

# PDI Monoclonal Antibody (RL90)

## Product Details

Size	100 µL
Species Reactivity	Hamster, Human, Mouse, Pig, Rat
Published Species	Rat, Non-human primate, Hamster, Human, Mouse, Rhesus monkey
Host/Isotype	Mouse / IgG2a
Class	Monoclonal
Type	Antibody
Clone	RL90
Conjugate	Unconjugated
Immunogen	Purified rat PDI protein.
Form	Liquid
Concentration	1 mg/mL
Purification	Protein A
Storage buffer	1mg/mL BSA
Contains	0.05% sodium azide
Storage conditions	-20° C, Avoid Freeze/Thaw Cycles
RRID	AB_2163120

Applications	Tested Dilution	Publications
Western Blot (WB)	1:200-1:2,000	22 Publications
Immunohistochemistry (IHC)	-	9 Publications
Immunohistochemistry (Paraffin) (IHC (P))	1:100	-
Immunohistochemistry (Frozen) (IHC (F))	1:100	1 Publication
Immunocytochemistry (ICC/IF)	1:100	34 Publications
Flow Cytometry (Flow)	0.5-1 µg/test	1 Publication
Immunoprecipitation (IP)	Assay-dependent	3 Publications
Neutralization (Neu)	-	4 Publications
Immunomicroscopy (IM)	Assay-dependent	-

## Product Specific Information

MA3-019 detects protein disulphide-isomerase (PDI) from human, rat, porcine and mouse tissues as well as hamster cells.

MA3-019 has been successfully used in Western blot, immunofluorescence, immunohistochemical, flow cytometry, and immunoprecipitation procedures. By Western blot, this antibody detects a protein at 59 kDa representing PDI from rat liver extract or a slightly higher protein at 61 kDa representing PDI from human liver extract. Immunohistochemical staining of PDI in rat intestine with MA3-019 yields a pattern consistent with cytoplasmic staining. In immunoprecipitation procedures MA3-019 has been shown to inhibit the activity of PDI in vitro. MA3-019 has also been found to inhibit disulfide bond reduction of the HIV protein, gp120, at the cell surface of CHO cells and human lymphoid cells.

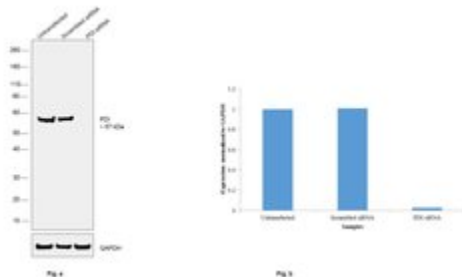
In immunohistochemistry procedures, formalin-fixed paraffin-embedded tissue sections are recommended.

The MA3-019 antigen is purified rat PDI.

## Advanced Verification Data

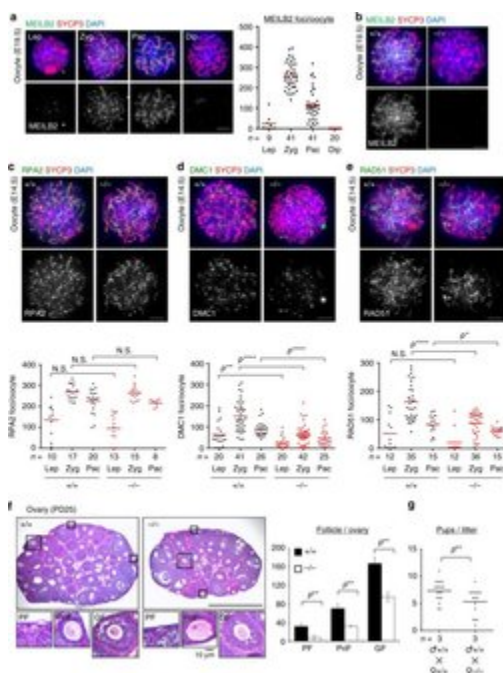
### PDI Antibody (MA3-019)

Antibody specificity was demonstrated by siRNA mediated knockdown of target protein. A-431 cells were transfected with PDI siRNA and reduction of signal was observed in Western Blot using PDI Monoclonal Antibody (Product # MA3-019). Knockdown validation info.

