Anti-PDIA1 (PDI) Rabbit mAb

Purified Recombinant Rabbit Monoclonal Antibody

Catalog # R012792

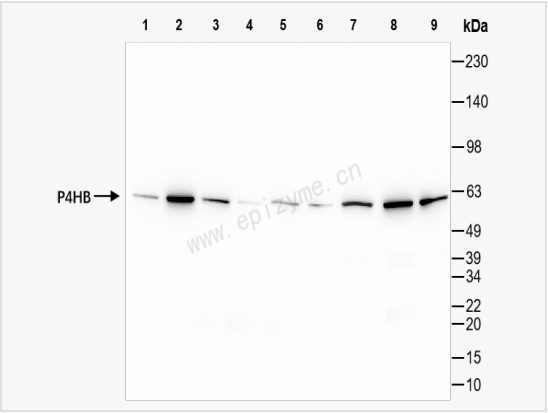
Product Information

Application	WB, IHC-P/IF (Tissue-P), IF (Cell)/ICC, ELISA
Reactivity	Human, Mouse, Rat
Dilution	WB 1:1,000~1:3,000; IHC-P 1:100~1:200; IF 1:100~1:200
Host	Rabbit
Clonality	Monoclonal
Clone No.	80L85K18
Isotype	IgG
Label	Unconjugated
Immunogen	A synthesized peptide derived from human P4HB
Format	Affinity purified monoclonal antibody supplied in PBS with 0.02% sodium azide and 50% glycerol, pH 7.3.
Storage	Shipped on wet ice. Store at -20°C. Stable for 24 months from date of receipt. Aliquoting is unnecessary for -20°C storage.
Precautions	Anti-PDIA1 (PDI) Rabbit mAb [80L85K18] is for research use only and not for use in diagnostic or therapeutic procedures.

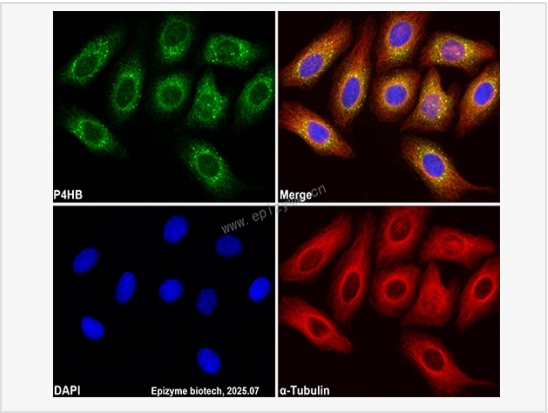
Protein Information

Synonyms	ERBA2L; PDI; PDIA1; PO4DB; P4HB; Protein disulfide-isomerase; Cellular thyroid hormone-binding protein; Prolyl 4-hydroxylase subunit beta; p55.
Calculated MW	Calculated MW: 57 kDa; Observed MW: 57 kDa
Uniprot ID	P07237
Gene ID	5034
Background	This gene encodes the beta subunit of prolyl 4-hydroxylase, a highly abundant multifunctional enzyme that belongs to the protein disulfide isomerase family. When present as a tetramer consisting of two alpha and two beta subunits, this enzyme is involved in hydroxylation of prolyl residues in preprocollagen. This enzyme is also a disulfide isomerase containing two thioredoxin domains that catalyze the formation, breakage and rearrangement of disulfide bonds. Other known functions include its ability to act as a chaperone that inhibits aggregation of misfolded proteins in a concentration-dependent manner, its ability to bind thyroid hormone, its role in both the influx and efflux of S-nitrosothiol-bound nitric oxide, and its function as a subunit of the microsomal triglyceride transfer protein complex. [provided by RefSeq, Jul 2008]
Cellular Location	Endoplasmic reticulum.Endoplasmic reticulum lumen.Melanosome.Cell membrane.Peripheral membrane protein.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).

