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GBA2 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP22212c

Product Information

Application	WB, E
Primary Accession	Q9HCG7
Other Accession	Q69ZF3, Q5M868
Reactivity	Human, Rat, Mouse
Predicted	Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB55138
Calculated MW	104649

Additional Information

Gene ID	57704
Other Names	Non-lysosomal glucosylceramidase, NLGase, 3.2.1.45, Beta-glucocerebrosidase 2, Beta-glucosidase 2, Glucosylceramidase 2, GBA2, KIAA1605
Target/Specificity	This GBA2 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 593-623 amino acids from the Central region of human GBA2.
Dilution	WB~~1:2000 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	GBA2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

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).

Background

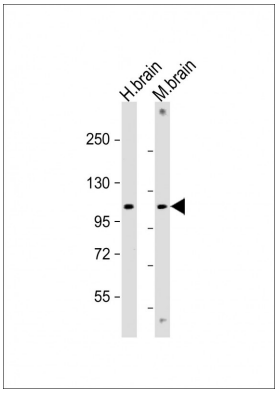
Non-lysosomal glucosylceramidase that catalyzes the conversion of glucosylceramide (GlcCer) to free glucose and ceramide. Involved in sphingomyelin generation and prevention of glycolipid accumulation. May also catalyze the hydrolysis of bile acid 3-O-glucosides, however, the relevance of such activity is unclear in vivo. Plays a role in central nevous system development. Required for proper formation of motor neuron axons.

References

Matern H.,et al.J. Biol. Chem. 276:37929-37933(2001).
Nagase T.,et al.DNA Res. 7:273-281(2000).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Bechtel S.,et al.BMC Genomics 8:399-399(2007).
Humphray S.J.,et al.Nature 429:369-374(2004).

Images

All lanes : Anti-GBA2 Antibody (Center) at 1:2000 dilution
Lane 1: human brain lysate Lane 2: mouse brain lysate
Lysates/proteins at 20 µg per lane. Secondary Goat
Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000



dilution. Predicted band size : 105 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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