SANTA CRUZ BIOTECHNOLOGY, INC.

GAPVD1 (K-22): sc-133607

BACKGROUND

GAPVD1 (GTPase-activating protein and VPS9 domain-containing protein 1), also known as RAP6 (Rab5-activating protein 6) and GAPex-5, is a 1478 amino acid peripheral membrane protein that acts both as a GTPase-activating protein (GAP) and a guanine nucleotide exchange factor (GEF). GAPVD1 participates in many processes such as Insulin receptor internalization, Glut4 trafficking and endocytosis. In addition, depletion of GAPVD1 leads to delayed EGFR degradation by mediating receptor ubiquination through its RGD domain, suggesting that it may be an important mediator of carcinogenesis resulting from Ras protein mutations. There are six isoforms of GAPVD1 that are produced as a result of alternative splicing events.

REFERENCES

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3. Lodhi, I.J., Chiang, S.H., Chang, L., Vollenweider, D., Watson, R.T., Inoue, M., Pessin, J.E. and Saltiel, A.R. 2007. Gapex-5, a Rab31 guanine nucleotide exchange factor that regulates Glut4 trafficking in adipocytes. Cell Metab. 5: 59-72.
4. Hou, J.C. and Pessin, J.E. 2007. Ins (endocytosis) and outs (exocytosis) of GLUT4 trafficking. Curr. Opin. Cell Biol. 19: 466-473.
5. Su, X., Kong, C. and Stahl, P.D. 2007. GAPex-5 mediates ubiquitination, trafficking, and degradation of epidermal growth factor receptor. J. Biol. Chem. 282: 21278-21284.
6. Lodhi, I.J., Bridges, D., Chiang, S.H., Zhang, Y., Cheng, A., Geletka, L.M., Weisman, L.S. and Saltiel, A.R. 2008. Insulin stimulates phosphatidylinositol 3-phosphate production via the activation of Rab5. Mol. Biol. Cell. 19: 2718-2728.
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CHROMOSOMAL LOCATION

Genetic locus: GAPVD1 (human) mapping to 9q33.3; Gapvd1 (mouse) mapping to 2 B.

SOURCE

GAPVD1 (K-22) is an affinity purified rabbit polyclonal antibody raised against synthetic GAPVD1 peptide of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

GAPVD1 (K-22) is recommended for detection of GAPVD1 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), immunohistochemistry (including paraffin-embedded sections) (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 GAPVD1 siRNA (h): sc-92781, GAPVD1 siRNA (m): sc-145326, GAPVD1 shRNA Plasmid (h): sc-92781-SH, GAPVD1 shRNA Plasmid (m): sc-145326-SH, GAPVD1 shRNA (h) Lentiviral Particles: sc-92781-V and GAPVD1 shRNA (m) Lentiviral Particles: sc-145326-V.

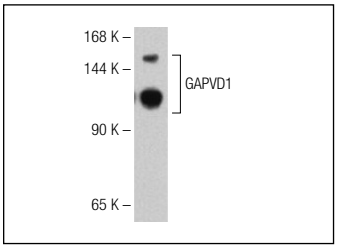
Molecular Weight of GAPVD1: 158 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



GAPVD1 (K-22): sc-133607. Western blot analysis of GAPVD1 expression in Hep G2 whole cell lysate.

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.