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GPI8 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP2462b

Specification

GPI8 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession	Q92643
Other Accession	GPI8_HUMAN

GPI8 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 10026

Other Names
GPI-anchor transamidase, GPI transamidase, 3---, GPI8 homolog, hGPI8, Phosphatidylinositol-glycan biosynthesis class K protein, PIG-K, PIGK, GPI8

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP2462b was selected from the C-term region of human GPI8 . 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.

GPI8 Antibody (C-term) Blocking Peptide - Protein Information

Name PIGK (HGNC:8965)

Function
Catalytic subunit of the glycosylphosphatidylinositol-anchor (GPI-anchor) transamidase (GPI-T) complex that catalyzes the formation of the linkage between a proprotein and a GPI-anchor and participates in GPI anchored protein biosynthesis (PubMed:10793132, PubMed:11483512, PubMed:12582175, PubMed:34576938, PubMed:35165458, PubMed:35551457, PubMed:37684232, PubMed:<a

href="http://www.uniprot.org/citations/9356492" target="_blank">9356492). Recognizes diverse proproteins at a C-terminal signal peptide (CSP) region that lacks consensus sequence and replaces it with a GPI-anchor via a transamidation reaction (PubMed:35165458, PubMed:35551457, PubMed:37684232). Transamidation catalysis reaction follows a two-phase mechanism (PubMed:37684232). In the acyl-enzyme phase, the carbonyl group of the proproteins's omega- site undergoes a nucleophilic attack forming an enzyme-substrate thioester bond (PubMed:37684232). Followed by a general acid catalysis that allows CSP releasing, regenerating the carbonyl, and forming the acyl-enzyme intermediate (PubMed:37684232). In the GPI-anchor attachment phase, the amino group of the GPI-anchor's ethanolamine phosphate, the one on third mannose (EtNP3), mediates a nucleophilic attack on the carbonyl of the acyl-enzyme intermediate, replacing the CSP, allowing GPI-anchor attachment to the omega-residue, therefore forming the product and freeing the enzyme (PubMed:37684232).

Cellular Location
Endoplasmic reticulum membrane; Single-pass type I membrane protein

GPI8 Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

GPI8 Antibody (C-term) Blocking Peptide - Images

GPI8 Antibody (C-term) Blocking Peptide - Background

GPI8 is a member of the cysteine protease family C13 that is involved in glycosylphosphatidylinositol (GPI)-anchor biosynthesis. The GPI-anchor is a glycolipid found on many blood cells and serves to anchor proteins to the cell surface. This protein is a member of the multisubunit enzyme, GPI transamidase and is thought to be its enzymatic component. GPI transamidase mediates GPI anchoring in the endoplasmic reticulum, by catalyzing the transfer of fully assembled GPI units to proteins.

GPI8 Antibody (C-term) Blocking Peptide - References

Ohishi, K., et al., J. Biol. Chem. 278(16):13959-13967 (2003).Vainauskas, S., et al., J. Biol. Chem. 277(34):30535-30542 (2002).Ohishi, K., et al., EMBO J. 20(15):4088-4098 (2001).Meyer, U., et al., Biochemistry 39(12):3461-3471 (2000).Yu, J., et al., Proc. Natl. Acad. Sci. U.S.A. 94(23):12580-12585 (1997).