

PDI (G-20): sc-30931

BACKGROUND

Oxidoreductase-protein disulfide isomerase (PDI) is a homodimer consisting of subunits that catalyzes thiol-disulfide exchange, mediates folding of newly synthesized proteins, and functions as a molecular chaperone. PDI localizes to the lumen of the endoplasmic reticulum (ER) where in conjunction with folding-helper proteins, such as immunoglobulin heavy chain binding protein (BiP), mediates tertiary and quaternary protein-processing. Cell surface PDI induces sulfhydryl-mediated conformational changes in integrin-mediated adhesion receptor-ligand interactions, thereby regulating integrin responses and cell adhesion. Additionally, PDI functions as a subunit of two more complex enzyme systems: the prolyl-4-hydroxylase and the triacylglycerol transfer proteins.

REFERENCES

- Burgess, J.K., et al. 2000. Physical proximity and functional association of glycoprotein 1b α and protein-disulfide isomerase on the platelet plasma membrane. *J. Biol. Chem.* 275: 9758-9766.
- Clappa, P., et al. 2000. Mutations that destabilize the α' domain of human protein-disulfide isomerase indirectly affect peptide binding. *J. Biol. Chem.* 275: 13213-13218.
- Mayer, M., et al. 2000. BiP and PDI cooperate in the oxidative folding of antibodies *in vitro*. *J. Biol. Chem.* 275: 29421-29425.

CHROMOSOMAL LOCATION

Genetic locus: P4HB (human) mapping to 17q25.3; P4hb (mouse) mapping to 11 E2.

SOURCE

PDI (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PDI 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-30931 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

PDI (G-20) is recommended for detection of precursor and mature PDI of mouse, rat and 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).

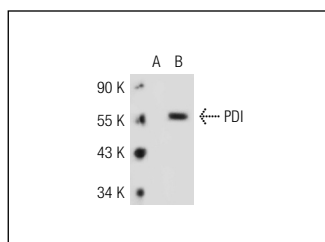
PDI (G-20) is also recommended for detection of precursor and mature PDI in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for PDI siRNA (h): sc-36201, PDI siRNA (m): sc-36202, PDI shRNA Plasmid (h): sc-36201-SH, PDI shRNA Plasmid (m): sc-36202-SH, PDI shRNA (h) Lentiviral Particles: sc-36201-V and PDI shRNA (m) Lentiviral Particles: sc-36202-V.

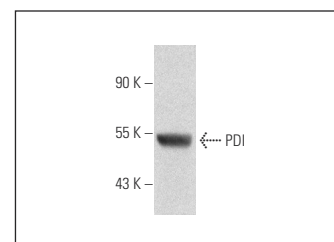
Molecular Weight of PDI: 55 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, Hep G2 cell lysate: sc-2227 or PDI (h): 293T Lysate: sc-111237.

DATA



PDI (G-20): sc-30931. Western blot analysis of PDI expression in non-transfected: sc-117752 (A) and human PDI transfected: sc-111237 (B) 293T whole cell lysates.



PDI (G-20): sc-30931. Western blot analysis of PDI expression in Hep G2 whole cell lysate.

SELECT PRODUCT CITATIONS

- Lutz, D., et al. 2013. Generation and nuclear translocation of sumoylated transmembrane fragment of cell adhesion molecule L1. *J. Biol. Chem.* 287: 17161-17175.



Try **PDI (C-2): sc-74551** or **PDI (A-1): sc-376370**, our highly recommended monoclonal alternatives to PDI (G-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **PDI (C-2): sc-74551**.