

## Active Recombinant Human GSTM3 Protein (1-225aa), N-His tagged

Cat. No. GSTM3-12H    Lot. No. (See product label)

### SPECIFICATION

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| Product Overview | Recombinant human GSTM3 protein (1-225aa), fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Species          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Source           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| ProteinLength    | 1-225aa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Description      | <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. 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.</p> |

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|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Form</b>           | Liquid                                                                                                                                                                                                                                                                |
| <b>Bio-activity</b>   | > 15,000 pmol/min/μg, and is defined as the amount of enzyme that conjugate 1.0 μmole of 1-chloro-2,4-dinitrobenzene (CDNB) with reduced glutathione per minute at pH 6.5 at 25 centigrade.                                                                           |
| <b>Molecular Mass</b> | 29.1 kDa (249aa) confirmed by MALDI-TOF                                                                                                                                                                                                                               |
| <b>AA Sequence</b>    | MGSSHHHHHSSGLVPRGSHMGSHMSCSSMVLGYWDIRGLAHAIRLLLEFTDTS<br>YEEKRYTCGEAPDYDRSQWLDVKFKLDLDFPNLPYLLDGKNKITQSNAILRYIARKH<br>NMCGETEEEEKIRVDIENQVMDFRTQLIRLCYSSDHEKLPQYLEELPGQLKQFSMFL<br>GKFSWFAGEKLTFFVDFTYDILDQNRIFDPKCLDEFPNLKAFMCRFEALEKIAAYLQS<br>DQFCKMPINNMAQWGNKPVC |
| <b>Purity</b>         | > 95% by SDS-PAGE                                                                                                                                                                                                                                                     |
| <b>Applications</b>   | SDS-PAGE, Enzyme Activity                                                                                                                                                                                                                                             |
| <b>Storage</b>        | Can be stored at +2 to +8 centigrade for 1 week. For long term storage, aliquot and store at -20 to -80 centigrade. Avoid repeated freezing and thawing cycles.                                                                                                       |
| <b>Concentration</b>  | 1 mg/mL (determined by Bradford assay)                                                                                                                                                                                                                                |
| <b>Storage Buffer</b> | 20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 10% glycerol, 0.1M NaCl                                                                                                                                                                                             |

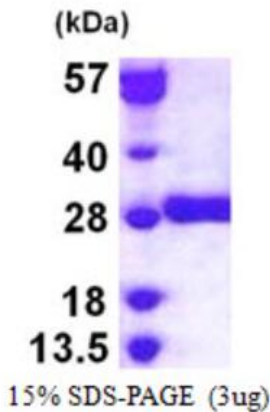
## GENE INFORMATION

|                        |                                                                       |
|------------------------|-----------------------------------------------------------------------|
| <b>Gene Name</b>       | GSTM3 glutathione S-transferase mu 3 (brain) [ Homo sapiens (human) ] |
| <b>Official Symbol</b> | GSTM3                                                                 |

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|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Synonyms</b>       | GSTM3; glutathione S-transferase mu 3 (brain); glutathione S transferase M3 (brain); glutathione S-transferase Mu 3; GST5; hGSTM3-3; brain GST; GST class-mu 3; glutathione S-transferase, Mu-3; glutathione S-aryltransferase M3; glutathione S-alkyltransferase M3; glutathione S-aralkyltransferase M3; S-(hydroxyalkyl)glutathione lyase M3; glutathione S-transferase M3 (brain); brain type mu-glutathione S-transferase; GSTB; GTM3; GSTM3-3; MGC3310; MGC3704; |
| <b>Gene ID</b>        | 2947                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>mRNA Refseq</b>    | NM_000849                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Protein Refseq</b> | NP_000840                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>MIM</b>            | 138390                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>UniProt ID</b>     | P21266                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>SDS-PAGE</b>       |  <p>3 µg by SDS-PAGE under reducing condition and visualized by coomassie blue</p>                                                                                                                                                                                                                                                                                                 |

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