SANTA CRUZ BIOTECHNOLOGY, INC.

ACOT8 (m): 293T Lysate: sc-126376

BACKGROUND

ACOT8 (acyl-CoA thioesterase 8), also designated TEII p35 or hTE, is a novel human thioesterase that has been found to interact with the HIV protein Nef using yeast two-hybrid screening. Nef is an auxiliary gene of the human immunodeficiency virus (HIV) which facilitates virus replication and enhances infectivity. The roles of Nef in HIV-infected cells are likely to be mediated by specific interactions with cellular proteins. The interaction between Nef and ACOT8 is correlated with CD4 downregulation, suggesting that ACOT8 may be involved in Nef-mediated CD4 downregulation in HIV-infected cells. ACOT8 is 42% identical to thioesterase II from *Escherichia coli*, and it has no significant homology with the two types of animal thioesterases that have previously been cloned (type I and type II thioesterases).

REFERENCES

1. Miller, M.D., Warmerdam, M.T., Gaston, I., Greene, W.C. and Feinberg, M.B. 1994. The human immunodeficiency virus-1 Nef gene product: a positive factor for viral infection and replication in primary lymphocytes and macrophages. J. Exp. Med. 179: 101-113.
2. Spina, C.A., Kwoh, T.J., Chowers, M.Y., Guatelli, J.C. and Richman, D.D. 1994. The importance of Nef in the induction of human immunodeficiency virus type 1 replication from primary quiescent CD4 lymphocytes. J. Exp. Med. 179: 115-123.
3. Smith, S. 1994. The animal fatty acid synthase: one gene, one polypeptide, seven enzymes. FASEB J. 8: 1248-1259.
4. Aiken, C. and Trono, D. 1995. Nef stimulates human immunodeficiency virus type 1 proviral DNA synthesis. J. Virol. 69: 5048-5056.
5. Schwartz, O., Maréchal, V., Danos, O. and Heard, J.M. 1995. Human immunodeficiency virus type 1 Nef increases the efficiency of reverse transcription in the infected cell. J. Virol. 69: 4053-4059.
6. Liu, L.X., Margottin, F., Le Gall, S., Schwartz, O., Selig, L., Benarous, R. and Benichou, S. 1997. Binding of HIV-1 Nef to a novel thioesterase enzyme correlates with Nef-mediated CD4 downregulation. J. Biol. Chem. 272: 13779-13785.

CHROMOSOMAL LOCATION

Genetic locus: Acot8 (mouse) mapping to 2 H3.

PRODUCT

ACOT8 (m): 293T Lysate represents a lysate of mouse ACOT8 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

PROTOCOLS

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

APPLICATIONS

ACOT8 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive ACOT8 antibodies. Recommended use: 10-20 µl per lane.

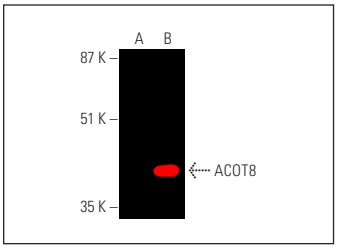
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ACOT8 (C-3): sc-7343 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse ACOT8 expression in ACOT8 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

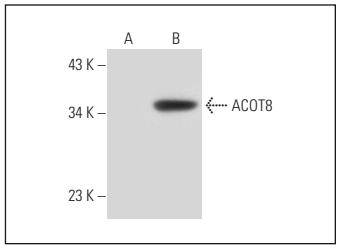
RECOMMENDED SUPPORT REAGENTS

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



ACOT8 (C-3): sc-7343. Near-infrared western blot analysis of ACOT8 expression in non-transfected: sc-117752 (**A**) and mouse ACOT8 transfected: sc-126376 (**B**) 293T whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.



ACOT8 (C-3): sc-7343. Western blot analysis of ACOT8 expression in non-transfected: sc-117752 (**A**) and mouse ACOT8 transfected: sc-126376 (**B**) 293T whole cell lysates.

RESEARCH USE

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