

## Anti-P4HB Antibody (7J75)

## Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	7J75
Purification:	Protein A

## Applications

1. Immunofluorescence staining of Human P4HB in Hela cells. Cells were fixed with 4% PFA, permeabilized with 1% Triton X-100 in PBS, blocked with 10% serum, and incubated with Rabbit anti-Human P4HB monoclonal antibody (1:60) at 37°C 1 hour. Then cells were stained with the Alexa Fluor®488-conjugated Goat Anti-rabbit IgG secondary antibody (green) and counterstained with DAPI (blue). Positive staining was localized to endoplasmic reticulum.

2. P4HB was immunoprecipitated using:

-Lane A:0.5 mg MCF-7 Whole Cell Lysate.

-2 µL anti-P4HB rabbit monoclonal antibody and 15 µL of 50 % Protein G agarose.

-Primary antibody:

-Anti-P4HB rabbit monoclonal antibody, at 1:200 dilution.

-Secondary antibody:

-Clean-Blot® IP Detection Reagent (HRP) at 1:1000 dilution.

-Developed using the DAB staining technique.

-Performed under reducing conditions.

-Predicted band size: 57 kDa.

-Observed band size: 57 kDa.

3. Anti-P4HB rabbit monoclonal antibody at 1:100 dilution.

-Lane A: MCF7 Whole Cell Lysate.

-Lane B: HepG2 Whole Cell lysate.

-Lysates/proteins at 30 µg per lane.

-Secondary

-Goat Anti-Rabbit IgG H&L (Dylight800) at 1/10000 dilution.

-Developed using the Odyssey technique.

-Performed under reducing conditions.

-Predicted band size:57 kDa.

-Observed band size:57 kDa(We are unsure as to the identity of these extra bands.)

Verified Activity:

Application:

ELISA,ICC/IF,IP,WB

## A DRUG SCREENING EXPERT

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Recommended WB: 1:500-1:2000; ELISA: 1:5000-1:10000; ICC-IF: 1:20-1:100; IP: 1-4  $\mu$ L/mg of lysate

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### Properties

Stability & Storage: Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. Preservative-Free.

Shipping: Shipping with blue ice.

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### Antigen Details

Immunogen: Recombinant Protein: Human P4HB protein (TMPY-01012)

Antigen Species: Human

Synonyms: prolyl 4-hydroxylase,  $\beta$  polypeptide; ERp59; PDI; Thbp; prolyl 4-hydroxylase, beta polypeptide; Pdia1

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### Research Background

Protein disulfide-isomerase, also known as Cellular thyroid hormone-binding protein, Prolyl 4-hydroxylase subunit beta, p55 and P4HB, is a peripheral membrane protein that belongs to the protein disulfide isomerase family. P4HB is highly abundant. In some cell types, it seems to be also secreted or associated with the plasma membrane, where it undergoes constant shedding and replacement from intracellular sources. P4HB localizes near CD4-enriched regions on lymphoid cell surfaces. It is identified by mass spectrometry in melanosome fractions from stage I to stage IV. P4HB reduces and may activate fusogenic properties of HIV-1 gp12 surface protein, thereby enabling HIV-1 entry into the cell. P4HB catalyzes the formation, breakage and rearrangement of disulfide bonds. At the cell surface, it seems to act as a reductase that cleaves disulfide bonds of proteins attached to the cell. P4HB may therefore cause structural modifications of exofacial proteins. Inside the cell, it seems to form/rearrange disulfide bonds of nascent proteins. At high concentrations, P4HB functions as a chaperone that inhibits aggregation of misfolded proteins. At low concentrations, it facilitates aggregation (anti-chaperone activity). P4HB may be involved with other chaperones in the structural modification of the TG precursor in hormone biogenesis. It also acts as a structural subunit of various enzymes such as prolyl 4-hydroxylase and microsomal triacylglycerol transfer protein MTTP.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

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