

PDC-E2 (C-19): sc-16892

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.

REFERENCES

- Coppel, R.L., et al. 1988. Primary structure of the human M2 mitochondrial autoantigen of primary biliary cirrhosis: dihydrolipoamide acetyltransferase. *Proc. Natl. Acad. Sci. USA* 85: 7317-7321.
- Thekkumkara, T.J., et al. 1988. Nucleotide sequence of a cDNA for the dihydrolipoamide acetyltransferase component of human pyruvate dehydrogenase complex. *FEBS Lett.* 240: 45-48.
- Klein, R., et al. 1993. Sera from patients with tuberculosis recognize the M2a-epitope (E2 subunit of pyruvate dehydrogenase) specific for primary biliary cirrhosis. *Clin. Exp. Immunol.* 92: 308-316.
- Chen, Q.Y., et al. 1993. Antibody to two forms of dihydrolipoamide acetyltransferase (PDC-E2) in primary biliary cirrhosis. *Liver* 13: 130-135.
- Howard, M.J., et al. 1998. Three-dimensional structure of the major autoantigen in primary biliary cirrhosis. *Gastroenterology* 115: 139-146.

CHROMOSOMAL LOCATION

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

SOURCE

PDC-E2 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus 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-16892 P, (100 µg 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.

APPLICATIONS

PDC-E2 (C-19) 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).

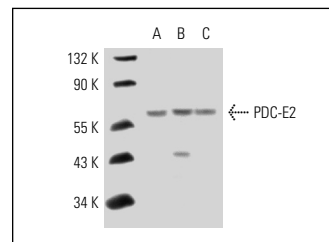
PDC-E2 (C-19) is also recommended for detection of PDC-E2 in additional species, including equine, canine, bovine, porcine and avian.

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.

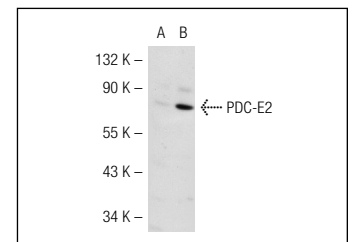
Molecular Weight of PDC-E2: 70 kDa.

Positive Controls: PDC-E2 (h): 293T Lysate: sc-114530, rat kidney extract: sc-2394 or mouse liver extract: sc-2256.

DATA



PDC-E2 (C-19): sc-16892. Western blot analysis of PDC-E2 expression in c4 whole cell lysate (A) and rat kidney (B) and mouse liver (C) tissue extracts.



PDC-E2 (C-19): sc-16892. Western blot analysis of PDC-E2 expression in non-transfected: sc-117752 (A) and human PDC-E2 transfected: sc-114530 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Yin, X., et al. 2007. YWK-II protein as a novel G_o-coupled receptor for Müllerian inhibiting substance in cell survival. *J. Cell Sci.* 120: 1521-1528.

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.


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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 (C-19).