGTNCCCTTACTCCCCTAAACCCTGTC  
 CATGCAGCCCTTTGAAGCTCGCTACCACT

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_000561 unedited  
 CTTTCTTCCATCAGTTAGCCTAAGGCAGGACCATGCTGCAGGAGCAGGGCCTGTAACCA  
 GTCAATGCTGCTCCTTCATGCAACACGGGGACAGCTCGGGGCTGAGCTCCACAGGCGAGG  
 GGCCAGGCAGGCCCTTTAAAGCAGACACAACCACTAACAGGAAGGAAGGTGAGGCTGGCT  
 TTAGTGACAGGGAAGGGTAAATGATGGGAGGGGATGTTACGAAGGATAGTGGGTAGCTGAG  
 GCTTCAAAGGGCCTGCATGGGACAGGGTTTAGGGGAGTGAAGAGGGACAATGAAGTCT  
 TGGGAGTAAAGATGGGAATAAACAGGAGAAAGGAACGAGGAGGCAGGTGCTGGGATGCAG  
 AGTCCAGCTGCGCTGCACAGCCTGGGCAGCAGGCTGAGTATGGGCTCCTCACTCCCACCT  
 CCTGGCCTTCAAGGCCCTACTTGTGGCCAGACAGCCATCTTTGTGAACACAGGCTTTG  
 GGAGGAAGCGGCTGGACTTCATGTAGGCAGAGATCTTCTCAAGCCCTCAAATCGGGAGA  
 TGAAGTCTTCAGGTTTGGGAAGGCATCCAGGCAGCTGGGCTCAAATACTGGTTTCTCT  
 CAAGGACATCATAAGCGATGAAATCCACAAAGGTGATCTTGTCCNCAAGAAACCATGGCN  
 TGCTTCCCAGAACTGTGAGTAGAGCTTCAGCATTTAAGGGAGTGCCTGCAGTATTCT  
 GGTTTTCAGTTCTCAAAATCTGGTATAGCAGAGTTTGCCAGCTGCATACGCTGTCATAAC  
 TGTTTCTCAAATGTCTCGGATCTGCNTCTTTCTGATNCCCGCACAGGTGTGCTTGCGGG  
 CATGTACGAGGATGGCGTGCTTGGGTGATCTGGNAGTCCATCATCAGTAGGGCAATGGG  
 AAGTCCAGCCAGCTTGATTTTCATCANCCTGGCTCTGTATATCAGGACGTCCCATCGGAC  
 TTCTTNTCGTACTGATCTGGATTCAGACAGCGAA

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_000561

**Insert Size:**

1140 bp

**OTI Disclaimer:**

Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

**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_000561.2</a> , <a href="#">NP_000552.2</a>
<b>RefSeq Size:</b>	1161 bp
<b>RefSeq ORF:</b>	657 bp
<b>Locus ID:</b>	2944
<b>UniProt ID:</b>	<a href="#">P09488</a>
<b>Cytogenetics:</b>	1p13.3
<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>Cytosolic and membrane-bound forms of glutathione S-transferase are encoded by two distinct supergene families. At present, eight distinct classes of the soluble cytoplasmic mammalian glutathione S-transferases have been identified: alpha, kappa, mu, omega, pi, sigma, theta and zeta. This gene encodes a glutathione S-transferase that belongs to the mu class. The mu class of enzymes functions in the detoxification of electrophilic compounds, including carcinogens, therapeutic drugs, environmental toxins and products of oxidative stress, by conjugation with glutathione. The genes encoding the mu class of enzymes are organized in a gene cluster on chromosome 1p13.3 and are known to be highly polymorphic. These genetic variations can change an individual's susceptibility to carcinogens and toxins as well as affect the toxicity and efficacy of certain drugs. Null mutations of this class mu gene have been linked with an increase in a number of cancers, likely due to an increased susceptibility to environmental toxins and carcinogens. Multiple protein isoforms are encoded by transcript variants of this gene. [provided by RefSeq, Jul 2008]</p> <p>Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (1).</p>