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PDIA3 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2922c

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P30101
Other Accession	P38657
Reactivity	Human
Predicted	Bovine, Mouse, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB20876
Calculated MW	56782
Antigen Region	192-220

Additional Information

Gene ID	2923
Other Names	Protein disulfide-isomerase A3, 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
Target/Specificity	This PDIA3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 192-220 amino acids from the Central region of human PDIA3.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PDIA3 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

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, PubMed:16193070, PubMed:27897272, PubMed:36104323, PubMed: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, PubMed: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)

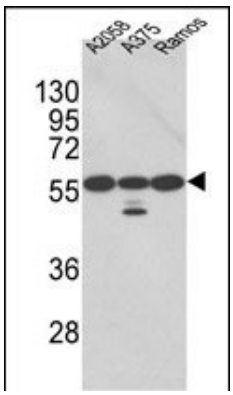
Background

PDIA3 is 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.

References

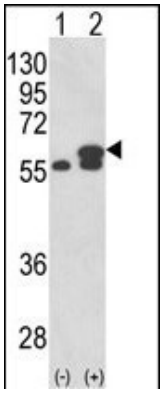
Vigneron,N., et.al., Eur. J. Immunol. 39 (9), 2371-2376 (2009)
Xu,D.,et.al., Am. J. Physiol. Lung Cell Mol. Physiol. 297 (1), L44-L51 (2009)

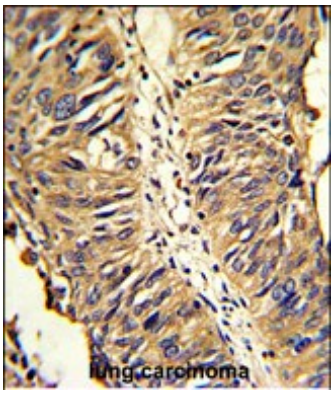
Images



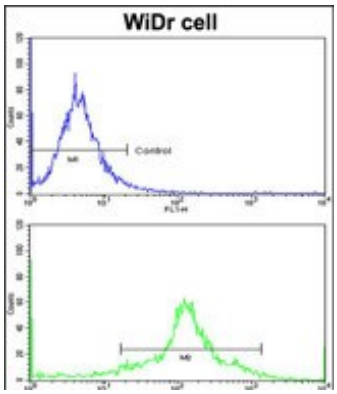
Western blot analysis of PDIA3 Antibody (Center) (Cat. #AP2922c) in A2058, A375, Ramos cell line lysates (35ug/lane). PDIA3 (arrow) was detected using the purified Pab.(2ug/ml)

Western blot analysis of PDIA3 (arrow) using rabbit polyclonal PDIA3 Antibody (Center) (Cat. #AP2922c). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the PDIA3 gene (Lane 2) .





Formalin-fixed and paraffin-embedded human lung carcinoma reacted with PDIA3 Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Flow cytometric analysis of widr cells using PDIA3 Antibody (Center)(bottom histogram) compared to a negative control cell (top histogram)FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.