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

GBA2 Rabbit pAb

Catalog # AP97527

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	Q9HCG7
Other Accession	Q9HCG7
Reactivity	Mouse
Predicted	Rat, Pig, Human, Chicken, Dog, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	104649
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human GBA2
Epitope Specificity	601-700/927
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 non-lysosomal glucosylceramidase family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Beta-glucosidase 2, also known as non-lysosomal glucosylceramidase (NLGase), Glucosylceramidase 2, GBA2 or AD035, is a 927 amino acid non-lysosomal glucosylceramidase that catalyzes glucosylceramide into ceramide and free glucose, and is suggested to play a role in carbohydrate transport and metabolism. A single-pass membrane protein, Beta-glucosidase 2 exists as three alternatively spliced isoforms that are widely expressed but found at highest levels in placenta, kidney, brain, skeletal muscle, kidney and heart, with low levels found in liver. Beta-glucosidase 2 activity has been linked to sphingomyelin generation and prevention of glycolipid accumulation. The gene encoding Beta-glucosidase 2 maps to human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome.

Additional Information

Gene ID	57704
Other Names	GBA2_HUMAN; GBA2; NLGase; Beta-glucocerebrosidase 2 (Beta-glucosidase 2); Bile acid beta-glucosidase GBA2; Bile acid glucosyl transferase GBA2; Cholesterol glucosyltransferase GBA2; Cholesteryl-beta-glucosidase GBA2; Glucosylceramidase 2; Non-lysosomal cholesterol glycosyltransferase; Non-lysosomal galactosylceramidase; Non-lysosomal glycosylceramidase; 3.2.1.45; KIAA1605; SPG46; GBA2_MOUSE; glucosylceramidase beta 2; spastic paraplegia 46 (autosomal recessive); glucosidase, beta (bile acid) 2; bile acid beta-glucosidase; non-lysosomal glucosylceramidase; glucocerebrosidase 2

Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
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	GBA2 (HGNC:18986)
Function	Non-lysosomal glucosylceramidase that catalyzes the hydrolysis of glucosylceramides/GlcCers (such as beta-D-glucosyl-(11')-N-acylsphing-4-enine) to free glucose and ceramides (such as N-acylsphing-4-enine) (PubMed:17105727, PubMed:30308956, PubMed:32144204). GlcCers are membrane glycosphingolipids that have a wide intracellular distribution (By similarity). They are the main precursors of more complex glycosphingolipids that play a role in cellular growth, differentiation, adhesion, signaling, cytoskeletal dynamics and membrane properties (By similarity). Involved in the transglucosylation of cholesterol, transfers glucose from GlcCer to cholesterol, thereby modifying its water solubility and biological properties (PubMed:32144204). Under specific conditions, may catalyze the reverse reaction, transferring glucose from cholesteryl-3-beta-D- glucoside to ceramide (such as N-acylsphing-4-enine) (Probable). May play a role in the metabolism of bile acids (PubMed:11489889, PubMed:17080196, PubMed:9111029). Able to hydrolyze bile acid 3-O- glucosides as well as to produce bile acid-glucose conjugates thanks to a bile acid glucosyl transferase activity (PubMed:11489889, PubMed:17080196, PubMed:9111029). Catalyzes the hydrolysis of galactosylceramides/GalCers (such as beta-D-galactosyl-(11')-N-acylsphing-4-enine), as well as the galactosyl transfer between GalCers and cholesterol in vitro with lower activity compared with their activity against GlcCers (PubMed:32144204).
Cellular Location	Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:Q69ZF3}; Peripheral membrane protein; Cytoplasmic side {ECO:0000250|UniProtKB:Q69ZF3}. Golgi apparatus membrane {ECO:0000250|UniProtKB:Q69ZF3}; Peripheral membrane protein; Cytoplasmic side {ECO:0000250|UniProtKB:Q69ZF3}. Note=Localization to the plasma membrane and alternative topologies have also been reported
Tissue Location	Widely expressed (PubMed:11489889). Mainly expressed in brain, heart, skeletal muscle, kidney and placenta and expressed at lower levels in liver, spleen, small intestine and lung (PubMed:11489889). Detectable in colon, thymus and peripheral blood leukocytes (PubMed:11489889).

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