

P4HB Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP2911b**Specification**

P4HB Antibody (C-term) Blocking Peptide - Product InformationPrimary Accession [P07237](#)**P4HB Antibody (C-term) Blocking Peptide - Additional Information**

Gene ID 5034

Other Names

Protein disulfide-isomerase, PDI, Cellular thyroid hormone-binding protein, Prolyl 4-hydroxylase subunit beta, p55, P4HB, ERBA2L, PDI, PDIA1, PO4DB

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP2911b](/products/AP2911b) was selected from the C-term region of human P4HB. 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.

P4HB Antibody (C-term) Blocking Peptide - Protein Information**Name** P4HB**Synonyms** ERBA2L, PDI, PDIA1, PO4DB**Function**

This multifunctional protein catalyzes the formation, breakage and rearrangement of disulfide bonds. At the cell surface, seems to act as a reductase that cleaves disulfide bonds of proteins attached to the cell. May therefore cause structural modifications of exofacial proteins. Inside the cell, seems to form/rearrange disulfide bonds of nascent proteins. At high concentrations and following phosphorylation by FAM20C, functions as a chaperone that inhibits aggregation of misfolded proteins (PubMed: <http://www.uniprot.org/citations/32149426> target="_blank">32149426). At low concentrations, facilitates aggregation (anti-chaperone activity). May be involved with other chaperones in the structural modification of the TG precursor in hormone biogenesis. Also acts as a structural subunit of various enzymes such as prolyl

4-hydroxylase and microsomal triacylglycerol transfer protein MTTP. Receptor for LGALS9; the interaction retains P4HB at the cell surface of Th2 T helper cells, increasing disulfide reductase activity at the plasma membrane, altering the plasma membrane redox state and enhancing cell migration (PubMed:21670307).

Cellular Location

Endoplasmic reticulum. Endoplasmic reticulum lumen. Melanosome. Cell membrane; Peripheral membrane protein. Note=Highly abundant. In some cell types, seems to be also secreted or associated with the plasma membrane, where it undergoes constant shedding and replacement from intracellular sources (Probable). Localizes near CD4-enriched regions on lymphoid cell surfaces (PubMed:11181151). Identified by mass spectrometry in melanosome fractions from stage I to stage IV (PubMed:10636893) Colocalizes with MTTP in the endoplasmic reticulum (PubMed:23475612) {ECO:0000269|PubMed:10636893, ECO:0000269|PubMed:11181151, ECO:0000269|PubMed:23475612, ECO:0000305}

P4HB Antibody (C-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

P4HB Antibody (C-term) Blocking Peptide - Images

P4HB Antibody (C-term) Blocking Peptide - Background

P4HB is a highly abundant multifunctional enzyme that belongs to the protein disulfide isomerase family. When present as a tetramer consisting of two alpha and two beta subunits, this enzyme is involved in hydroxylation of prolyl residues in procollagen. This enzyme is also a disulfide isomerase containing two thioredoxin domains that catalyze the formation, breakage and rearrangement of disulfide bonds. Other known functions include its ability to act as a chaperone that inhibits aggregation of misfolded proteins in a concentration-dependent manner, its ability to bind thyroid hormone, its role in both the influx and efflux of S-nitrosothiol-bound nitric oxide, and its function as a subunit of the microsomal triglyceride transfer protein complex.

P4HB Antibody (C-term) Blocking Peptide - References

Ewing,R.M., et.al., Mol. Syst. Biol. 3, 89 (2007)