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GGT1 / GGT Antibody (clone 1F9)

Mouse Monoclonal Antibody
Catalog # ALS14058

Specification

GGT1 / GGT Antibody (clone 1F9) - Product Information

Application	**WB, IHC-P, E, IP**
Primary Accession	P19440
Reactivity	**Human, Mouse**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**61kDa KDa**
Dilution	**WB~~1:1000** **IHC-P~~N/A** **E~~N/A** **IP~~N/A**

GGT1 / GGT Antibody (clone 1F9) - Additional Information

Gene ID 2678

Other Names
Gamma-glutamyltranspeptidase 1, GGT 1, 2.3.2.2, Gamma-glutamyltransferase 1, Glutathione hydrolase 1, 3.4.19.13, Leukotriene-C4 hydrolase, 3.4.19.14, CD224, Gamma-glutamyltranspeptidase 1 heavy chain, Gamma-glutamyltranspeptidase 1 light chain, GGT1, GGT

Target/Specificity
Human GGT1

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions
GGT1 / GGT Antibody (clone 1F9) is for research use only and not for use in diagnostic or therapeutic procedures.

GGT1 / GGT Antibody (clone 1F9) - 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, 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:21447318, PubMed:7673200, PubMed:7759490, PubMed:8095045, PubMed:8827453). 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}

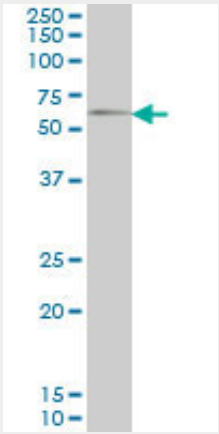
Tissue Location
Detected in fetal and adult kidney and liver, adult pancreas, stomach, intestine, placenta and lung. There are several other tissue-specific forms that arise from alternative promoter usage but that produce the same protein

GGT1 / GGT Antibody (clone 1F9) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

GGT1 / GGT Antibody (clone 1F9) - Images



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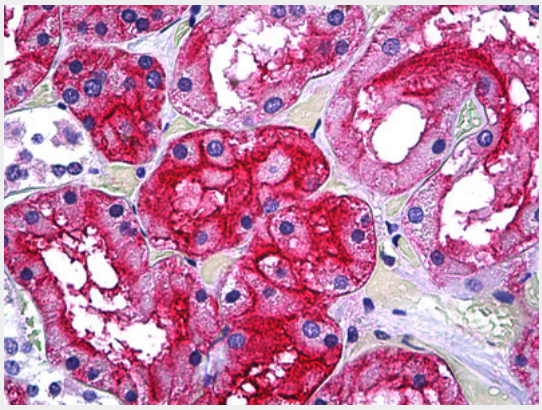
GGT1 monoclonal antibody clone 1F9 Western blot of GGT1 expression in NIH/3T3.



Anti-GGT1 / GGT antibody IHC of human kidney, tubules.

GGT1 / GGT Antibody (clone 1F9) - 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.

GGT1 / GGT Antibody (clone 1F9) - References

Rajpert-De Meyts E.,et al.Proc. Natl. Acad. Sci. U.S.A. 85:8840-8844(1988).
Sakamuro D.,et al.Gene 73:1-9(1988).
Pitot H.C.,et al.Toxicol. Appl. Pharmacol. 97:23-34(1989).
Goodspeed D.C.,et al.Gene 76:1-9(1989).
Pawlak A.,et al.J. Biol. Chem. 265:3256-3262(1990).