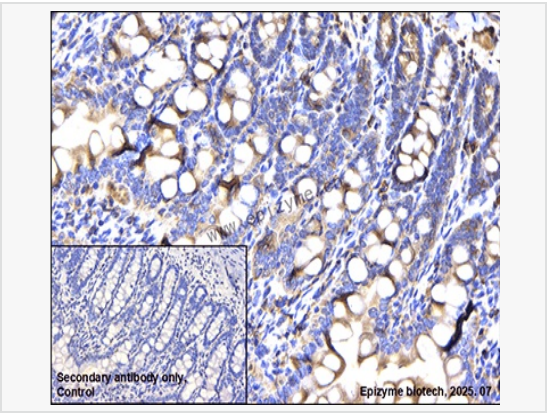
Validation Images



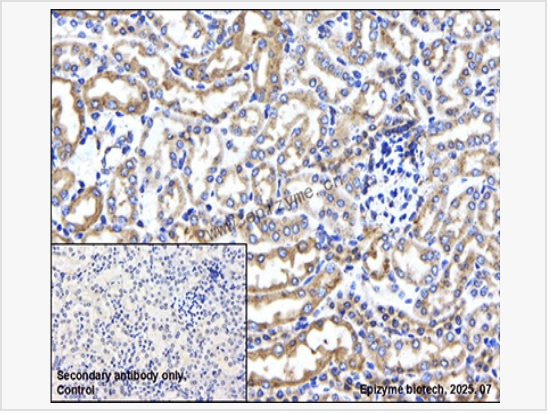
Western Blot - Anti-PDIA1 (PDI) Rabbit mAb [80L85K18]
All lanes: R012792 at 1:3,000 dilution
Lane 1: HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates
Lane 2: HepG2 (Human hepatocarcinoma epithelial cell) whole cell lysates
Lane 3: HCT116 (Human colorectal carcinoma epithelial cell) whole cell lysates
Lane 4: 293T (Human embryonic kidney cell) whole cell lysates
Lane 5: K562 (Human chronic myeloid leukemia cell) whole cell lysates
Lane 6: SH-SY5Y (Human neuroblastoma epithelial cell) whole cell lysates
Lane 7: C2C12 (Mouse myoblasts epithelial cell) whole cell lysates
Lane 8: PC-12 (Rat adrenal pheochromocytoma epithelial cell) whole cell lysates
Lane 9: Rat liver whole tissue lysates
Lysates/proteins at 10 µg per lane.
Secondary antibody: Goat Anti-Rabbit IgG (H+L), HRP Conjugated (Cat. No. LF102) at 1:5,000 dilution
Predicted band size: 57 kDa
Observed band size: 57 kDa
Developed using the ECL technique (Cat. No. SQ201).



Immunofluorescence - Anti-PDIA1 (PDI) Rabbit mAb [80L85K18]
Sample: HeLa cells
The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.5% Triton X-100 for 10 minutes and then blocked with 5% BSA in 0.1% PBS-Tween for 0.5 hours.
Primary antibodies: R012792 at 1:100 dilution and α-tubulin Mouse Monoclonal Antibody (Cat. No. LF209) at 1:100 dilution
Secondary antibodies: Goat anti-Rabbit (488) at 1:1,000 dilution (shown in green) and Goat anti-Mouse (555) at 1:1,000 dilution (shown in red)
Nuclei were stained with DAPI (shown in blue).



Immunohistochemistry - Anti-PDIA1 (PDI) Rabbit mAb [80L85K18]
Sample: Paraformaldehyde-fixed, paraffin embedded rat colon tissue
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins.
Primary antibody: R012792 at 1:200 dilution
Secondary antibody: Goat Anti-Rabbit IgG (H+L), HRP conjugated at 1:1,000 dilution
DAB was used as the chromogen.
Counter stained with hematoxylin.
Positive/negative staining were presented.
Only the secondary antibody was used as the negative control.



Immunohistochemistry - Anti-PDIA1 (PDI) Rabbit mAb [80L85K18]
Sample: Paraformaldehyde-fixed, paraffin embedded mouse kidney tissue
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins.
Primary antibody: R012792 at 1:200 dilution
Secondary antibody: Goat Anti-Rabbit IgG (H+L), HRP conjugated at 1:1,000 dilution
DAB was used as the chromogen.
Counter stained with hematoxylin.
Positive/negative staining were presented.
Only the secondary antibody was used as the negative control.