

**GGT1 Polyclonal Antibody**  
**Catalog # AP73449****Specification****GGT1 Polyclonal Antibody - Product Information**

Application	<b>WB, IHC-P</b>
Primary Accession	<a href="#">P19440</a>
Reactivity	<b>Human</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>

**GGT1 Polyclonal Antibody - Additional Information****Gene ID** 2678**Other Names**

GGT1; GGT; Gamma-glutamyltranspeptidase 1; GGT 1; Gamma-glutamyltransferase 1; Glutathione hydrolase 1; Leukotriene-C4 hydrolase; CD224

**Dilution**

WB~~Western Blot: 1/500 - 1/2000. IHC-p: 1:100-300 ELISA: 1/20000. Not yet tested in other applications.

IHC-P~~N/A

**Format**

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

**Storage Conditions**

-20°C

**GGT1 Polyclonal Antibody - 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:<a href="http://www.uniprot.org/citations/17924658" target="\_blank">17924658</a>, PubMed:<a href="http://www.uniprot.org/citations/21447318" target="\_blank">21447318</a>, PubMed:<a href="http://www.uniprot.org/citations/27791009" target="\_blank">27791009</a>). The metabolism of glutathione by GGT1 releases free glutamate and the dipeptide cysteinyl-glycine, which is hydrolyzed to cysteine and glycine by dipeptidases (PubMed:<a href="http://www.uniprot.org/citations/27791009" target="\_blank">27791009</a>). 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:<a href="http://www.uniprot.org/citations/17924658" target="\_blank">17924658</a>, PubMed:<a href="http://www.uniprot.org/citations/21447318" target="\_blank">21447318</a>, PubMed:<a href="http://www.uniprot.org/citations/7673200" target="\_blank">7673200</a>, PubMed:<a href="http://www.uniprot.org/citations/7759490" target="\_blank">7759490</a>, PubMed:<a href="http://www.uniprot.org/citations/8095045" target="\_blank">8095045</a>, PubMed:<a href="http://www.uniprot.org/citations/8827453" target="\_blank">8827453</a>). 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

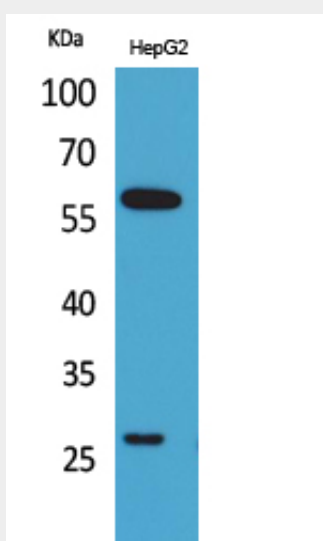
Detected in fetal and adult kidney and liver, adult pancreas, stomach, intestine, placenta and lung. There are several other tissue-specific forms that arise from alternative promoter usage but that produce the same protein

### GGT1 Polyclonal Antibody - Protocols

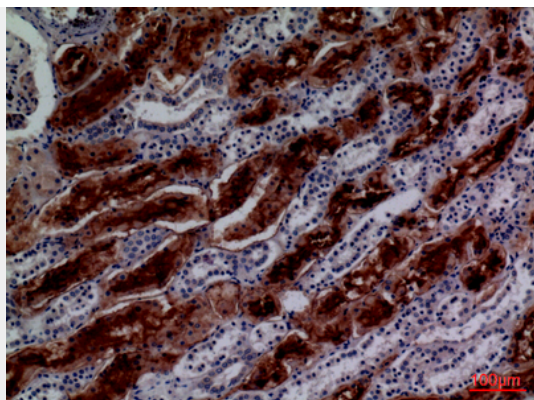
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

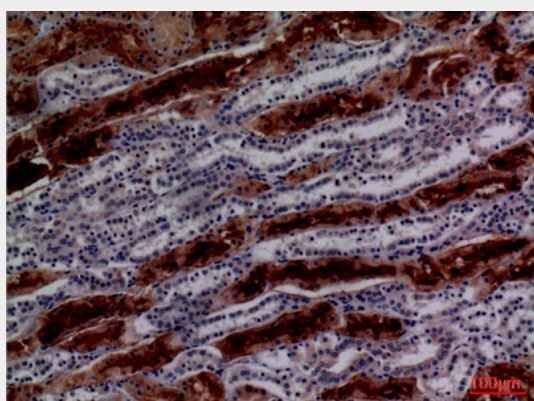
### GGT1 Polyclonal Antibody - Images



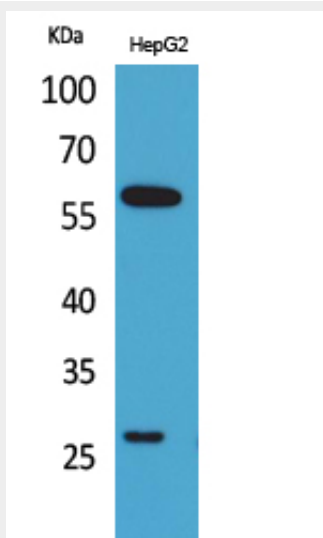
Western Blot analysis of HepG2 cells using GGT1 Polyclonal Antibody.. Secondary antibody was diluted at 1:20000



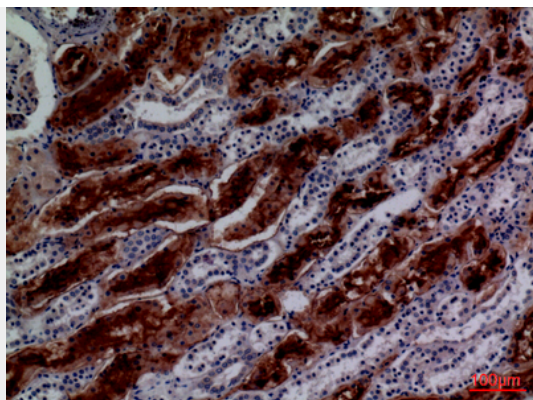
Immunohistochemical analysis of paraffin-embedded human-kidney, antibody was diluted at 1:100



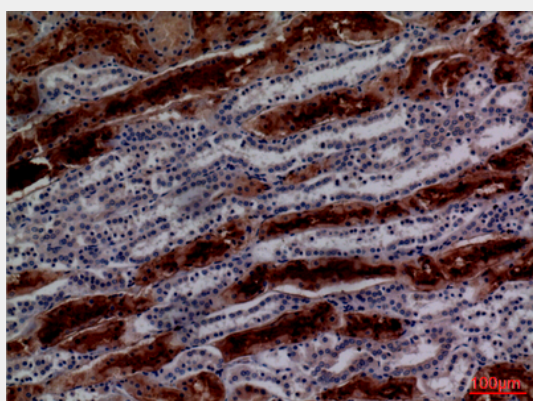
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#### **GGT1 Polyclonal Antibody - Background**

Cleaves the gamma-glutamyl bond of extracellular glutathione (gamma-Glu-Cys-Gly), glutathione conjugates, and other gamma-glutamyl compounds. The metabolism of glutathione releases free glutamate and the dipeptide cysteinyl-glycine, which is hydrolyzed to cysteine and glycine by dipeptidases. 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. Initiates extracellular glutathione (GSH) breakdown, provides cells with a local cysteine supply and contributes to maintain intracellular GSH level. It is part of the cell antioxidant defense mechanism. Isoform 3 seems to be inactive.