

DESCRIPTION

Species Reactivity	Human
Specificity	Designed to visualize the expression of P4HB by fluorescence microscopy for staining cells and tissues. Conjugated P4HB antibodies are ideal for immunocytochemistry colocalization studies in the lumen of the endoplasmic reticulum. The unconjugated antibody detects human Protein Disulfide Isomerase/P4HB in direct ELISAs.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Protein Disulfide Isomerase/P4HB Asp18-Lys505 Accession # P07237
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

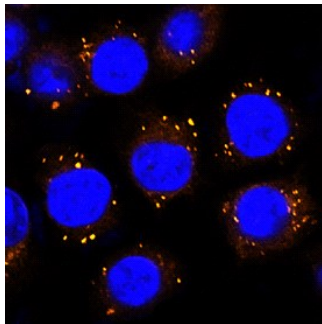
APPLICATIONS

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
Immunocytochemistry	5-15 µg/mL	See Below

DATA

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 # BAF4236) at 1.7 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Streptavidin (red; Catalog # NL999) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

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.
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.