SANTA CRUZ BIOTECHNOLOGY, INC.

EHD2 (L-05): sc-100724

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Eps15 homology domain (EHD)-containing proteins function in the exit of receptors and other membrane proteins from the endosomal recycling compartment. EHD2 (EH-domain containing 2), also known as PAST2, is a 543 amino acid protein that contains one EF-hand domain and one EH domain. Expressed at high levels in heart and at lower levels in lung, placenta and skeletal muscle, EHD2 interacts with various proteins such as the glucose transporter Glut4 and the endocytotic-associated protein EHBP1. When EHD2 associates with Insulin-induced Glut4, it can recruit Glut4 to the plasma membrane, thereby allowing Glut4 to bind glucose and regulate blood sugar levels. Additionally, EHD2 interacts with EHBP1 and is thought to link EHBP1-associated endocytotic events with Actin cytoskeleton dynamics. Through its interactions with these two proteins, EHD2 is involved in both maintaining blood glucose levels and mediating Actin-associated endocytosis.

REFERENCES

1. Pohl, U., et al. 2000. EHD2, EHD3, and EHD4 encode novel members of a highly conserved family of EH domain-containing proteins. Genomics 63: 255-262.
2. Park, S.Y., et al. 2004. EHD2 interacts with the Insulin-responsive glucose transporter (Glut4) in rat adipocytes and may participate in Insulin-induced Glut4 recruitment. Biochemistry 43: 7552-7562.

CHROMOSOMAL LOCATION

Genetic locus: EHD2 (human) mapping to 19q13.33; Ehd2 (mouse) mapping to 7 A2.

SOURCE

EHD2 (L-05) is a mouse monoclonal antibody raised against recombinant EHD2 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

EHD2 (L-05) is recommended for detection of EHD2 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).

Suitable for use as control antibody for EHD2 siRNA (h): sc-40517, EHD2 siRNA (m): sc-40518, EHD2 shRNA Plasmid (h): sc-40517-SH, EHD2 shRNA Plasmid (m): sc-40518-SH, EHD2 shRNA (h) Lentiviral Particles: sc-40517-V and EHD2 shRNA (m) Lentiviral Particles: sc-40518-V.

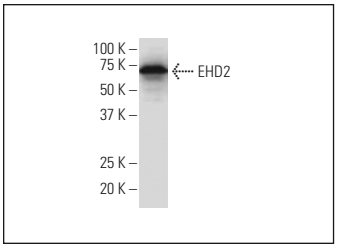
Molecular Weight of EHD2: 65 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

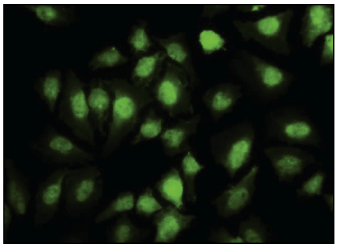
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



EHD2 (L-05): sc-100724. Western blot analysis of EHD2 expression in HeLa whole cell lysate.



EHD2 (L-05): sc-100724. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Stoeber, M., et al. 2012. Oligomers of the ATPase EHD2 confine caveolae to the plasma membrane through association with Actin. EMBO J. 31: 2350-2364.
2. Torrino, S., et al. 2018. EHD2 is a mechanotransducer connecting caveolae dynamics with gene transcription. J. Cell Biol. 217: 4092-4105.
3. Hetmanski, J.H.R., et al. 2019. Membrane tension orchestrates rear retraction in matrix-directed cell migration. Dev. Cell 51: 460-475.
4. Shen, W.W., et al. 2020. EHD2 is a predictive biomarker of chemotherapy efficacy in triple negative breast carcinoma. Sci. Rep. 10: 7998.

STORAGE

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

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.