

Anti-ERp57 Picoband Antibody
Catalog # ABO12458

Specification

Anti-ERp57 Picoband Antibody - Product Information

| | |
|-------------------|------------------------|
| Application | WB, IHC-P, IHC-F |
| Primary Accession | P30101 |
| Host | Rabbit |
| Reactivity | Human, Mouse, Rat |
| Clonality | Polyclonal |
| Format | Lyophilized |

Description

Rabbit IgG polyclonal antibody for Protein disulfide-isomerase A3(PDIA3) detection. Tested with WB, IHC-P, IHC-F in Human;Mouse;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-ERp57 Picoband Antibody - Additional Information

Gene ID 2923

Other Names

Protein disulfide-isomerase A3, 5.3.4.1, 58 kDa glucose-regulated protein, 58 kDa microsomal protein, p58, Disulfide isomerase ER-60, Endoplasmic reticulum resident protein 57, ER protein 57, ERp57, Endoplasmic reticulum resident protein 60, ER protein 60, ERp60, PDIA3, ERP57, ERP60, GRP58

Calculated MW

56782 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, By Heat
Immunohistochemistry(Frozen Section), 0.5-1 µg/ml
Western blot, 0.1-0.5 µg/ml

Subcellular Localization

Endoplasmic reticulum. Endoplasmic reticulum lumen . Melanosome. Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

Tissue Specificity

Detected in the flagellum and head region of spermatozoa (at protein level).

Protein Name

Protein disulfide-isomerase A3

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human ERp57 (471-505aa RELSDFISYLQREATNPPVIQEEKPKKKKKAQEDL), different from the related mouse and rat sequences by two amino acids.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins.

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Anti-ERp57 Picoband Antibody - Protein Information

Name PDIA3 ([HGNC:4606](#))

Synonyms ERP57, ERP60, GRP58

Function

Protein disulfide isomerase that catalyzes the formation, isomerization, and reduction or oxidation of disulfide bonds in client proteins and functions as a protein folding chaperone (PubMed: [11825568](http://www.uniprot.org/citations/11825568), PubMed: [16193070](http://www.uniprot.org/citations/16193070), PubMed: [27897272](http://www.uniprot.org/citations/27897272), PubMed: [36104323](http://www.uniprot.org/citations/36104323), PubMed: [7487104](http://www.uniprot.org/citations/7487104)). Core component of the major histocompatibility complex class I (MHC I) peptide loading complex where it functions as an essential folding chaperone for TAPBP. Through TAPBP, assists the dynamic assembly of the MHC I complex with high affinity antigens in the endoplasmic reticulum. Therefore, plays a crucial role in the presentation of antigens to cytotoxic T cells in adaptive immunity (PubMed: [35948544](http://www.uniprot.org/citations/35948544), PubMed: [36104323](http://www.uniprot.org/citations/36104323)).

Cellular Location

Endoplasmic reticulum. Endoplasmic reticulum lumen {ECO:0000250|UniProtKB:P11598}. Melanosome Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV (PubMed:12643545).

Tissue Location

Detected in the flagellum and head region of spermatozoa (at protein level) (PubMed:20400973). Expressed in liver, stomach and colon (at protein level). Expressed in gastric parietal cells and chief cells (at protein level) (PubMed:24188822)

Anti-ERp57 Picoband Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)

- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-ERp57 Picoband Antibody - Images

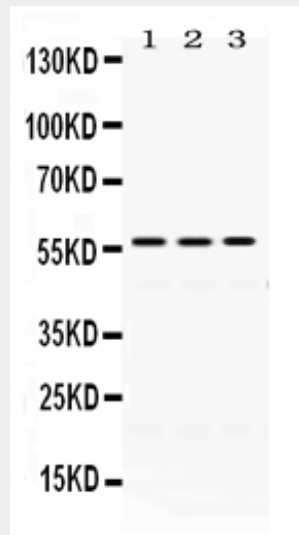


Figure 1. Western blot analysis of ERp57 using anti-ERp57 antibody (ABO12458). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: Rat Liver Tissue Lysate, Lane 2: Mouse Liver Tissue Lysate, Lane 3: A549 Whole Cell Lysate. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-ERp57 antigen affinity purified polyclonal antibody (Catalog # ABO12458) at 0.5 μ g/mL overnight at 4 $^{\circ}$ C, then washed with TBS-0.1% Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for ERp57 at approximately 57KD. The expected band size for ERp57 is at 57KD.

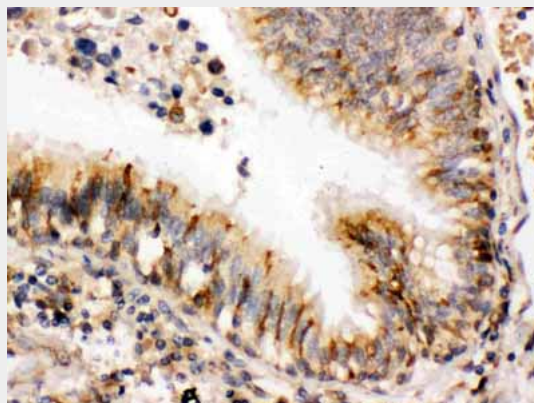


Figure 2. IHC analysis of PB9771 using anti-PB9771 antibody (ABO12458). PB9771 was detected in paraffin-embedded section of Human Lung Cancer Tissue. Heat mediated antigen retrieval was used.

performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-PB9771 Antibody (ABO12458) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

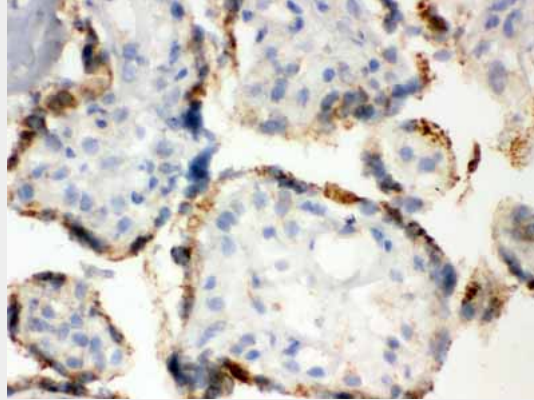


Figure 3. IHC analysis of ERp57 using anti-ERp57 antibody (ABO12458). ERp57 was detected in frozen section of human placenta tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-ERp57 Antibody (ABO12458) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

Anti-ERp57 Picoband Antibody - Background

PDIA3 (Protein disulfide isomerase family A, member 3), also called GRP58, Erp57 or ER60, is an isomerase enzyme. It is mapped on 15q15.3. PDIA3 is also part of the major histocompatibility complex (MHC) class I peptide-loading complex, which is essential for formation of the final antigen conformation and export from the endoplasmic reticulum to the cell surface. This gene encodes a protein of the endoplasmic reticulum that interacts with lectin chaperones calreticulin and calnexin to modulate folding of newly synthesized glycoproteins. The protein was once thought to be a phospholipase; however, it has been demonstrated that the protein actually has protein disulfide isomerase activity. It is thought that complexes of lectins and this protein mediate protein folding by promoting formation of disulfide bonds in their glycoprotein substrates.