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.

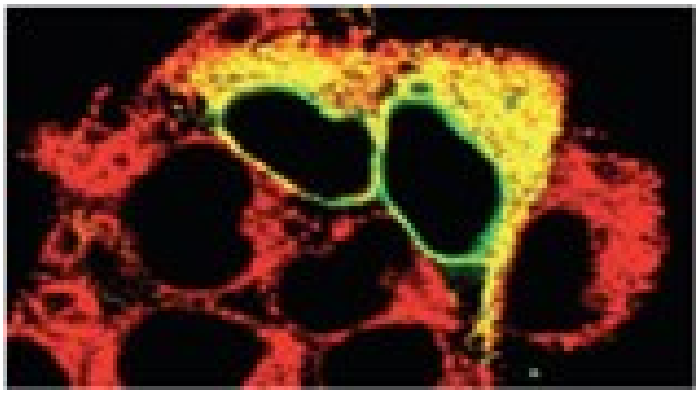
This antibody is covered by our Worry-Free Guarantee.

Citations: 175 View Online »

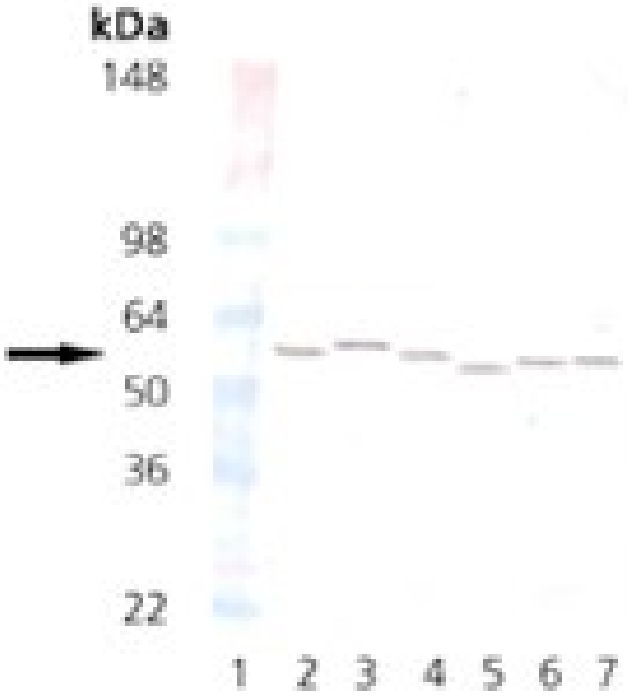
Ordering Information Order Online »

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

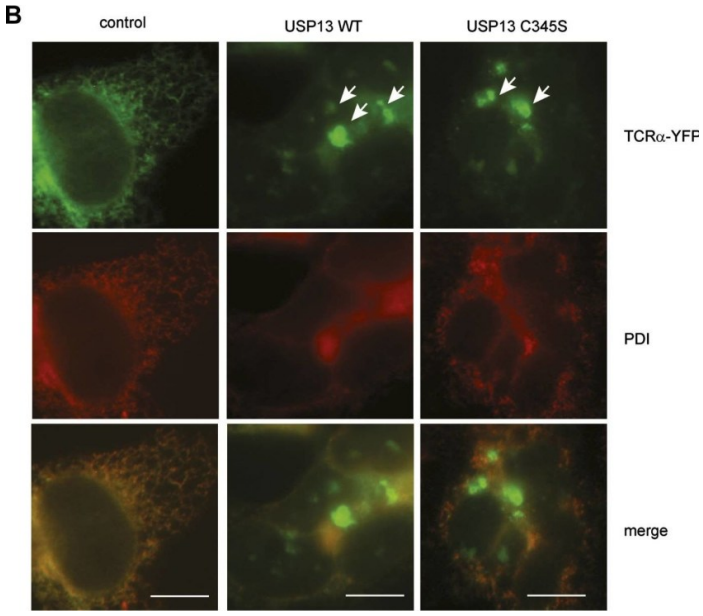
Manuals, SDS & CofA View Online »



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 TCRα to accumulate in aggregates in cells.(A) Cells co-expressing TCRα-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 TCRα degradation in a dominant negative manner. COS7 cells transfected with TCRα-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, TCRα-YFP often accumulates in aggregates that are not localized to the same focal plane as the ER marker PDI. Scale bars, 10 μm. (C) USP13 knockdown stabilizes an ERAD substrate in both glycosylated and deglycosylated forms. Cells co-expressing TCRα-ΔTMD 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

Worry-free Guarantee **This antibody is covered by our Worry-Free Guarantee .**

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