

GGT1 Blocking Peptide (N-term)
Synthetic peptide
Catalog # BP19816a**Specification**

GGT1 Blocking Peptide (N-term) - Product Information

Primary Accession [P19440](#)
Other Accession [A6NGU5](#), [P36268](#), [P07314](#), [P20735](#), [Q60928](#),
[NP_038347.2](#)

GGT1 Blocking Peptide (N-term) - Additional Information

Gene ID 2678

Other Names

Gamma-glutamyltranspeptidase 1, GGT 1, Gamma-glutamyltransferase 1, Glutathione hydrolase 1, Leukotriene-C4 hydrolase, CD224, Gamma-glutamyltranspeptidase 1 heavy chain, Gamma-glutamyltranspeptidase 1 light chain, GGT1, GGT

Target/Specificity

The synthetic peptide sequence is selected from aa 139-152 of HUMAN GGT1

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

GGT1 Blocking Peptide (N-term) - Protein Information

Name GGT1

Synonyms GGT

Function

Cleaves the gamma-glutamyl bond of extracellular glutathione (gamma-Glu-Cys-Gly), glutathione conjugates (such as maresin conjugate (13R)-S-glutathionyl-(14S)-hydroxy-(4Z,7Z,9E,11E,16Z,19Z)- docosahexaenoate, MCTR1) and other gamma-glutamyl compounds (such as leukotriene C4, LTC4) (PubMed:17924658, PubMed:21447318, PubMed:27791009). The metabolism of glutathione by GGT1 releases free glutamate and the dipeptide cysteinyl-glycine, which is hydrolyzed to cysteine and glycine by dipeptidases (PubMed:27791009). In the presence of high concentrations of dipeptides and some amino acids, can also catalyze a transpeptidation reaction, transferring the gamma-glutamyl moiety to an acceptor amino acid to form a new gamma-glutamyl compound (PubMed:17924658, PubMed:7673200, PubMed:7759490, PubMed:8095045, PubMed:8827453, PubMed:21447318). Contributes to cysteine homeostasis, glutathione homeostasis and in the conversion of the leukotriene LTC4 to LTD4.

Cellular Location

Cell membrane; Single-pass type II membrane protein {ECO:0000250|UniProtKB:P07314}

Tissue Location

Detected in fetal and adult kidney and liver, adult pancreas, stomach, intestine, placenta and lung. There are several other tissue-specific forms that arise from alternative promoter usage but that produce the same protein

GGT1 Blocking Peptide (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

GGT1 Blocking Peptide (N-term) - Images

GGT1 Blocking Peptide (N-term) - Background

The enzyme encoded by this gene catalyzes the transfer of the glutamyl moiety of glutathione to a variety of amino acids and dipeptide acceptors. The enzyme is composed of a heavy chain and a light chain, which are derived from a single precursor protein, and is present in tissues involved in absorption and secretion. This enzyme is a member of the gamma-glutamyltransferase protein family, of which many members have not yet been fully characterized and some of which may represent pseudogenes. This gene is classified as type I gamma-glutamyltransferase. Multiple alternatively spliced variants, encoding the same protein, have been identified.

GGT1 Blocking Peptide (N-term) - References

Speliotes, E.K., et al. Hepatology 52(3):904-912(2010)
Ikeda, M., et al. Scand. J. Clin. Lab. Invest. 70(3):171-179(2010)
Fujita, M., et al. Exp. Biol. Med. (Maywood) 235(3):335-341(2010)
Kamatani, Y., et al. Nat. Genet. 42(3):210-215(2010)
Diergaarde, B., et al. Pancreatology 10 (2-3), 194-200 (2010) :