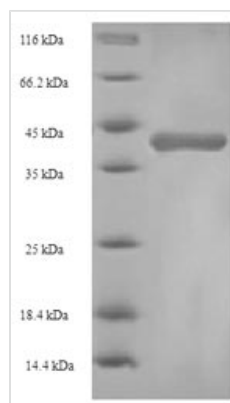




# Recombinant Rat Glutathione S-transferase alpha-1 (Gsta1)

<b>Product Code</b>	CSB-EP009970RA
<b>Relevance</b>	Conjugation of reduced glutathione to a wide number of exogenous and endogenous hydrophobic electrophiles.
<b>Abbreviation</b>	Recombinant Rat Gsta1 protein
<b>Storage</b>	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
<b>Uniprot No.</b>	P00502
<b>Alias</b>	GST 1-1;GST 1a-1a;GST A1-1;GST B;Glutathione S-transferase Ya-1 ;GST Ya1;Ligandin
<b>Product Type</b>	Recombinant Protein
<b>Immunogen Species</b>	Rattus norvegicus (Rat)
<b>Purity</b>	Greater than 90% as determined by SDS-PAGE.
<b>Sequence</b>	SGKPVLYHYFNARGRMCEIRWLLAAAGVEFDEKFIQSPEDLEKLKKDGNLMFDQ VPMVEIDGMKLAQTRAILNYIATKYDLYGKDMKERALIDMYTEGILDLTIMMQL VICPPDQKEAKTALAKDRITKNRYLPFAFEKVLKSHGQDYLVGNRLTRVDIHLLEL LLYVEEFDASLLTSFPLLKAFKSRISLPLNVKKFLQPGSQRKLPVDAKQIEEARK IFKF
<b>Research Area</b>	Others
<b>Source</b>	E.coli
<b>Target Names</b>	Gsta1
<b>Protein Names</b>	Recommended name: Glutathione S-transferase alpha-1 EC= 2.5.1.18 Alternative name(s): GST 1-1 GST 1a-1a GST A1-1 GST B Glutathione S-transferase Ya-1 Short name= GST Ya1 Ligandin
<b>Expression Region</b>	2-222aa
<b>Notes</b>	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
<b>Tag Info</b>	N-terminal 6xHis-SUMO-tagged
<b>Mol. Weight</b>	41.5kDa
<b>Protein Length</b>	Full Length of Mature Protein
<b>Image</b>	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

## Description

This recombinant Rat Gsta1 protein is an E.coli-expressed protein (Full Length of Mature Protein). At the theoretical level, the steps needed for obtaining a recombinant protein are pretty straightforward. Obtain the Gsta1 gene, clone it in an expression vector, transform it into the host of choice, induce it, and then, the protein is ready for purification and characterization. In practice, however, dozens of things can go wrong. Poor growth of the host, inclusion body formation, protein inactivity, and even not obtaining any protein at all are some of the problems often found down the pipeline. So we choose the most suitable strain and vector for this recombinant Gsta1 protein expression and adopt the most optimized expression condition and purification method. Finally, mild condition and subsequent cumbersome protein-refolding procedures ensure this Gsta1 protein is soluble.

Gsta1 is a protein coding gene that encodes Glutathione S-transferase alpha-1. According to some studies, Gsta1 may have the following features. The expression of GSTA1 was increased in PIA. The low levels of GSTA1 and GSTP1 in HGPIN and adenocarcinomas suggest a widespread lack of detoxification activity in these cells, which may be related to the oncogenicity of the prostate. Human GSTA1-1 reduces c-Jun N-terminal kinase signaling and apoptosis in Caco-2 cells. GSTA1 can be detected at low concentrations during the early stages of acute liver injury. GSTA1 is a more sensitive and accurate indicator than ALT. UGT1A1 and GSTA1 are regulated by soda through distinct signaling pathways, and differences in the regulatory mechanisms of UGT1A1 transcription.

## Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

## Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.