

**GC Antibody(Center) (Ascites)**  
**Mouse Monoclonal Antibody (Mab)**  
**Catalog # AM2180a**

**Specification**

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**GC Antibody(Center) (Ascites) - Product Information**

Application	WB,E
Primary Accession	<a href="#">P04062</a>
Other Accession	<a href="#">O70KH2</a> , <a href="#">O2KHZ8</a> , <a href="#">NP_000148.2</a>
Reactivity	Human
Predicted	Bovine, Pig
Host	Mouse
Clonality	Monoclonal
Isotype	IgM
Calculated MW	59716
Antigen Region	337-365

**GC Antibody(Center) (Ascites) - Additional Information**

**Gene ID** 2629

**Other Names**

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

**Target/Specificity**

This GC antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 337-365 amino acids from the Central region of human GC.

**Dilution**

WB~~1:100~1600

**Format**

Mouse monoclonal antibody supplied in crude ascites with 0.09% (W/V) sodium azide.

**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**

GC Antibody(Center) (Ascites) is for research use only and not for use in diagnostic or therapeutic procedures.

**GC Antibody(Center) (Ascites) - 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-(11')-N-acylsphing-4-enine) into free ceramides (such as N-acylsphing-4-enine) and glucose (PubMed:[15916907](#), PubMed:[24211208](#), PubMed:[32144204](#), PubMed:[9201993](#)). 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 (Probable) (PubMed:[26724485](#)). 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-(11')-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-xyosyl-(11')-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

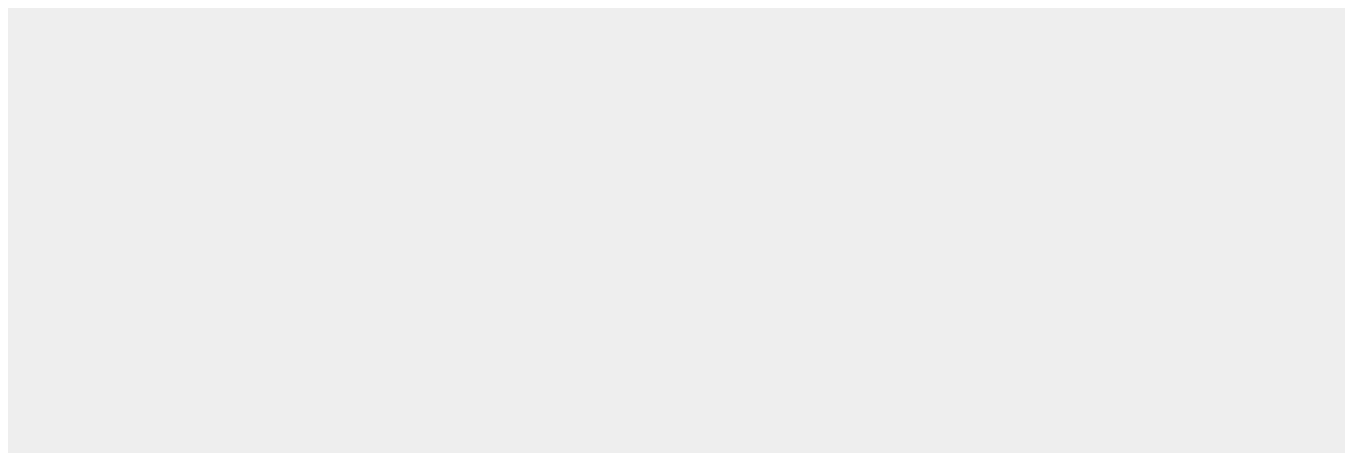
Lysosome membrane; Peripheral membrane protein; Lumenal side. Note=Interaction with saposin-C promotes membrane association (PubMed:10781797). Targeting to lysosomes occurs through an alternative MPR-independent mechanism via SCARB2 (PubMed:18022370).

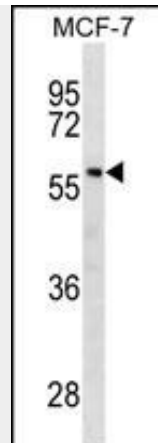
#### GC Antibody(Center) (Ascites) - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### GC Antibody(Center) (Ascites) - Images





GC Antibody(Center) (Cat. #AM2180a) western blot analysis in MCF-7 cell line lysates (35µg/lane). This demonstrates the GC antibody detected the GC protein (arrow).

### **GC Antibody(Center) (Ascites) - Background**

This gene encodes a lysosomal membrane protein that cleaves the beta-glucosidic linkage of glycosylceramide, an intermediate in glycolipid metabolism. Mutations in this gene cause Gaucher disease, a lysosomal storage disease characterized by an accumulation of glucocerebrosides. A related pseudogene is approximately 12 kb downstream of this gene on chromosome 1. Alternative splicing results in multiple transcript variants.

### **GC Antibody(Center) (Ascites) - References**

Dos Santos, A.V., et al. *Neurosci. Lett.* 485(2):121-124(2010)  
Bailey, S.D., et al. *Diabetes Care* 33(10):2250-2253(2010)  
Jeong, S.Y., et al. *Blood Cells Mol. Dis.* (2010) In press :  
Hu, F.Y., et al. *Eur. J. Neurol.* (2010) In press :  
Velayati, A., et al. *Curr Neurol Neurosci Rep* 10(3):190-198(2010)