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GBA3 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP55124

Product Information

Application	WB, IHC-P, IHC-F, IF, ICC, E
Primary Accession	Q9H227
Reactivity	Rat, Pig, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	53696
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human GBA3/CBG
Epitope Specificity	151-250/469
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm; cytosol.
SIMILARITY	Belongs to the glycosyl hydrolase 1 family. Klotho subfamily.
Post-translational modifications	The N-terminus is blocked.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	CBG is a monomeric enzyme involved in the absorption and metabolism of flavonoid glucosides. CBG is found predominately in the liver, but is also located in tissues such as spleen, small intestine and kidney. Through its catalytic activity, CBG is able to hydrolyze a variety of glycosides including phytoestrogens, cyanogens, and flavonols. Although its catalytic activity extends to many dietary flavonoids, CBG has increased specificity for hydrophobic aglycones such as beta-D-glucoside and beta-D-galactoside. Hydrolysis is inhibited by sodium taurocholate and glucosyl-sphingosine, both of which regulate CBG enzymatic activity. Deficiencies in CBG have been implicated in Gaucher's disease, a lysosomal storage disease that causes a build up of fatty material in the spleen, liver, lung and kidneys.

Additional Information

Gene ID	57733
Other Names	Cytosolic beta-glucosidase, 3.2.1.21, Cytosolic beta-glucosidase-like protein 1, Cytosolic glycosylceramidase, Cytosolic GCase, Glucosidase beta acid 3 {ECO:0000312|HGNC:HGNC:19069}, Glucosylceramidase beta 3 {ECO:0000312|HGNC:HGNC:19069}, Klotho-related protein, KLrP, GBA3 (HGNC:19069), CBG, CBGL1
Target/Specificity	Present in small intestine (at protein level). Expressed in liver, small intestine,

	colon, spleen and kidney. Down-regulated in renal cell carcinomas and hepatocellular carcinomas.
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
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	GBA3 (HGNC:19069)
Synonyms	CBG, CBGL1
Function	Neutral cytosolic beta-glycosidase with a broad substrate specificity that could play a role in the catabolism of glycosylceramides (PubMed:11389701, PubMed:11784319, PubMed:17595169, PubMed:20728381, PubMed:26724485, PubMed:33361282). Has a significant glucosylceramidase activity in vitro (PubMed:17595169, PubMed:26724485). However, that activity is relatively low and its significance in vivo is not clear (PubMed:17595169, PubMed:20728381, PubMed:26724485). Hydrolyzes galactosylceramides/GalCers, glucosylsphingosines/GlcSphs and galactosylsphingosines/GalSphs (PubMed:17595169). However, the in vivo relevance of these activities is unclear (PubMed:17595169). It can also hydrolyze a broad variety of dietary glycosides including phytoestrogens, flavonols, flavones, flavanones and cyanogens in vitro and could therefore play a role in the metabolism of xenobiotics (PubMed:11784319). Possesses transxylosylase activity in vitro using xylosylated ceramides/XylCers (such as beta-D-xylosyl-(11')-N-acylsphing-4-enine) as xylosyl donors and cholesterol as acceptor (PubMed:33361282). Could also play a role in the catabolism of cytosolic sialyl free N-glycans (PubMed:26193330).
Cellular Location	Cytoplasm, cytosol
Tissue Location	Present in small intestine (at protein level). Expressed in liver, small intestine, colon, spleen and kidney. Down- regulated in renal cell carcinomas and hepatocellular carcinomas