SANTA CRUZ BIOTECHNOLOGY, INC.

EHD4 (m2): 293T Lysate: sc-126771

BACKGROUND

Eps15 homology domain (EHD)-containing proteins function in the exit of receptors and other membrane proteins from the endosomal recycling compartment. EHD4 (Eps15 homology domain-containing protein 4), also known as PAST4 or Pincher, belongs to a subfamily of the EHD protein family that includes the closely related proteins EHD1, EHD2 and EHD3. EHD4 is predominantly expressed in pancreas and heart, localizing to vesicular and tubular structures in the cell. It contains an EH domain as well as a calcium binding EF hand. EHD4 is believed to function in transport from the early endosome to the endocytic recycling compartment. In addition, EHD4 is capable of binding lipids via its EH domain. Loss of EHD4 can lead to retention of transferrin in peripheral compartments, suggesting that EHD4 regulates the transport of transferrin out of the early endosome.

REFERENCES

1. Pohl, U., Smith, J.S., Tachibana, I., Ueki, K., Lee, H.K., Ramaswamy, S., Wu, Q., Mohrenweiser, H.W., Jenkins, R.B. and Louis, D.N. 2000. EHD2, EHD3, and EHD4 encode novel members of a highly conserved family of EH domain-containing proteins. Genomics 63: 255-262.
2. Kuo, H.J., Tran, N.T., Clary, S.A., Morris, N.P. and Glanville, R.W. 2001. Characterization of EHD4, an EH domain-containing protein expressed in the extracellular matrix. J. Biol. Chem. 276: 43103-43110.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605892. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Guilherme, A., Soriano, N.A., Furcinitti, P.S. and Czech, M.P. 2004. Role of EHD1 and EHBP1 in perinuclear sorting and Insulin-regulated Glut4 recycling in 3T3-L1 adipocytes. J. Biol. Chem. 279: 40062-40075.
5. Smith, C.A., Dho, S.E., Donaldson, J., Tepass, U. and McGlade, C.J. 2004. The cell fate determinant numb interacts with EHD/Rme-1 family proteins and has a role in endocytic recycling. Mol. Biol. Cell 15: 3698-3708.
6. Naslavsky, N. and Caplan, S. 2005. C-terminal EH-domain-containing proteins: consensus for a role in endocytic trafficking, EH? J. Cell Sci. 118: 4093-4101.
7. Naslavsky, N., Rahajeng, J., Chenavas, S., Sorgen, P.L. and Caplan, S. 2007. EHD1 and Eps15 interact with phosphatidylinositols via their Eps15 homology domains. J. Biol. Chem. 282: 16612-16622.
8. George, M., Ying, G., Rainey, M.A., Solomon, A., Parikh, P.T., Gao, Q., Band, V. and Band, H. 2007. Shared as well as distinct roles of EHD proteins revealed by biochemical and functional comparisons in mammalian cells and *C. elegans*. BMC Cell Biol. 8: 3.
9. Blume, J.J., Halbach, A., Behrendt, D., Paulsson, M. and Plomann, M. 2007. EHD proteins are associated with tubular and vesicular compartments and interact with specific phospholipids. Exp. Cell Res. 313: 219-231.

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: Ehd4 (mouse) mapping to 2 E5.

PRODUCT

EHD4 (m2): 293T Lysate represents a lysate of mouse EHD4 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

EHD4 (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive EHD4 antibodies. Recommended use: 10-20 µl per lane.

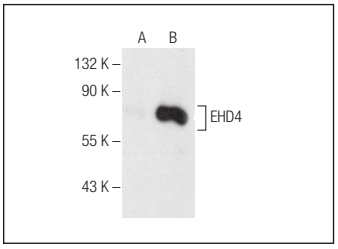
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

EHD4 (E-2): sc-376373 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse EHD4 expression in EHD4 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



EHD4 (E-2): sc-376373. Western blot analysis of EHD4 expression in non-transfected: sc-117752 (**A**) and mouse EHD4 transfected: sc-126771 (**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.