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Datasheet for ABIN361829

## anti-P4HB antibody (AA 409-509)

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### Overview

Quantity:	100 µL
Target:	P4HB
Binding Specificity:	AA 409-509
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunoprecipitation (IP), Immunofluorescence (IF), Immunocytochemistry (ICC)

### Product Details

Immunogen:	Rat PDI synthetic peptide (409-509 aa C-terminal) conjugated to KLH
Specificity:	Detects ~58 kDa.
Cross-Reactivity:	Cow, Dog, Guinea Pig, Hamster, Human, Mollusca, Mouse, Pig, Rat, Sheep, Xenopus laevis
Purification:	Peptide Affinity Purified

### Target Details

Target:	P4HB
Alternative Name:	PDI ( <a href="#">P4HB Products</a> )
Background:	The three dimensional structure of many extracellular proteins is stabilized by the formation of disulphide bonds. Studies suggest that a microsomal enzyme known as Protein Disulphide Isomerase (PDI) is involved in disulphide-bond formation via its oxidase activity and

## Target Details

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isomerization via its isomerase activity, as well as the reduction of disulphide bonds in proteins (1). Studies suggest BiP and PDI work together sequentially to increase oxidation of these proteins (2, 3). PDI has also been found to function as a chaperone to prevent the aggregation of unfolded substrates, and serves as a subunit of prolyl 4-hydroxylase and microsomal triglyceride transferase (4, 5). PDI is an abundant 55 kDa protein located primarily in the ER, however studies have also proved its presence in the cytosol (1). PDI has the ability to reside in the ER permanently due to the highly conserved KDEL sequence at its carboxy-terminus (6). It uses carboxy-terminal KDEL as a retention signal, and this appears to be sufficient to reduce the secretion of proteins from the ER. This retention is reported to be mediated by a KDEL receptor (7).

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Gene ID: 287164

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NCBI Accession: [NP\\_001099245](#)

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UniProt: [P04785](#)

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Pathways: [Maintenance of Protein Location](#), [Cell RedoxHomeostasis](#), [Lipid Metabolism](#)

## Application Details

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Application Notes:

- WB (1:1000)
- ICC/IF (1:100)
- optimal dilutions for assays should be determined by the user.

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Comment: A 1:1000 dilution of ABIN361828 was sufficient for detection of PDI in 20 µg of HeLa cell lysate by ECL immunoblot analysis.

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Restrictions: For Research Use only

## Handling

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Format: Liquid

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Concentration: 1 mg/mL

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Buffer: PBS pH 7.4, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated

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Preservative: Sodium azide

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Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

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Storage: -20 °C

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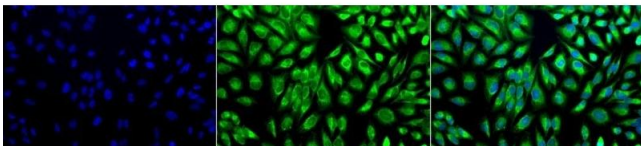
## Handling

Storage Comment: -20°C

## Publications

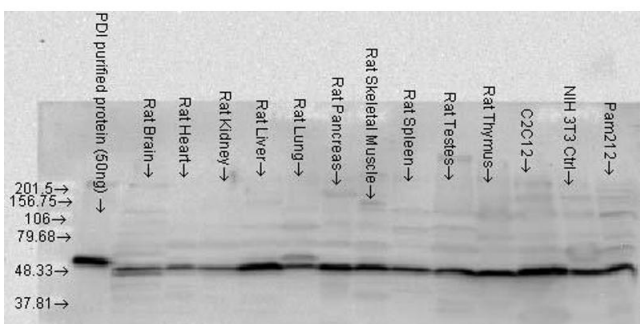
Product cited in: Jiao, Wei, Chen, Li, Wang, Li, Guo, Zhang, Wei: "Cartilage oligomeric matrix protein and hyaluronic acid are sensitive serum biomarkers for early cartilage lesions in the knee joint." in: **Biomarkers : biochemical indicators of exposure, response, and susceptibility to chemicals**, Vol. 21, Issue 2, pp. 146-51, (2016) ([PubMed](#)).

## Images

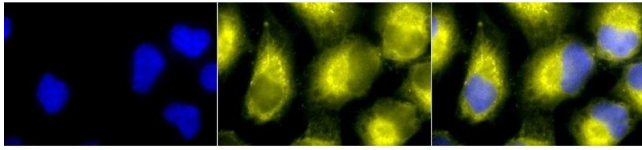


### Immunocytochemistry

**Image 1.** Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-PDI Polyclonal Antibody (ABIN361828 and ABIN361829). Tissue: Cervical cancer cell line (HeLa). Species: Human. Fixation: 2 % Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-PDI Polyclonal Antibody (ABIN361828 and ABIN361829) at 1:100 for 12 hours at 4 °C. Secondary Antibody: FITC Goat Anti-Rabbit (green) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Endoplasmic reticulum lumen. Melanosome. Magnification: 20x. (A) DAPI (blue) nuclear stain. (B) Anti-PDI Antibody. (C) Composite.



**Image 2.** PDI, Rat tissue



### Immunocytochemistry

**Image 3.** Immunocytochemistry/Immunofluorescence analysis using Rabbit Anti-PDI Polyclonal Antibody (ABIN361828 and ABIN361829). Tissue: Cervical cancer cell line (HeLa). Species: Human. Fixation: 2 % Formaldehyde for 20 min at RT. Primary Antibody: Rabbit Anti-PDI Polyclonal Antibody (ABIN361828 and ABIN361829) at 1:100 for 12 hours at 4 °C. Secondary Antibody: R-PE Goat Anti-Rabbit (yellow) at 1:200 for 2 hours at RT. Counterstain: DAPI (blue) nuclear stain at 1:40000 for 2 hours at RT. Localization: Endoplasmic reticulum lumen. Melanosome. Magnification: 100x. (A) DAPI (blue) nuclear stain. (B) Anti-PDI Antibody. (C) Composite.