

# Recombinant Human Glutathione S-transferase Alpha 4, His-tagged

**Cat. No.** GSTA4-1956H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <b>Product Overview</b> | Recombinanthuman GSTA4 protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Description</b>      | GSTA4 belongs to the GST superfamily. This enzyme is involved in cellular defense against toxic, carcinogenic, and pharmacologically active electrophilic compounds. GSTA4 shows very high activity with reactive carbonyl compounds such as alk-2-enals. GSTA4 is highly effective in catalyzing the conjugate addition of reduced glutathione to 4-hydroxynonenal, an important product of peroxidative degradation of arachidonic acid and a commonly used biomarker for oxidative damage in tissue. This enzyme is expressed at a high level in brain, placenta, and skeletal muscle and much lower in lung and liver. |
| <b>Form</b>             | Liquid. In 20 mM Tris-HCl buffer, pH 8.0, 20% glycerol, 2mM DTT, 100mM NaCl.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Molecular Weight</b> | 28.3 kDa (246aa) confirmed by MALDI-TOF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Purity</b>           | > 95% by SDS-PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Concentration</b>    | 1 mg/ml (determined by Bradford assay)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Sequences of aminoacids</b> | MGSSHHHHHSSGLVPRGSH MGSMAARPK LHYPNGRGRM ESRWVLA<br>GVEFDEEFLE TKEQLYKLQDGNHLLFQQVP MVEIDGMKLV QTRSILHYIA<br>DKHNLFQGNL KERTLIDMYV EGTDLLELL IMHPFLKPDDQQKEVVNMAQ<br>KAIIRYFPVF EKILRGHGQS FLVGNQLSLA DVILLQTLA LEEKIPNLS<br>AFPFLQEYTVKLSNIPTIKR FLEPGSKKKP PPDEIYVRTV YNIFRP |                                                                                                                                                                                      |
| <b>Storage</b>                 | Can bestored at +4°C short term (1-2 weeks). For long term storage, aliquot andstore at -20°C or -70°C. Avoid repeated freezing and thawing cycles.                                                                                                                            |                                                                                                                                                                                      |
| <b>OfficialSymbol</b>          | GSTA4                                                                                                                                                                                                                                                                          |                                                                                                                                                                                      |
| <b>nullValue_other</b>         | Pathway                                                                                                                                                                                                                                                                        | Biological oxidations; Drugmetabolism-cytochrome P450; Glutathione conjugation; Glutathione metabolism;Metabolism; Metabolism of xenobiotics by cytochrome P450; Phase IIconjugation |

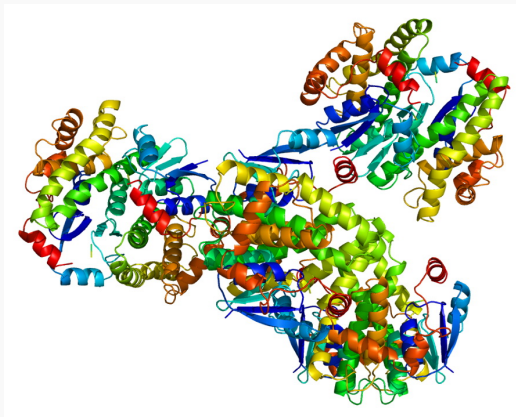
## GENE INFORMATION

|                       |                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>      | <a href="#">GSTA4</a> glutathione S-transferase alpha 4 [ Homo sapiens ]                                                                                                                                                                                                                                                                                                                                |
| <b>Synonyms</b>       | GSTA4; glutathioneS-transferase alpha 4; GTA4; GSTA4-4; OTTHUMP00000016624; OTTHUMP00000016625;OTTHUMP00000016626; OTTHUMP00000016627; glutathione S-transferase A4; GlutathioneS-transferase A4-4; GST class-alpha member 4; EC 2.5.1.18; DKFZp686D21185; glutathioneS-alkyltransferase A4; glutathione S-aralkyltransferase A4; glutathioneS-aryltransferase A4; S-(hydroxyalkyl)glutathione lyase A4 |
| <b>Gene ID</b>        | <a href="#">2941</a>                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>mRNA Refseq</b>    | <a href="#">NM_004177</a>                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Protein Refseq</b> | <a href="#">NP_004168</a>                                                                                                                                                                                                                                                                                                                                                                               |

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|------------------------------------|-------------------------------------------------------------------------------------|
| <b>MIM</b>                         | 605450                                                                              |
| <b>UniProt ID</b>                  | Q13277                                                                              |
| <b>Chromosome Location</b>         | 6p12.1                                                                              |
| <b>PDBrendering based on 1gul.</b> |  |