



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

<b>Product Code</b>	CSB-MP009970RA
<b>Storage</b>	Store at -20°C, for extended storage, conserve at -20°C or -80°C.
<b>Uniprot No.</b>	P00502
<b>Product Type</b>	Recombinant Protein
<b>Immunogen Species</b>	Rattus norvegicus (Rat)
<b>Purity</b>	>85% (SDS-PAGE)
<b>Sequence</b>	MSGKPVLYHYF NARGRMCEIR WLLAAAGVEF DEKFIQSPED LEKLLKDGNL MFDQVPMVEI DGMKLAQTRA ILNYIATKYD LYGKDMKERA LIDMYTEGIL DLTEMIMQLV ICPPDQKEAK TALAKDRTKN RYLPAFEKVL KSHGQDYLVG NRLTRVDIHL LELLYVEEF DASLLTSFPL LKAFKSRIS LPNVKKFLQP GSQRKLPVDA KQIEEARKIF KF
<b>Source</b>	Mammalian cell
<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>	1-222
<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>	Tag type will be determined during the manufacturing process.
<b>Protein Length</b>	Full length protein
<b>Target Details</b>	Cytosolic and membrane-bound forms of glutathione S-transferase are encoded by two distinct supergene families. These enzymes function in the detoxification of electrophilic compounds, including carcinogens, therapeutic drugs, environmental toxins and products of oxidative stress, by conjugation with glutathione. The genes encoding these enzymes 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 some drugs. 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 belonging to the alpha class. The alpha class genes, located in a cluster mapped to chromosome 6, are the most abundantly expressed glutathione S-transferases in liver. In addition to metabolizing bilirubin and certain anti-cancer drugs in the liver, the alpha class of these enzymes exhibit glutathione peroxidase activity thereby protecting the cells from reactive oxygen species and the products of peroxidation.



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**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.

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**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.