

GC Antibody (Center) Blocking peptide
Synthetic peptide
Catalog # BP8937c**Specification**

GC Antibody (Center) Blocking peptide - Product InformationPrimary Accession [P04062](#)**GC Antibody (Center) Blocking peptide - Additional Information****Gene ID** 2629**Other Names**

Glucosylceramidase, Acid beta-glucosidase, Alglucerase, Beta-glucocerebrosidase, Beta-GC, D-glucosyl-N-acylsphingosine glucosylhydrolase, Imiglucerase, GBA, GC, GLUC

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP8937c](/products/AP8937c) was selected from the Center region of human GC. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

GC Antibody (Center) Blocking peptide - Protein Information**Name** GBA1 ([HGNC:4177](#))**Synonyms** GBA, GC, GLUC**Function**

Glucosylceramidase that catalyzes, within the lysosomal compartment, the hydrolysis of glucosylceramides/GlcCers (such as beta- D-glucosyl-(1<->1')-N-acylsphing-4-enine) into free ceramides (such as N-acylsphing-4-enine) and glucose (PubMed:9201993, PubMed:24211208, PubMed:15916907, PubMed:32144204). Plays a central role in the degradation of complex lipids and the turnover of cellular membranes (PubMed:27378698).

Through the production of ceramides, participates in the PKC-activated salvage pathway of ceramide formation (PubMed:19279011). Catalyzes the glucosylation of cholesterol, through a transglucosylation reaction where glucose is transferred from GlcCer to cholesterol (PubMed:24211208, PubMed:26724485, PubMed:32144204). GlcCer containing mono-unsaturated fatty acids (such as beta-D-glucosyl-N-(9Z-octadecenoyl)-sphing-4-enine) are preferred as glucose donors for cholesterol glucosylation when compared with GlcCer containing same chain length of saturated fatty acids (such as beta-D-glucosyl-N-octadecanoyl-sphing-4-enine) (PubMed:24211208). Under specific conditions, may alternatively catalyze the reverse reaction, transferring glucose from cholesteryl 3-beta-D-glucoside to ceramide (PubMed:26724485) (Probable). Can also hydrolyze cholesteryl 3-beta-D-glucoside producing glucose and cholesterol (PubMed:24211208, PubMed:26724485). Catalyzes the hydrolysis of galactosylceramides/GalCers (such as beta-D-galactosyl-(1<->1')-N-acylsphing-4-enine), as well as the transfer of galactose between GalCers and cholesterol in vitro, but with lower activity than with GlcCers (PubMed:32144204). Contrary to GlcCer and GalCer, xylosylceramide/XylCer (such as beta-D-xylosyl-(1<->1')-N-acylsphing-4-enine) is not a good substrate for hydrolysis, however it is a good xylose donor for transxylosylation activity to form cholesteryl 3-beta-D-xyloside (PubMed:33361282).

Cellular Location

Lysosome membrane; Peripheral membrane protein; Lumenal side. Note=Interaction with saposin-C promotes membrane association (PubMed:10781797). Targeting to lysosomes occurs through an alternative MPR-independent mechanism via SCARB2 (PubMed:18022370).

GC Antibody (Center) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

GC Antibody (Center) Blocking peptide - Images

GC Antibody (Center) Blocking peptide - Background

GC is a protein that cleaves the beta-glucosidic linkage of glycosylceramide, an intermediate in glycolipid metabolism.

GC Antibody (Center) Blocking peptide - References

Jamrozik,Z., et.al., J. Neurol. 257 (3), 459-460 (2010)Mao,X.Y., et.al., Neurosci. Lett. 469 (2), 256-259 (2010)