Product Name: GGT1 Rabbit Polyclonal Antibody
Catalog #: APRab11431

Summary

Production Name	GGT1 Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	WB,IHC,
Reactivity	Human,Rat,Mouse

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	GGT1
Alternative Names	GGT1; GGT; Gamma-glutamyltranspeptidase 1; GGT 1; Gamma-glutamyltransferase 1; Glutathione hydrolase 1; Leukotriene-C4 hydrolase; CD224
Gene ID	2678.0
SwissProt ID	P19440.The antiserum was produced against synthesized peptide derived from the N-terminal region of human GGT1. AA range:21-70

Application

Dilution Ratio	WB 1:500 - 1:2000 IHC 1:100 - 1:300. ELISA: 1:20000..
Molecular Weight	61kD

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Background

The enzyme encoded by this gene is a type I gamma-glutamyltransferase that 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. It is expressed in tissues involved in absorption and secretion and may contribute to the etiology of diabetes and other metabolic disorders. Multiple alternatively spliced variants have been identified. There are a number of related genes present on chromosomes 20 and 22, and putative pseudogenes for this gene on chromosomes 2, 13, and 22. [provided by RefSeq, Jan 2014],catalytic activity:(5-L-glutamyl)-peptide + an amino acid = peptide + 5-L-glutamyl amino acid.,disease:Defects in GGT1 are a cause of glutathionuria [MIM:231950]; also known as gamma-glutamyltranspeptidase deficiency. It is an autosomal recessive disease.,function:Initiates extracellular glutathione (GSH) breakdown, provides cells with a local cysteine supply and contributes to maintain intracelular GSH level. It is part of the cell antioxidant defense mechanism. Catalyzes the transfer of the glutamyl moiety of glutathione to amino acids and dipeptide acceptors. Alternatively, glutathione can be hydrolyzed to give Cys-Gly and gamma glutamate. Isoform 3 seems to be inactive.,function:Initiates extracellular glutathione (GSH) breakdown; catalyzes the transfer of the glutamyl moiety of glutathione to amino acids and dipeptide acceptors.,miscellaneous:Corresponds to the light chain of other gamma-glutamyltransferase family members.,miscellaneous:Cys-454 was thought to bind the gamma-glutamyl moiety, but mutagenesis of this residue had no effect on activity.,online information:Gamma-glutamyl transpeptidase entry,pathway:Sulfur metabolism; glutathione metabolism.,PTM:N-glycosylated on both chains. Contains hexoses, hexosamines and sialic acid residues. It is not known if the sialic acid residues are present on N-linked or on O-linked glycans.,similarity:Belongs to the gamma-glutamyltransferase family.,subunit:Heterodimer composed of the light and heavy chains. The active site is located in the light chain.,tissue specificity:Detected in fetal and adult kidney and liver, adult pancreas, stomach, intestine, placenta and lung. Isoform 3 is lung-specific. There are several other tissue-specific forms that arise from alternative promoter usage but that produce the same protein.,tissue specificity:Highly expressed in fetal and adult kidney and liver.,

Research Area

Taurine and hypotaurine metabolism;Selenoamino acid metabolism;Cyanoamino acid metabolism;Glutathione metabolism;Arachidonic acid metabolism;

Image Data

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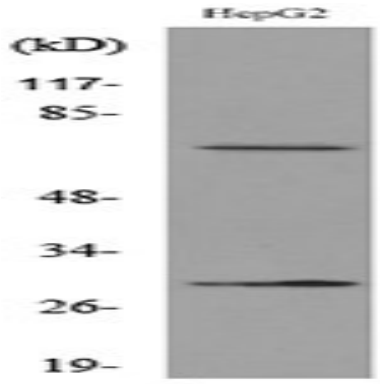
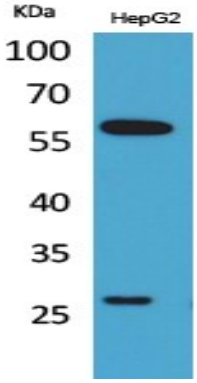
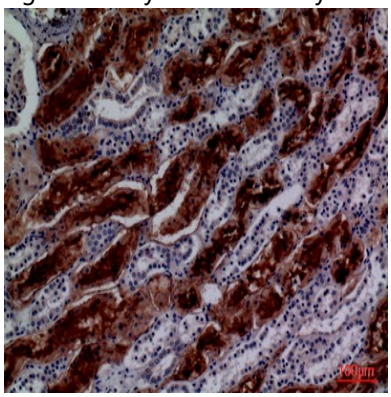


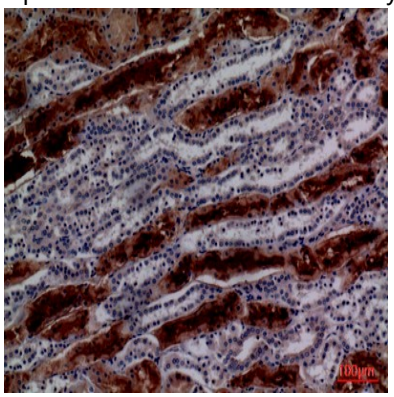
Western blot analysis of lysate from HepG2 cells, using GGT1 Antibody.



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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Note

For research use only.