**OriGene Technologies, Inc.**
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

# Product datasheet for SC319401

## GSTM3 (NM_000849) Human Untagged Clone

### Product data:

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| **Product Type:** | Expression Plasmids |
| **Product Name:** | GSTM3 (NM_000849) Human Untagged Clone |
| **Tag:** | Tag Free |
| **Symbol:** | GSTM3 |
| **Synonyms:** | GST5; GSTB; GSTM3-3; GTM3 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-AC (PS100020) |
| **E. coli Selection:** | Ampicillin (100 ug/mL) |
| **Fully Sequenced ORF:** | >OriGene sequence for NM_000849.3<br>CGGAAGCCCGTCACCATGTCGTGCGAGTCGTCTATGGTTCTCGGGTACTGGGATATTCGT<br>GGGCTGGCGCACGCCATCCGCCTGCTCCTGGAGTTCACGGATACCTCTTATGAGGAGAAA<br>CGGTACACGTGCGGGGAAGCTCCTGACTATGATCGAAGCCAATGGCTGGATGTGAAATTC<br>AAGCTAGACCTGGACTTTCCTAATCTGCCCTACCTCCTGGATGGGAAGAACAAGATCACC<br>CAGAGCAATGCCATCTTGCGCTACATCGCTCGCAAGCACAACATGTGTGGTGAGACTGAA<br>GAAGAAAAGATTCGAGTGGACATCATAGAGAACCAAGTAATGGATTTCCGCACACAACTG<br>ATAAGGCTCTGTTACAGCTCTGACCACGAAAAACTGAAGCCTCAGTACTTGGAAGAGCTA<br>CCTGGACAACTGAAACAATTCTCCATGTTTCTGGGGAAATTCTCATGGTTTGCCGGGGAA<br>AAGCTCACCTTTGTGGATTTTCTCACCTATGATATCTTGGATCAGAACCGTATATTTGAC<br>CCCAAGTGCCTGGATGAGTTCCCAAACCTGAAGGCTTTCATGTGCCGTTTTGAGGCTTTG<br>GAGAAAATCGCTGCCTACTTACAGTCTGATCAGTTCTGCAAGATGCCCATCAACAACAAG<br>ATGGCCCAGTGGGGCAACAAGCCTGTATGCTGAGCAGGAGGCAGACTTGCAGAGCTTGTT<br>TTGTTTCATCCTGTCCGTAAGGGGTCAGCGCTCTTGCTTTGCTCTTTTCAATGAATAGCA<br>CTTATGTTACTGGTGTCCAGCTGAGTTTCTCTTGGGTATAAAGGCTAAAAGGGAAAAAGG<br>ATATGTGGAGAATCATCAAGATATGAATTGAATCGCTGCGATACTGGCATTTCCCTACTC<br>CCCAACTGAGTTCAAGGGCTGTAGGTTCATGCCCAAGCCCTGAGAGTGGGTACTAGAAAA<br>AACGAGATTGCACAGTTGGAGAGAGCAGGTGTGTTAAATGGGACTGGAGTCCCTGTGAAG<br>ACTGGGTGAGGATAACACAAGTAAAACTGTGGTACTGATGGACTTAACCGGAGTTCGGAA<br>ACCGTCCTGTGTACACATGGGAGTTTAGTGTGATAAAGGCAGTATTTCAGACTGGTGGGC<br>TAGCCAATAGAGTTGGGACAATTGCTTACTCATTAAAAATAATAGAGCCCCACTTGACAC<br>TATTCACTAAAATTAATCTGGAATTTAAGGCCCAACATTAAACACAAAGCTGTTGAAATA<br>AAAAAAAAAAAAAAAAA |
| **Restriction Sites:** | Please inquire |
| **ACCN:** | NM_000849 |

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| **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). |
| **OTI Annotation:** | This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA. |
| **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.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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_000849.3, NP_000840.2 |
| **RefSeq Size:** | 3948 bp |
| **RefSeq ORF:** | 678 bp |
| **Locus ID:** | 2947 |
| **UniProt ID:** | P21266 |
| **Cytogenetics:** | 1p13.3 |
| **Domains:** | GST_N, GST_C |
| **Protein Pathways:** | Drug metabolism - cytochrome P450, Glutathione metabolism, Metabolism of xenobiotics by cytochrome P450 |

**Gene Summary:** 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. Mutations of this class mu gene have been linked with a slight increase in a number of cancers, likely due to exposure with environmental toxins. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Nov 2008]
Transcript Variant: This variant (1) represents the longer transcript.