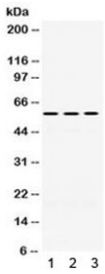
PDIA3 Antibody / Protein Disulfide-Isomerase A3 Antibody (R32052)

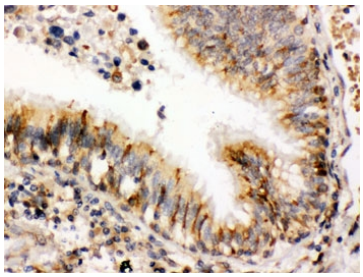
Catalog No.	Formulation	Size
R32052	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

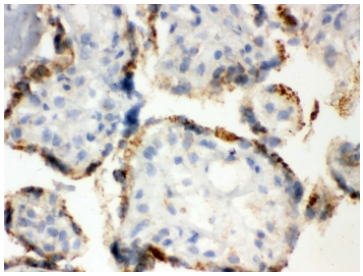
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA, 0.025% sodium azide
UniProt	P30101
Localization	Cytoplasmic, membrane
Applications	Western blot: 0.1-0.5ug/ml Immunohistochemistry (FFPE): 0.5-1ug/ml Immunohistochemistry (Frozen): 0.5-1ug/ml Immunofluorescence: 2-4ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This PDIA3 Antibody / Protein Disulfide-Isomerase A3 Antibody is available for research use only.



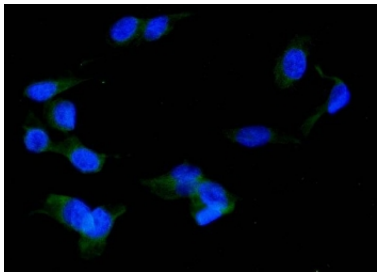
PDIA3 Antibody WB. Western blot analysis of PDIA3 in rat liver, mouse liver and human A549 cell lysates using PDIA3 Antibody. Lane 1: rat liver; Lane 2: mouse liver; Lane 3: human A549. A specific band is detected at approximately 57â€“60 kDa, consistent with the expected molecular weight of PDIA3. This PDIA3 Antibody, also called a Protein Disulfide-Isomerase A3 Antibody, detects PDIA3 across human, rat and mouse samples and supports studies of ER protein folding, disulfide bond formation and cellular proteostasis.



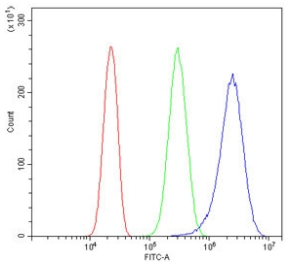
PDIA3 Antibody Human Lung Cancer IHC. IHC staining of FFPE human lung cancer tissue using PDIA3 Antibody. Heat-induced epitope retrieval was performed by boiling tissue sections in 10 mM citrate buffer (pH 6.0) for 20 minutes, followed by cooling prior to staining. Positive PDIA3 staining is observed in the tumor epithelium. This PDIA3 Antibody, also called a Protein Disulfide-Isomerase A3 Antibody, demonstrates PDIA3 expression in human lung cancer and supports studies of ER protein folding, quality control and proteostasis.



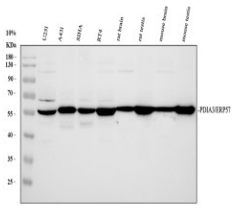
PDIA3 Antibody Human Placenta IHC-F. IHC staining of frozen human placental tissue using PDIA3 Antibody. Positive PDIA3 staining is observed within the placental tissue. This PDIA3 Antibody, also called a Protein Disulfide-Isomerase A3 Antibody, demonstrates PDIA3 expression in human placenta and supports studies of ER protein folding, glycoprotein quality control and proteostasis.



PDIA3 Antibody U-2 OS Cell IF. Immunofluorescent staining of FFPE human U-2 OS cells using PDIA3 Antibody at 2 ug/ml. Heat-induced epitope retrieval was performed by steaming in citrate buffer (pH 6.0) for 20 minutes. PDIA3 staining is shown in green, with DAPI nuclear counterstaining in blue. Positive cytoplasmic PDIA3 staining is observed in U-2 OS cells. This PDIA3 Antibody, also called a Protein Disulfide-Isomerase A3 Antibody, demonstrates PDIA3 localization consistent with its role in ER protein folding, quality control and proteostasis.



