



Product Specification Sheet

Protein disulfide-isomerase A2 antibody

<input type="checkbox"/> Cat # PDIH11-A	Rabbit anti-Human PDIA2 antibody	SIZE: 100 µg
<input type="checkbox"/> Cat # PDIM21-A	Rabbit anti-Mouse PDIA2 antibody	SIZE: 100 µg

Protein disulfide isomerase family A member 2 (PDIA2) is a protein that in humans is encoded by the PDIA2 gene. This gene encodes a member of the disulfide isomerase (PDI) family of endoplasmic reticulum (ER) proteins that catalyze protein folding and thiol-disulfide interchange reactions. PDI is a ubiquitous, highly conserved redox chaperone enzyme from the thioredoxin superfamily. PDI has an N-terminal ER-signal sequence, two catalytically active thioredoxin (TRX) domains, two TRX-like domains and a C-terminal ER-retention sequence. The protein plays a role in the folding of nascent proteins in the endoplasmic reticulum by forming disulfide bonds through its thiol isomerase, oxidase, and reductase activity. The encoded protein also possesses estradiol-binding activity and can modulate intracellular estradiol levels. Diseases associated with PDIA2 include Alpha Thalassemia-Intellectual Disability Syndrome Type 1 and Multiple Sulfatase Deficiency.

Source of Antigen or Antibodies

Uniprot: PDIH11-A: Q13087 PDIM21-A: D3Z6P0

Host: Rabbit

Clonality: Polyclonal

Purification: Ammonium sulfate followed by peptide affinity purification

Immunogen: Synthetic peptide derived from PDIA2 within region 400-500

Cross reactivity: The peptide (**PDIH11-A**) used as an immunogen exhibits 92% homology with Non-Human Primates, Pig, Dog, and Cat. 85% Horse, Bovine, Sheep, Rat, and Mouse

The peptide (**PDIM21-A**) used as an immunogen exhibits 93% homology with Rat, Horse, and Dog. 86% Cat. 79% Human, Goat, and Sheep. 71% Non-Human Primate and Chicken.

Subcellular Location: Endoplasmic reticulum

Alternative names: Pancreas-specific protein disulfide isomerase. PDIp

Recommended Secondary Antibody: Goat anti-Rabbit IgG-HRP (**ADI cat#20320**)

Form & Storage of Antibodies

Affinity pure IgG Solution

Concentration: 0.5 mg/ml Volume: 200 µl
Supplied in PBS, pH 7.4 + 0.1% BSA
The antibody can be made available carrier free or conjugated to HRP, Biotin, or FITC on request

Lyophilized powder

Reconstitute powder in 200 µl distilled water to 0.5 mg/ml

Storage:

Short-term: 4°C for 1 month

Long-term: at -20°C or below in suitable aliquots after reconstitution for 1 year. Do not expose to multiple freeze/thaw cycles or store working, diluted solutions. Glycerol may be added to a final concentration of 50% and antibodies can be stored un-aliquoted at -20°C.

Recommended Usage

ELISA: Assay dependent concentration. Typically, between 0.1-2.0 µg/ml for capture/detection antibodies.

Western Blotting: 0.2-1.0 µg/ml

Predicted band size: 58 kDa

Observed band size: 58 kDa.

Immunohistochemistry/Immunocytochemistry: 1-10 µg/ml. QC tested using 10 mM sodium citrate pH 6 antigen retrieval buffer. The antibody may work better with other retrieval solutions or no antigen retrieval.

The above concentrations are a *suggestion*, user's must optimize their assay based on their own conditions. The antibody may work in other applications. These methods have not been tested by ADI.

