

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human P4HB in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human P4HB Asp18-Lys505 Accession # P07237
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

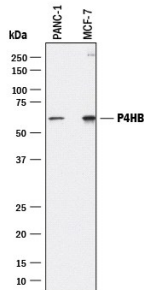
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunocytochemistry	1-15 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Protein Disulfide Isomerase/P4HB (Catalog # 4236-D1), see our available Western blot detection antibodies
Simple Western	10 µg/mL	See Below

DATA

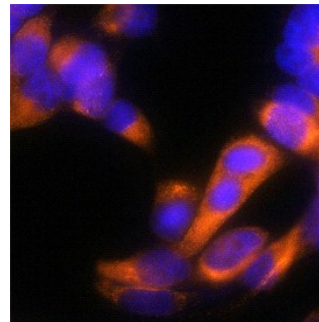
Western Blot



Detection of Human Protein Disulfide Isomerase/P4HB by Western Blot.

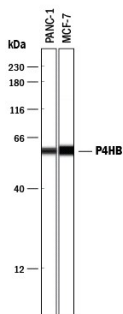
Western blot shows lysates of PANC-1 human pancreatic carcinoma cell line and MCF-7 human breast cancer cell line. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human Protein Disulfide Isomerase/P4HB Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4236) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for Protein Disulfide Isomerase/P4HB at approximately 57 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 1](#).

Immunocytochemistry



Protein Disulfide Isomerase/P4HB in HeLa Human Cell Line. Protein Disulfide Isomerase/P4HB was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Goat Anti-Human Protein Disulfide Isomerase/P4HB Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4236) at 1.7 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

Simple Western



Detection of Human Protein Disulfide Isomerase/P4HB by Simple Western™.

Simple Western lane view shows lysates of PANC-1 human pancreatic carcinoma cell line and MCF-7 human breast cancer cell line, loaded at 0.2 mg/mL. A specific band was detected for Protein Disulfide Isomerase/P4HB at approximately 59 kDa (as indicated) using 10 µg/mL of Goat Anti-Human Protein Disulfide Isomerase/P4HB Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4236) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

P4HB (Prolyl 4-hydroxylase beta chain; also PDI) is a 60 kDa member of the protein disulfide isomerase family. As an intracellular homodimer, it forms a tetrameric complex with P4H alpha chains to form an active prolyl 4 hydroxylase. This catalyses the hydroxylation of proline in collagen. On the cell surface, it reduces disulfide bonds in HIV that allow the virus to fuse with CXCR4 and enter susceptible cells. Mature human P4HB is 491 amino acids (aa) in length. It contains two TRX domains (aa 25 134 and 368 475) plus an ER retention sequence (aa 505 508). There is one potential isoform that shows an 11 aa substitution for the first 162 amino acids. Over aa 18 505, human P4HB shares 94% aa identity with mouse P4HB.