SANTA CRUZ BIOTECHNOLOGY, INC.

EHD2 (G-3): sc-515458

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.
3. Guilherme, A., et al. 2004. EHD2 and the novel EH domain binding protein EHBP1 couple endocytosis to the Actin cytoskeleton. J. Biol. Chem. 279: 10593-10605.
4. 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.

CHROMOSOMAL LOCATION

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

SOURCE

EHD2 (G-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 414-441 within an internal region of EHD2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-515458 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

EHD2 (G-3) is recommended for detection of EHD2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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.

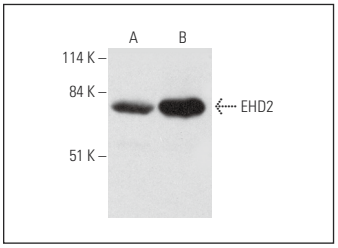
Molecular Weight of EHD2: 65 kDa.

Positive Controls: human placenta extract: sc-363772, HeLa whole cell lysate: sc-2200 or human heart extract: sc-363763.

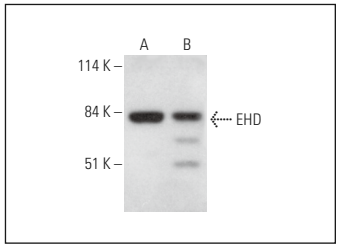
RECOMMENDED SUPPORT REAGENTS

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 (G-3): sc-515458. Western blot analysis of EHD2 expression in human placenta (**A**) and human heart (**B**) tissue extracts.



EHD (D-12): sc-515458. Western blot analysis of EHD expression in HeLa (**A**) and WI-38 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Liu, G., et al. 2022. Bioorthogonal conjugation-assisted purification method for profiling cell surface proteome. Anal. Chem. 94: 1901-1909.
2. Nishimura, T. and Suetsugu, S. 2022. Super-resolution analysis of PACSIN2 and EHD2 at caveolae. PLoS ONE 17: e0271003.

RESEARCH USE

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