

PDIR (P-20): sc-66803

BACKGROUND

Oxidoreductase-protein disulfide isomerase (PDI) is a homodimer that catalyzes thiol-disulfide exchange, mediates folding of newly synthesized proteins and functions as a molecular chaperone. PDIR (protein disulfide isomerase-related protein), also known as PDIA5 (protein disulfide-isomerase A5), is a 519 amino acid protein that catalyzes the rearrangement of sulfur-sulfur bonds in various proteins. Localized to the lumen of the endoplasmic reticulum (ER), PDIR has an oxidative refolding activity that is specific for α 1-antitrypsin (AAT) and aids in the formation of disulfide bonds in the ER lumen. PDIR contains one ER retention signal at its C-terminus and three thioredoxin (CXXC) motifs which mediate the substrate-specific isomerase, chaperone and redox activity of PDIR.

REFERENCES

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- Jessop, C.E., Chakravarthi, S., Watkins, R.H. and Bulleid, N.J. 2004. Oxidative protein folding in the mammalian endoplasmic reticulum. *Biochem. Soc. Trans.* 32: 655-658.
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- Alanen, H.I., Salo, K.E., Pirneskoski, A. and Ruddock, L.W. 2006. pH dependence of the peptide thiol-disulfide oxidase activity of six members of the human protein disulfide isomerase family. *Antioxid. Redox Signal.* 8: 283-291.

CHROMOSOMAL LOCATION

Genetic locus: PDIA5 (human) mapping to 3q21.1.

SOURCE

PDIR (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PDIR of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-66803 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PDIR (P-20) is recommended for detection of PDIR of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PDIR siRNA (h): sc-62767, PDIR shRNA Plasmid (h): sc-62767-SH and PDIR shRNA (h) Lentiviral Particles: sc-62767-V.

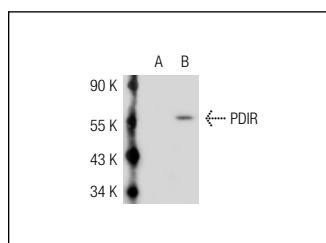
Molecular Weight of PDIR: 60 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, JAR cell lysate: sc-2276 or Hep G2 cell lysate: sc-2227.

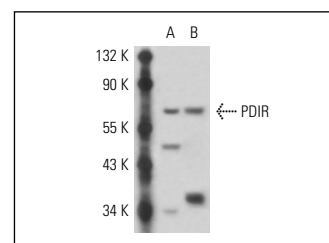
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PDIR (P-20): sc-66803. Western blot analysis of PDIR expression in non-transfected: sc-117752 (A) and mouse PDIR transfected: sc-122469 (B) 293T whole cell lysates.



PDIR (P-20): sc-66803. Western blot analysis of PDIR expression in Hep G2 (A) and JEG-3 (B) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.