

## Product datasheet for **RC202097**

### **GSTM4 (NM\_000850) Human Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	GSTM4 (NM_000850) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GSTM4
Synonyms:	GSTM4-4; GTM4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC202097 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCCATGACACTGGGGTACTGGGACATCCGCGGGCTGGCCACGCCATCCGCCTGCTCCTGGAATACA  
CAGACTCAAGCTACGAGGAAAAGAAGTATACGATGGGGGACGCTCCTGACTATGACAGAAGCCAGTGGCT  
GAATGAAAATTCAAGCTGGCCTGGACTTTCCCAATCTGCCCTACTTGATTGATGGGGCTCACAAGATC  
ACCCAGAGCAACCCATCCTGTGCTACATTGCCGCAAGCACAACCTGTGTGGGAGACAGAAGAGGAGA  
AGATTCGTGTGGACATTTGGAGAACCAGGCTATGGACGCTCTCCAATCAGCTGGCCAGAGTCTGCTACAG  
CCCTGACTTTGAGAACTGAAGCCAGAATACTTGAGGAACTTCCTACAATGATGCAGCACTTCTCACAG  
TTCTGGGGAAGAGGCCATGGTTTGTGGAGACAAGATCACCTTTGTAGATTTCTCTGCCTATGATGTCC  
TTGACCTCCACCGTATATTTGAGCCCACTGCTTGAGCGCTTCCCAAATCTGAAGGACTTCATCTCCC  
CTTTGAGGGCTTGAGAAGATCTCTGCCTACATGAAGTCCAGCGCTTCTCCAAAACCTCTGTACACA  
AGGGTGGCTGTCTGGGCAACAAG

**ACGCGT**ACGCGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC202097 protein sequence  
Red=Cloning site Green=Tags(s)

MSMTLGYWDIRGLAHAIRLLLEYPDSSYEEKKYTMGDAPDYDRSQWLNEKFKLGLDFPNLPYLIDGAHKI  
 TQSNAILCYIARKHNLCGETEEEEIRVDILENQAMDVSNQLARVCYSPDFEKLKPEYLEELPTMMQHFSQ  
 FLGKRPFVGDKITFVDFLAYDVLDLHRIFEPNCLDAFPNLKDFISRFEGLKISAYMKSSRFLPKPLYT  
 RVAVWGNK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6540\\_b03.zip](https://cdn.origene.com/chromatograms/mk6540_b03.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_000850

**ORF Size:** 654 bp

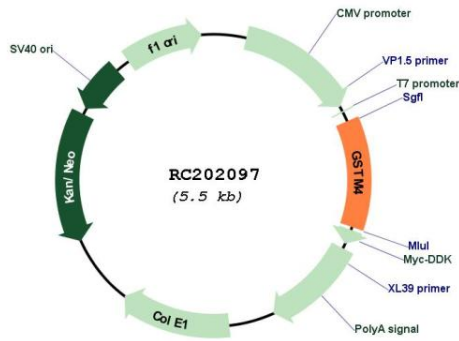
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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.

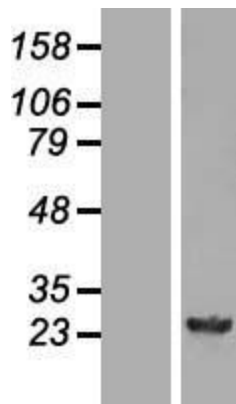
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<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_000850.3</a> , <a href="#">NP_000841.1</a>
<b>RefSeq Size:</b>	1441 bp
<b>RefSeq ORF:</b>	657 bp
<b>Locus ID:</b>	2948
<b>UniProt ID:</b>	<a href="#">Q03013</a>
<b>Cytogenetics:</b>	1p13.3
<b>Domains:</b>	GST_N, GST_C
<b>Protein Pathways:</b>	Drug metabolism - cytochrome P450, Glutathione metabolism, Metabolism of xenobiotics by cytochrome P450
<b>MW:</b>	25.6 kDa
<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. Diversification of these genes has occurred in regions encoding substrate-binding domains, as well as in tissue expression patterns, to accommodate an increasing number of foreign compounds. Multiple transcript variants, each encoding a distinct protein isoform, have been identified. [provided by RefSeq, Jul 2008]</p>

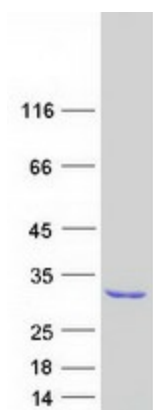
Product images:



Circular map for RC202097



Western blot validation of overexpression lysate (Cat# [LY424492]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202097 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GSTM4 protein (Cat# [TP302097]). The protein was produced from HEK293T cells transfected with GSTM4 cDNA clone (Cat# RC202097) using MegaTran 2.0 (Cat# [TT210002]).