

## Active Recombinant Human GSTM1 Protein

**Cat. No.** GSTM1-105H    **Lot. No.** (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant human GSTM1 protein without tag was expressed in E. coli.
<b>Species</b>	Human
<b>Source</b>	E.coli
<b>Description</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.</p>
<b>Bio-activity</b>	<p>GST Activity Data(Unless otherwise stated, all assays are carried out at 37 centigrade in 100 mM potassium phosphate buffer (pH 6.5) containing 1 mM reduced glutathione, at a protein concentration of 0.2 µg/ml, using a continuous</p>

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spectrophotometric procedure)  
Substrate: 1-chloro-2,4-dinitrobenzene (CDNB)  
Vmax: 172  $\mu$ mol/min/mg protein  
Km (CDNB): 0.83 mM(Km for reduced glutathione, based on average batch data, is approximately 0.2 mM)

**Usage** For laboratory (research) purposes only

**Storage** Store at -80 centigrade. Avoid frequent temperature changes. Thaw on ice.

**Concentration** Protein Concentration: 10 mg/ml

**Storage Buffer** 10 mM sodium phosphate (pH 7.4), 140 mM NaCl

## GENE INFORMATION

**Gene Name** GSTM1 glutathione S-transferase mu 1 [ Homo sapiens (human) ]

**Official Symbol** GSTM1

**Synonyms** GSTM1; glutathione S-transferase mu 1; MU; H-B; GST1; GTH4; GTM1; MU-1; GSTM1-1; GSTM1a-1a; GSTM1b-1b; glutathione S-transferase Mu 1; GST HB subunit 4; GST class-mu 1; HB subunit 4; S-(hydroxyalkyl)glutathione lyase; glutathione S-alkyltransferase; glutathione S-aralkyltransferase; glutathione S-aryltransferase; glutathione S-transferase M1

**Gene ID** 2944

**mRNA Refseq** NM\_000561

**Protein Refseq** NP\_000552

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<b>MIM</b>	138350
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<b>UniProt ID</b>	P09488
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