

# PDC-E2 (N-20): sc-16890

## BACKGROUND

Primary biliary cirrhosis (PBC) is a chronic, destructive autoimmune liver disease characterized by the presence of antimitochondrial autoantibodies in patient's serum and T cell-mediated destruction of the biliary epithelial cells lining the small intrahepatic bile ducts. Patient sera are characterized by a high frequency (greater than 95%) of autoantibodies directed to a mitochondrial antigen, identified as the E2 component of the pyruvate dehydrogenase multienzyme complex (PDC-E2). PDC-E2 contains both an amino-terminal lipoyl-bearing domain and a carboxy-terminal catalytic domain. The human sequence preserves the Glu-Thr-Asp-Lys-Ala motif of the lipoyl-bearing site. Two conformationally alternative forms of the PDC-E2 protein have been revealed by immunoblotting. The immunodominant autoepitopes of the autoantigens correspond to the inner lipoyl domain. A significant number of asymptomatic patients found to have antibodies to PDC-E2 are at high risk of developing primary biliary cirrhosis.

## CHROMOSOMAL LOCATION

Genetic locus: DLAT (human) mapping to 11q23.1; Dlat (mouse) mapping to 9 A5.3.

## SOURCE

PDC-E2 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PDC-E2 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.

Blocking peptide available for competition studies, sc-16890 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PDC-E2 (N-20) is recommended for detection of PDC-E2 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).

PDC-E2 (N-20) is also recommended for detection of PDC-E2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PDC-E2 siRNA (h): sc-40813, PDC-E2 siRNA (m): sc-40814, PDC-E2 shRNA Plasmid (h): sc-40813-SH, PDC-E2 shRNA Plasmid (m): sc-40814-SH, PDC-E2 shRNA (h) Lentiviral Particles: sc-40813-V and PDC-E2 shRNA (m) Lentiviral Particles: sc-40814-V.

Molecular Weight of PDC-E2: 70 kDa.

Positive Controls: PDC-E2 (m): 293T Lysate: sc-122447, HeLa whole cell lysate: sc-2200 or PDC-E2 (h): 293T Lysate: sc-114530.

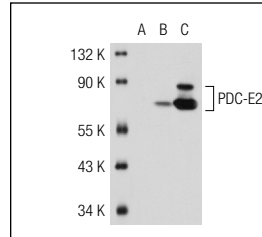
## RESEARCH USE

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

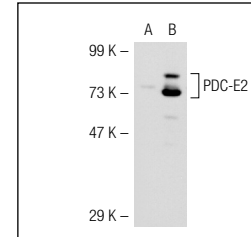
## STORAGE

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

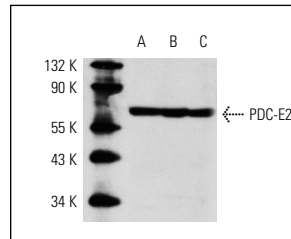
## DATA



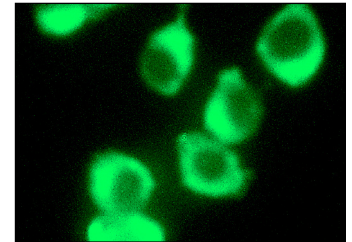
PDC-E2 (N-20): sc-16890. Western blot analysis of PDC-E2 expression in non-transfected 293T: sc-117752 (A), human PDC-E2 transfected 293T: sc-114530 (B) and HeLa (C) whole cell lysates.



PDC-E2 (N-20): sc-16890. Western blot analysis of PDC-E2 expression in non-transfected: sc-117752 (A) and mouse PDC-E2 transfected: sc-122447 (B) 293T whole cell lysates.



PDC-E2 (N-20): sc-16890. Western blot analysis of PDC-E2 expression in non-transfected 293T: sc-117752 (A), human PDC-E2 transfected 293T: sc-114530 (B) and HeLa (C) whole cell lysates.



PDC-E2 (N-20): sc-16890. Immunofluorescence staining of methanol-fixed KNrk cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Bellucci, R., et al. 2007. Differential epitope mapping of antibodies to PDC-E2 in patients with hematologic malignancies after allogeneic hematopoietic stem cell transplantation and primary biliary cirrhosis. *Blood* 109: 2001-2007.
- Ijiri, T.W., et al. 2011. Identification and validation of mouse sperm proteins correlated with epididymal maturation. *Proteomics* 11: 4047-4062.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

**MONOS**  
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Try **PDC-E2 (B-2): sc-271534** or **PDC-E2 (C-9): sc-271352**, our highly recommended monoclonal alternatives to PDC-E2 (N-20).