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Rat Ggt1 Antibody(N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19641a

Product Information

Application	WB, E
Primary Accession	P07314
Other Accession	NP_446292.2
Reactivity	Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB40721
Calculated MW	61610
Antigen Region	12-39

Additional Information

Gene ID	116568
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	This Rat Ggt1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 12-39 amino acids from the N-terminal region of rat Ggt1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Rat Ggt1 Antibody(N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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) (By similarity) (PubMed:6122208). The metabolism of glutathione by GGT1 releases free glutamate and the dipeptide cysteinyl-glycine, which is hydrolyzed to cysteine and glycine by dipeptidases (PubMed:6122208). 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:6122208). Contributes to cysteine homeostasis, glutathione homeostasis and in the conversion of the leukotriene LTC4 to LTD4 (PubMed:6122208).
Cellular Location	Cell membrane {ECO:0000250|UniProtKB:P19440}; Single-pass type II membrane protein
Tissue Location	Detected in adult kidney and mammary gland, and in fetal liver.

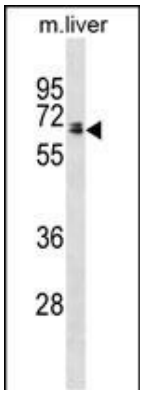
Background

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.

References

Aly, H.A., et al. Chem. Biol. Interact. 182 (2-3), 112-118 (2009) :
Zheng, M.Q., et al. Am. J. Physiol., Cell Physiol. 297 (2), C253-C262 (2009) :
Hamden, K., et al. Steroids 73(5):495-501(2008)
Pandur, S., et al. Free Radic. Res. 41(12):1376-1384(2007)
Hamden, K., et al. J. Physiol. Biochem. 63(3):195-201(2007)

Images



Rat Ggt1 Antibody (N-term) (Cat. #AP19641a) western blot analysis in mouse liver tissue lysates (35ug/lane).This demonstrates the Rat Ggt1 antibody detected the Rat Ggt1 protein (arrow).