

PDI monoclonal antibody (1D3)

The mammalian protein disulphide-isomerase (PDI) family encompasses several highly divergent proteins involved in the processing and maturation of secretory proteins in the ER by catalyzing the rearrangement of disulphide bonds. PDI, an abundant protein of the ER (>400uM), contains a carboxy-terminal retention signal sequence, KDEL, similar to that of BiP and Grp94. The PDI proteins are characterized by the presence of one or more domains of ~95-110 amino acids related to the cytoplasmic protein thioredoxin. All but the PDI-D subfamily are composed entirely of repeats of such domains, with at least one domain containing - and one domain lacking - a redox-active-Cys-X-X-Cys-tetrapeptide. In addition to roles as redox catalysts and isomerases, PDI proteins perform such functions as peptide binding and cell adhesion, and may conduct chaperone activities. Platelet surface thiols and disulphides play an important role in platelet responses. Catalytically active PDI resides on platelet surfaces where it mediates platelet aggregation and secretion by reducing disulfide bonds, thus exposing fibrinogen receptors in platelets.

This antibody is covered by our [Worry-Free Guarantee](#).

Citations: 175

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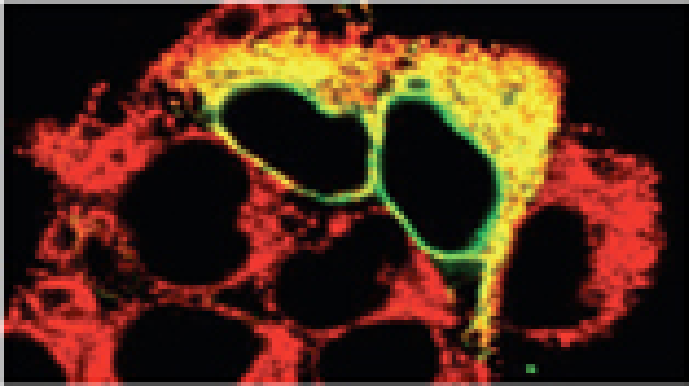
Ordering Information

[Order Online »](#)

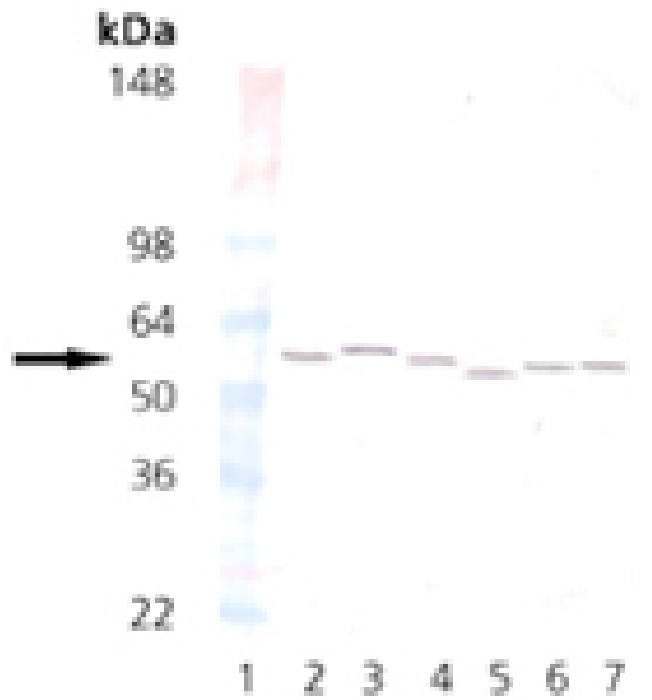
ADI-SPA-891-J	1mg
ADI-SPA-891-D	50µg
ADI-SPA-891-F	200µg

