SANTA CRUZ BIOTECHNOLOGY, INC.

PDC-E2 (h): 293T Lysate: sc-114530

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

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2. Thekkumkara, T.J., Ho, L., Wexler, I.D., Pons, G., Liu, T.C. and Patel, M.S. 1988. Nucelotide sequence of a cDNA for the dihydrolipoamide acetyltransferase component of human pyruvate dehydrogenase complex. FEBS Lett. 240: 45-48.
3. Klein, R., Wiebel, M., Engelhart, S. and Berg, P.A. 1993. Sera from patients with tuberculosis recognize the M2α-epitope (E2 subunit of pyruvate dehydrogenase) specific for primary biliary cirrhosis. Clin. Exp. Immunol. 92: 308-316.
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5. Howard, M.J., Fuller, C., Broadhurst, R.W., Perham, R.N., Tang, J.G., Quinn, J., Diamond, A.G. and Yeaman, S.J. 1998. Three-dimensional structure of the major autoantigen in primary biliary cirrhosis. Gastroenterology 115: 139-146.
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STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: DLAT (human) mapping to 11q23.1.

PRODUCT

PDC-E2 (h): 293T Lysate represents a lysate of human PDC-E2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

PDC-E2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive PDC-E2 antibodies. Recommended use: 10-20 µl per lane.

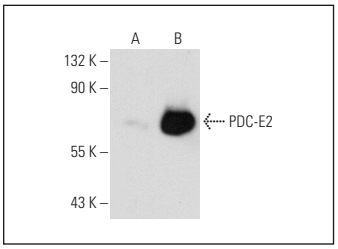
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-tranfected 293T cells.

PDC-E2 (C-1): sc-166899 is recommended as a positive control antibody for Western Blot analysis of enhanced human PDC-E2 expression in PDC-E2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

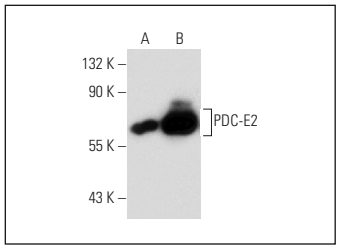
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



PDC-E2 (C-1): sc-166899. 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.



PDC-E2 (B-2): sc-271534. 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.

RESEARCH USE

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

PROTOCOLS

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