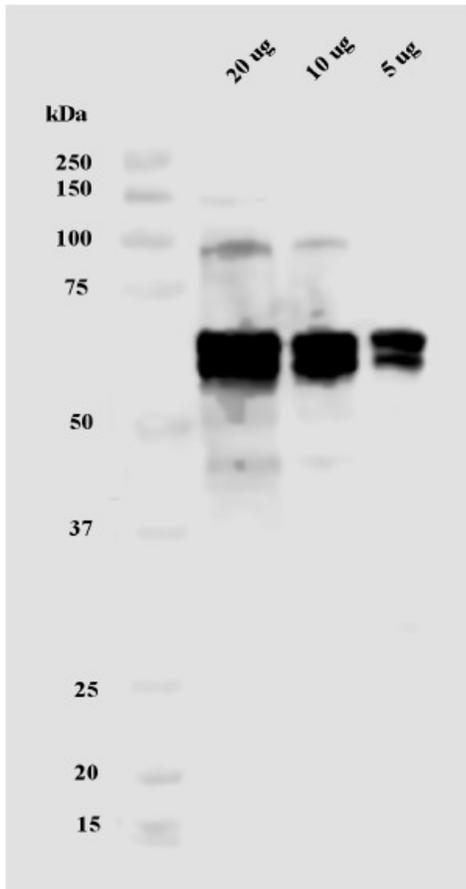
**This product is for In vitro research use only.*

Related materials available from ADI

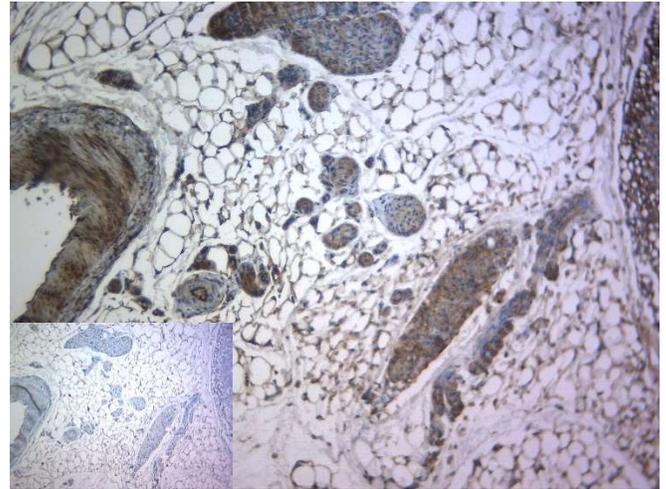
Catalog#	Description'
DDIT3H-A	Rabbit anti-Human DDIT3/GADD 153 antibody
DDIT3M-A	Rabbit anti-Mouse DDIT3/GADD 153 antibody
CANX11-A	Rabbit Anti-Human Calnexin (S583) antibody

PDIM21--A

1902071A



Western blotting: 20, 10, and 5 µg of a whole Mouse Pancreas lysate was heated for 5 minutes at 95°C then electrophoretically separated on a 10% SDS-PAGE gel. The gel was run at 100V for ~1 hour and 30 minutes then transferred to a 0.2 µm nitrocellulose membrane using the 'Mixed MW' settings on a Transblot Turbo (Biorad). The blot was blocked for 1 hour at room temperature with Fish plasma (Aquablock, EastCoastBio). **PDIM21-A** was diluted with TBST+0.1% BSA to 1 µg/ml and incubated overnight at 4°C. The blot was washed with TBS-T 3 times for 5 minutes each. Goat anti-rabbit IgG HRP (**ADI cat#20320**) was diluted in TBST+0.1% BSA at a 1:10,000 dilution (50 ng/ml) then incubated for 1 hour at room temperature. The blot was washed 3 times with TBS-T for 5 minutes each. The blot was then incubated with ADI Femto ECL substrate (**ADI cat#80210**) for 5 minutes and imaged on a CCD imaging system (C-DiGit, LI-COR).



Immunohistochemistry: FFPE Rat Pancreas slides were heated for 20 minutes at 60°C then deparaffinized. Antigen retrieval was performed for 10 minutes at 95°C in a microwave using 10 mM pH 6, sodium citrate buffer. The slide was then cooled for 20 minutes at room temperature before being blocked for 30 minutes with 2.5% normal goat serum. **PDIM21-A** was diluted to 5 µg/ml in TBST+0.1% BSA and incubated overnight at 4°C (Inset represents peptide absorbed antibody incubation). The slides were then washed twice and incubated with 3% hydrogen peroxide for 10 minutes to quench endogenous peroxidase. The slide was washed then incubated with Goat anti-Rabbit IgG HRP polymer detection reagent for 30 minutes at room temperature. The slide was washed twice, incubated with DAB for 3 minutes, washed with distilled water, then counterstained for 1 minute with Gil's II Hematoxylin before being cover-slipped.