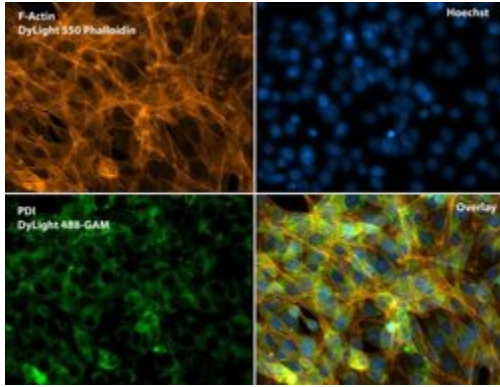


### PDI Antibody (MA3-019)

Fig. 1 Role of PDIA1 in oxidant generation by colon carcinoma cells with distinct levels of KRas activation. a KRas expression and activity in Caco2, HKE3, and HCT116 cells. Active KRas was pulled down with GST-RBD beads from lysates of serum-starved cells treated with EGF 25?ng/mL for 10?min. Aliquots of the lysates were blotted for total KRas and GAPDH as loading control. b RNAseq analysis of P4HB (PDIA1) gene in Caco2, HCT116, and HCT15 cells, showing mean expression in FPKM (Fragments Per Kilobase Million), P4HB fold-change expression in HCT15 vs. Caco2 ( $q < 0.000001$ ) and HCT116 vs. Caco2 ( $q < 0.000001$ ). c PDIA1 basal protein expression by western analysis, normalized for GAPDH ( $n = 3$ ) and quantified using Odyssey software. d Intracellular PDIA1 titration, using Human P4HB ELISA Pair Set (SinoBiological). Test  $t^{**} p < 0.01$ , ( $n = 4$ ); e–g ROS production after 72?h of PDIA1 silencing, measured by HPLC analysis of DHE oxidation products. DHE oxidation produces, among many others, two major products: 2-hydroxyethidium (EOH), which is representative of superoxide species and ethidium, representative of other oxidant species. Ctrl negative, si-RNA control; ? si-PDI, si-RNA against PDIA1 protein. Representative immunoblots of PDI silencing for each cell type Test  $t^{*} p < 0.05$ ;  $^{**} p < 0.01$ . For Caco2 cells,  $n = 3$ ; HKE3 cells,  $n = 4$ ; HCT116 cells,  $n = 5$  Knockdown validation info.



## Product Images For PDI Monoclonal Antibody (RL90)



### PDI Antibody (MA3-019) in ICC/IF

Immunofluorescent analysis of Phalloidin (orange) and PDI (green) in NIH 3T3 cells. Formalin fixed cells were permeabilized with 0.1% Triton X-100 in PBS for 10 minutes at room temperature and blocked with 2% BSA (Product # 37525) in PBS + 0.1% Triton X-100 for 30 minutes at room temperature. Cells were probed with a PDI monoclonal antibody (Product # MA3-019) at a dilution of 1:75 for at least 1 hour at room temperature, washed with PBS, and incubated with DyLight 488 goat anti-mouse IgG secondary antibody (Product # 35502) at a dilution of 1:250 for 30 minutes at room temperature. Actin was stained with DyLight 550 Phalloidin (Product # 21835) at a dilution of 1:120 (2.5 units/mL final concentration) and nuclei (blue) were stained with Hoechst (Product # 62249) at a concentration of 1  $\mu$ g/mL for 30 minutes. Images were taken on a Zeiss Axio Observer Z1 microscope at 20X magnification.

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## Western Blot (22)

PloS one

**Shear stress-exposed pulmonary artery endothelial cells fail to upregulate HSP70 in chronic thromboembolic pulmonary hypertension.**

"MA3-019 was used in Western Blotting to investigate the pathophysiological mechanisms underlying chronic thromboembolic pulmonary hypertension."

Authors: Salibe-Filho W, Araujo TLS, G Melo E, B C T Coimbra L, Lapa MS, Acencio MMP, Freitas-Filho O, Capelozzi VL, Teixeira LR, Fernandes CJCS, Jatene FB, Laurindo FRM, Terra-Filho M

**Species**  
Human

**Dilution**  
1:1000

**Year**  
2021

Frontiers in cell and developmental biology

**Overexpression of FAM46A, a Non-canonical Poly(A) Polymerase, Promotes Hemin-Induced Hemoglobinization in K562 Cells.**

"MA3-019 was used in Immunocytochemistry-immunofluorescence to summarize that FAM46A is a novel poly(A) polymerase that functions as a critical intracellular modulator of hemoglobinization."

Authors: Lin HH, Lo YL, Wang WC, Huang KY, I KY, Chang GW

**Species**  
Mouse

**Dilution**  
Not Cited

**Year**  
2020

[View more WB references on thermofisher.com](#)

## Immunohistochemistry (9)

Frontiers in cellular neuroscience

**Endocytosis of Activated Muscarinic m2 Receptor (m2R) in Live Mouse Hippocampal Neurons Occurs via a Clathrin-Dependent Pathway.**

"Published figure using PDI monoclonal antibody (Product # MA3-019) in Immunofluorescence"

Authors: Lambert L, Dubayle D, Fafouri A, Herzog E, Csaba Z, Dournaud P, El Mestikawy S, Bernard V

**Species**  
Human

**Dilution**  
Not Cited

**Year**  
2020

The Journal of clinical investigation

**TGF--induced epigenetic deregulation of SOCS3 facilitates STAT3 signaling to promote fibrosis.**

"MA3-019 was used in Immunohistochemistry to identify a pathway of epigenetic imprinting of fibroblasts in fibrotic disease with translational implications for the development of targeted therapies in fibrotic diseases."

Authors: Dees C, Pötter S, Zhang Y, Bergmann C, Zhou X, Luber M, Wohlfahrt T, Karouzakis E, Ramming A, Gelse K, Yoshimura A, Jaenisch R, Distler O, Schett G, Distler JH

**Species**  
Human

**Dilution**  
Not Cited

**Year**  
2020

[View more IHC references on thermofisher.com](#)

## More applications with references on thermofisher.com

IHC (F) (1)

ICC/IF (34)

Flow (1)

IP (3)

Neu (4)

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