SANTA CRUZ BIOTECHNOLOGY, INC.

PDI (H-160): sc-20132

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Oxidoreductase-protein disulfide isomerase (PDI) is a homodimer consisting of two 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.

CHROMOSOMAL LOCATION

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

SOURCE

PDI (H-160) is a rabbit polyclonal antibody raised against amino acids 211-370 mapping near the N-terminus of PDI of human origin.

PRODUCT

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

Available as agarose conjugate for immunoprecipitation, sc-20132 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

PDI (H-160) is recommended for detection of PDI of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 (H-160) is also recommended for detection of 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: PDI (h): 293 lysate: sc-111237, Hep G2 cell lysate: sc-2227 or COLO 320DM cell lysate: sc-2226.

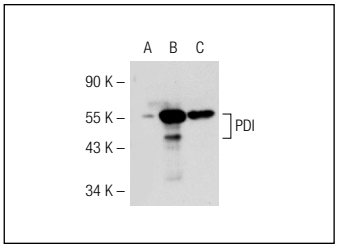
STORAGE

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

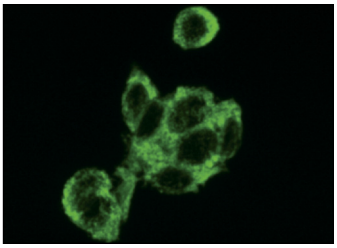
RESEARCH USE

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

DATA



PDI (H-160): sc-20132. Western blot analysis of PDI expression in non-transfected 293T: sc-117752 (**A**), human PDI transfected 293T: sc-111237 (**B**) and Hep G2 (**C**) whole cell lysates.



PDI (H-160): sc-20132. Immunofluorescence staining of methanol-fixed Hep G2 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

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3. Yim, S.H., et al. 2011. Identification and characterization of alternatively transcribed form of peroxiredoxin IV gene that is specifically expressed in spermatids of postpubertal mouse testis. J. Biol. Chem. 286: 39002-39012.
4. Haefliger, S., et al. 2011. Protein disulfide isomerase blocks CEBPA translation and is up-regulated during the unfolded protein response in AML. Blood 117: 5931-5940.
5. Wang, N., et al. 2011. Hnrnpk, a protein differentially expressed in immature rat ovarian development, is required for normal primordial follicle assembly and development. Endocrinology 152: 1024-1035.
6. Peters, L.R. and Raghavan, M. 2011. Endoplasmic reticulum calcium depletion impacts chaperone secretion, innate immunity, and phagocytic uptake of cells. J. Immunol. 187: 919-931.
7. Cotán, D., et al. 2011. Secondary coenzyme Q_{10} deficiency triggers mitochondria degradation by mitophagy in MELAS fibroblasts. FASEB J. 25: 2669-2687.
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