10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GGT5 heavy chain Rabbit pAb

Catalog # AP97431

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	P36269
Other Accession	P36269
Predicted	Rat, Human, Mouse, Rabbit, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	62261
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Gamma-glutamyltransferase 5 heavy chain
Epitope Specificity	51-150/568
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
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
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	g-glutamyltranspeptidase (GGT) acts as a glutathionase and catalyzes the transfer of the glutamyl moiety of Glutathione to a variety of amino acids and dipeptide acceptors. This enzyme is located on the outer surface of the cell membrane and is widely distributed in mammalian tissues involved in absorption and secretion. In humans, hepatic GGT activity is elevated in some liver diseases. GGT1 is released into the bloodstream after liver damage and an elevated level of the enzyme may be a useful early sign of hepatocellular carcinoma. GGT5 converts Leukotriene C4 to Leukotriene D4; it does not, however, convert synthetic substrates that are commonly used to assay GGT. In human serum and tissues there is a marked heterogeneity in GGT, but this heterogeneity can be attributed to different glycosylation of the same peptide rather than to the products of different genes.

Additional Information

Gene ID	2687
Other Names	GGL; GGT 5; GGT-REL; GGTLA1; GGT5_HUMAN; GGT5; Gamma-glutamyl transpeptidase-related enzyme (GGT-rel); Gamma-glutamyltransferase 5 (GGT 5); Gamma-glutamyltransferase-like activity 1; Gamma-glutamyltranspeptidase 5; Leukotriene-C4 hydrolase; 3.4.19.13; gamma-glutamyltransferase 5
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:500

	0-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	GGT5
Synonyms	GGTLA1
Function	Cleaves the gamma-glutamyl bond of extracellular glutathione tripeptide (gamma-Glu-Cys-Gly) and certain glutathione conjugates (PubMed:1676842, PubMed:21447318). Hydrolyzes glutathione releasing L- Glu and Cys-Gly dipeptide which is further metabolized to maintain extracellular cysteine levels but also to provide cysteine necessary for intracellular glutathione synthesis (PubMed:1676842, PubMed:21447318). Among glutathione-S-conjugates metabolizes leukotriene C4 (LTC4) and S-geranylgeranyl-glutathione (GGG), but is inactive toward gamma-glutamyl leucine. Converts extracellular LTC4 to LTD4 during acute inflammatory response. Acts as a negative regulator of GGG bioactivity. GGT5 (via GGG catabolism) and ABCC1 (via extracellular transport) establish GGG gradients within lymphoid tissues to position P2RY8-positive lymphocytes at germinal centers in lymphoid follicles and restrict their chemotactic transmigration from blood vessels to bone marrow parenchyma (By similarity). The transpeptidation reaction, i.e. the transfer of gamma-glutamyl moiety to an acceptor molecule to yield a new gamma-glutamyl compound requires high concentration of dipeptide acceptor and is considered nonphysiological (PubMed:21447318, PubMed:29667297).
Cellular Location	Membrane {ECO:0000250|UniProtKB:Q9Z2A9}; Single- pass type II membrane protein {ECO:0000250|UniProtKB:Q9Z2A9}
Tissue Location	Expressed in follicular dendritic cells in lymphoid follicles (at protein level).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.