

## GGT1 Protein, Human (HEK293, His)

<b>Cat. No.:</b>	HY-P700729
<b>Synonyms:</b>	Gamma-glutamyltransferase 1; GGT 1; CD224; GGT; GGT-1; GGTD; D22S672; D22S73; D22S732
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	P19440-1 (P27-Y569)
<b>Gene ID:</b>	2678
<b>Molecular Weight:</b>	55-65 kDa (heavy chain) & 25-30 kDa (light chain)

### PROPERTIES

<b>Biological Activity</b>	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.22 µm filtered solution of PBS, pH 7.4. Normally 8% trehalose is added as protectant before lyophilization.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	<p>The GGT1 protein plays a pivotal role in cellular metabolism by cleaving the gamma-glutamyl bond in various substrates, including extracellular glutathione, glutathione conjugates such as maresin conjugate (13R)-S-glutathionyl-(14S)-hydroxy-(4Z,7Z,9E,11E,16Z,19Z)-docosahexaenoate (MCTR1), and other gamma-glutamyl compounds like leukotriene C4 (LTC4). This enzymatic activity results in the release of free glutamate and the dipeptide cysteinyl-glycine, which can be further hydrolyzed to cysteine and glycine by dipeptidases. Under conditions of elevated dipeptides and certain amino acids, GGT1 can catalyze a transpeptidation reaction, transferring the gamma-glutamyl moiety to an acceptor amino acid and forming a new gamma-glutamyl compound. Beyond its involvement in cysteine and glutathione homeostasis, GGT1 contributes to the conversion of leukotriene LTC4 to LTD4. It is noteworthy that GGT1 appears to be inactive under certain circumstances.</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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