PDIA3 Antibody PC-3 Cell FACS. Flow cytometry analysis of human PC-3 cells using PDIA3 Antibody at 1 ug/million cells. Cells were blocked with goat serum prior to staining. The histogram shows PDIA3 staining (blue), isotype control (green) and unstained cells (red). A strong fluorescence shift is observed with PDIA3 staining relative to the isotype control. This PDIA3 Antibody, also called a Protein Disulfide-Isomerase A3 Antibody, detects PDIA3 in human PC-3 cells and supports studies of ER protein folding, quality control and proteostasis.



ERp57 Antibody Human, Mouse and Rat WB. Western blot analysis of ERp57 in human U251, A431, SiHa and RT4 cell lysates, rat brain and testis tissue lysates, and mouse brain and testis tissue lysates using ERp57 Antibody. Lane 1: U251; Lane 2: A431; Lane 3: SiHa; Lane 4: RT4; Lane 5: rat brain; Lane 6: rat testis; Lane 7: mouse brain; Lane 8: mouse testis. A specific band is detected at approximately 57 kDa, consistent with the expected molecular weight of ERp57/PDIA3. This ERp57 Antibody, also called a GRP58 Antibody, detects ERp57 across human, rat and mouse samples and supports studies of ER protein folding, disulfide bond formation and cellular proteostasis.

Description

PDIA3 Antibody / Protein Disulfide-Isomerase A3 Antibody recognizes PDIA3, an endoplasmic reticulum oxidoreductase also widely known as ERp57 and GRP58. PDIA3 belongs to the protein disulfide isomerase family and participates in the formation, reduction and rearrangement of disulfide bonds during protein folding. Within the ER, PDIA3 works closely with the lectin chaperones calnexin and calreticulin to promote the proper folding and maturation of newly synthesized glycoproteins. These functions place PDIA3 within the cellular machinery responsible for ER protein quality control and proteostasis.

PDIA3 contains multiple thioredoxin-like domains, including catalytically active domains containing CXXC motifs that

mediate thiol-disulfide exchange reactions. Its association with calnexin and calreticulin helps direct PDIA3 toward glycoprotein substrates undergoing maturation in the ER lumen. By facilitating correct disulfide bond formation, PDIA3 contributes to the production of properly folded proteins capable of progressing through the secretory pathway. Misfolded proteins may instead be retained for additional folding attempts or directed toward degradation, connecting PDIA3 with broader mechanisms that maintain protein homeostasis.

Protein Disulfide-Isomerase A3 also has an important role in antigen processing and presentation. PDIA3 is a component of the MHC class I peptide-loading complex together with calreticulin, tapasin and other proteins involved in assembling peptide-MHC class I complexes. Within this machinery, PDIA3 contributes to the stability and function of the peptide-loading complex as antigenic peptides are selected for presentation at the cell surface. A PDIA3 Antibody can therefore support studies spanning ER protein quality control, antigen processing and molecular mechanisms involved in immune recognition.

Although PDIA3 is strongly associated with the endoplasmic reticulum, its reported biology extends beyond its classical role as an ER folding catalyst. PDIA3 has been detected in additional cellular compartments and investigated in signaling, cellular stress responses and protein-protein interactions. Altered PDIA3 expression or function has been studied in cancer, neurological disease and other conditions associated with disturbances in protein homeostasis. Its involvement in multiple cellular processes makes careful evaluation of tissue, cell type and subcellular localization important when studying PDIA3 experimentally.

PDIA3 provides an important connection between protein folding, ER quality control and cellular responses to proteotoxic stress. Its oxidoreductase activity and cooperation with calnexin and calreticulin are central to glycoprotein maturation, while its participation in the MHC class I peptide-loading complex extends its relevance to antigen processing. These functions place PDIA3 within the broader cellular mechanisms that preserve protein quality and respond to disruptions in protein homeostasis. NSJ Bioreagents supplies antibodies to PDIA3 and other proteins involved in cellular stress and proteostasis. An PDIA3 Antibody can support research on Protein Disulfide-Isomerase A3, ER protein folding, disulfide bond formation, glycoprotein quality control and cellular stress responses.

For related targets involved in ER protein folding, quality control and proteostasis, explore our Endoplasmic Reticulum Antibodies page.

Application Notes

Optimal dilution of the PDIA3 Antibody / Protein Disulfide-Isomerase A3 Antibody should be determined by the researcher.

Immunogen

Amino acids RELSDFISYLQREATNPPVIQEEKPKKKKKAQEDL of human PDIA3/ERp57 were used as the immunogen for the PDIA3 antibody.

Storage

After reconstitution, the PDIA3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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