Manuals, SDS & CofA

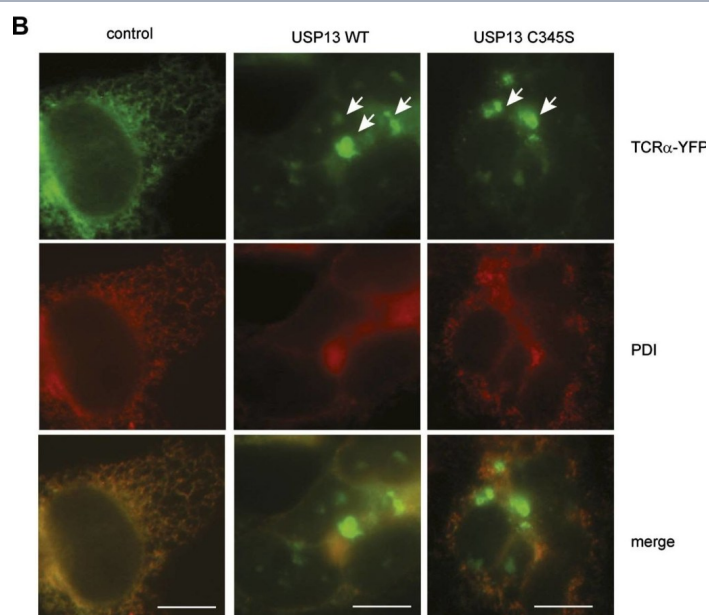
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Immunohistochemistry analysis of human HEK293 cells transfected with wild type TorsinA co-stained with PDI mAb (1D3) (red). Co-localization of TorsinA and PDI proteins merge as yellow.



Western blot analysis of PDI: Lane 1: MW marker, Lane 2: HeLa (HS) Lane 3: ADI-SPP-891, Lane 4: Vero (HS), Lane 5: 3T3 (HS), Lane 6: PC-12 (HS), Lane 7: CHO-K1 (HS)



USP13 loss-of-function causes TCR α to accumulate in aggregates in cells. (A) Cells co-expressing TCR α -YFP together with the indicated shRNAs were subject to sequential extraction, first by an NP40-containing lysis buffer, then by the Laemmli buffer. The NP40 soluble (S) and insoluble (P) fractions were analyzed by immunoblotting. UBE1 and H2A serve as markers for the NP40 soluble (S) and insoluble (P) fractions, respectively. (B) Expression of USP13 inhibits TCR α degradation in a dominant negative manner. COS7 cells transfected with TCR α -YFP together with either control or the indicated USP13-expressing constructs were stained by a PDI antibody in red. Cells were imaged using a Zeiss Axiovert fluorescence microscope with the exposure time set to auto. Note that in USP13 and USP13 C345S transfected cells, TCR α -YFP often accumulates in aggregates that are not localized to the same focal plane as the ER marker PDI. Scale bars, 10 μ m. (C) USP13 knockdown stabilizes an ERAD substrate in both glycosylated and deglycosylated forms. Cells co-expressing TCR α - Δ TMD together with the indicated shRNAs were subject to sequential extraction, first by an NP40-containing lysis buffer, then by the Laemmli buffer. Where indicated, the extracts were treated with EndoH before immunoblotting. DOI:<http://dx.doi.org/10.7554/eLife.01369>.008

Image collected and cropped by CiteAb under a CC0-1.0 license from the following publication: USP13 antagonizes gp78 to maintain functionality of a chaperone in ER-associated degradation. *Elife* (2014)

Handling & Storage

Handling Avoid freeze/thaw cycles.

Long Term Storage -20°C

Shipping Blue Ice

Regulatory Status RUO - Research Use Only

Product Details

Alternative Name P4HB, protein disulfide isomerase

Application Electron microscopy, ICC, IF, IHC, WB

Application Notes Detects a band of ~58kDa by Western blot.

Clone 1D3

Formulation Liquid. In PBS, pH 7.2, containing 50% glycerol and 0.09% sodium azide.

Host Mouse

Immunogen Synthetic peptide corresponding to the sequence near the C-terminus of rat PDI.

Isotype IgG1

Purity Detail Protein G affinity purified.

Recommendation Dilutions/Conditions Immunohistochemistry (1:200-1:500)Western Blot (1:1,000, colorimetric)Suggested dilutions/conditions may not be available for all applications.Optimal conditions must be determined individually for each application.

Source Purified from ascites

Species Reactivity Bovine, Chicken, Dog, Guinea pig, Hamster, Human, Monkey, Mouse, Porcine, Rabbit, Rat, Sheep, Xenopus

Technical Info / Product Notes

Cited samples:

[For an overview on cited samples please click here.](#)

UniProt ID

P04785

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