

## GPT Protein, Rat (sf9, His)

|                   |   |
|-------------------|---|
| Cat. No.:         | HY-P75158                                     |
| Synonyms:         | Alanine aminotransferase 1; ALT1; GPT 1; Aat1 |
| Species:          | Rat   |
| Source:           | Sf9 insect cells                              |
| Accession:        | P25409 (M1-S496)                              |
| Gene ID:          | 81670   |
| Molecular Weight: | Approximately 48 kDa                          |

### PROPERTIES

|                     |   |
|---------------------|---|
| Biological Activity | The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.  |
| Appearance          | Lyophilized powder.   |
| Formulation         | Lyophilized from a 0.2 $\mu$ m filtered solution of 50 mM Tris, 100 mM NaCl, pH 8.0, 10% Glycerol, 0.5 mM TCEP. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. |
| Endotoxin Level     | <1 EU/ $\mu$ g, determined by LAL method.   |
| Reconstitution      | It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O.  |
| Storage & Stability | Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.              |
| Shipping            | Room temperature in continental US; may vary elsewhere.   |

### DESCRIPTION

#### Background

The GPT protein, also known as alanine transaminase or ALT, plays a crucial role in cellular nitrogen metabolism by catalyzing the reversible transamination between alanine and 2-oxoglutarate to form pyruvate and glutamate. This enzymatic activity is central to the interconversion of amino acids and is particularly important for the regulation of nitrogen balance within the cell. GPT is actively involved in liver gluconeogenesis, contributing to the synthesis of glucose from precursors transported from skeletal muscles. The reversible transamination reactions mediated by GPT are integral to various metabolic pathways, emphasizing its significance in amino acid metabolism and glucose homeostasis. Understanding the functions of GPT provides insights into the dynamic regulation of nitrogen and carbon flux in cellular metabolism.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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