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KD-Validated Anti-Prolyl 4-hydroxylase subunit beta Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1234

Specification

KD-Validated Anti-Prolyl 4-hydroxylase subunit beta Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	P07237
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 57 kDa , observed, 57 kDa KDa**
Gene Name	**P4HB**
Aliases	**Prolyl 4-Hydroxylase Subunit Beta; PDIA1; PDI; ERBA2L; PROHB; PO4HB; PO4DB; DSI; GIT; Procollagen-Proline, 2-Oxoglutarate 4-Dioxygenase (Proline 4-Hydroxylase), Beta Polypeptide; Protein Disulfide Isomerase Family A, Member; Protein Disulfide Isomerase-Associated; Cellular Thyroid Hormone-Binding Protein; Prolyl 4-Hydroxylase, Beta Polypeptide; Collagen Prolyl 4-Hydroxylase Beta; Protein Disulfide-Isomerase; EC 5.3.4.1; P4Hbeta; P55; Procollagen-Proline, 2-Oxoglutarate 4-Dioxygenase (Proline 4-Hydroxylase), Beta Polypeptide (Protein Disulfide Isomerase; Thyroid Hormone Binding Protein P55); Procollagen-Proline, 2-Oxoglutarate 4-Dioxygenase (Proline 4-Hydroxylase), Beta Polypeptide (Protein Disulfide Isomerase-Associated 1) Protein Disulfide Isomerase/Oxidoreductase; Glutathione-Insulin Transhydrogenase; Thyroid Hormone-Binding Protein P55; Testicular Secretory Protein Li 32; Protocollagen Hydroxylase; P4HBETA; CLCRP1; PHDB;**
Immunogen	**A synthesized peptide derived from human P4HB**

KD-Validated Anti-Prolyl 4-hydroxylase subunit beta Rabbit Monoclonal Antibody - Additional Information

Gene ID	**5034**

Other Names
Protein disulfide-isomerase, PDI, 5.3.4.1, Cellular thyroid hormone-binding protein, Prolyl 4-hydroxylase subunit beta, p55, P4HB, ERBA2L, PDI, PDIA1, PO4DB

KD-Validated Anti-Prolyl 4-hydroxylase subunit beta Rabbit Monoclonal Antibody - 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: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}

KD-Validated Anti-Prolyl 4-hydroxylase subunit beta Rabbit Monoclonal Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-Prolyl 4-hydroxylase subunit beta Rabbit Monoclonal Antibody - Images

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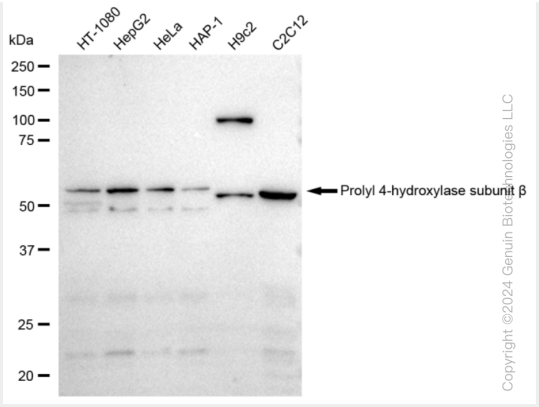
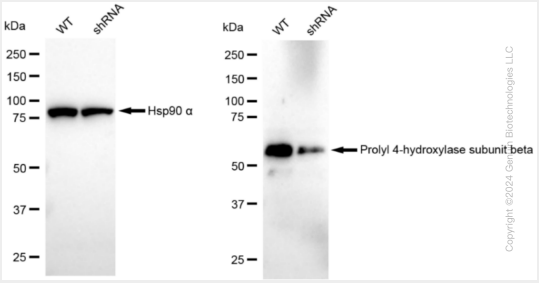
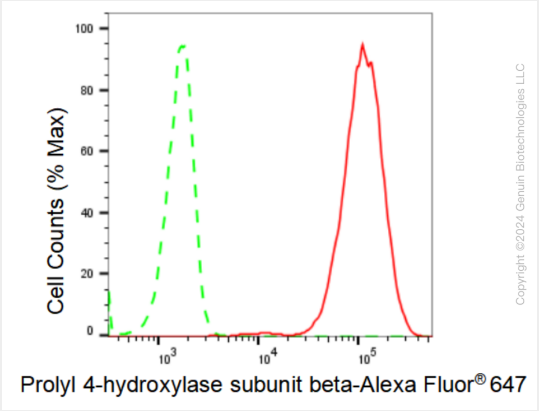


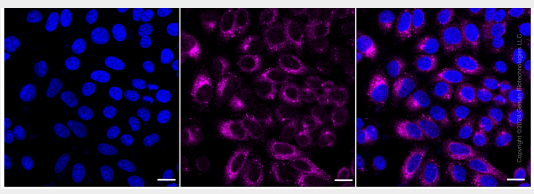
Western blotting analysis using anti-Prolyl 4-hydroxylase subunit beta antibody (Cat#AGI1234). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Prolyl 4-hydroxylase subunit beta antibody (Cat#AGI1234, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-Prolyl 4-hydroxylase subunit beta antibody (Cat#AGI1234). Prolyl 4-hydroxylase subunit beta expression in wild type (WT) and prolyl 4-hydroxylase subunit beta shRNA knockdown (KD) HT1080 cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-Prolyl 4-hydroxylase subunit beta antibody (Cat#AGI1234, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of Prolyl 4-hydroxylase subunit beta expression in C2C12 cells using Prolyl 4-hydroxylase subunit beta antibody (Cat#AGI1234, 1:2,000). Green, isotype control; red, Prolyl 4-hydroxylase subunit beta.



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Immunocytochemical staining of HepG2 cells with anti-prolyl 4-hydroxylase subunit beta antibody (Cat#AGI1234, 1:1,000). Nuclei were stained blue with DAPI; Prolyl 4-hydroxylase subunit beta was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.