

SH3PXD2B (D-12): sc-136855

BACKGROUND

SH3PXD2B (SH3 and PX domains 2B), also known as HOF1 or FAD49, is a 911 amino acid protein that contains one PX domain and four SH3 domains. Localized to the nucleus, SH3PXD2B functions to bind to a wide range of phosphoinositides, such as phosphatidylinositol 3,5-bisphosphate and, to a lesser extent, phosphatidylinositol 3-phosphate, and is thought to play a role in mitotic clonal expansion during adipocyte differentiation. The gene encoding SH3PXD2B maps to human chromosome 5, which contains 181 million base pairs and comprises nearly 6% of the human genome. Deletion of the p arm of chromosome 5 leads to Cri-du-chat syndrome, while deletion of the q arm or of chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

REFERENCES

- Dixon, M.J., Read, A.P., Donnai, D., Colley, A., Dixon, J. and Williamson, R. 1991. The gene for Treacher Collins syndrome maps to the long arm of chromosome 5. *Am. J. Hum. Genet.* 49: 17-22.
- Saltman, D.L., Dolganov, G.M., Warrington, J.A., Wasmuth, J.J. and Lovett, M. 1993. A physical map of 15 loci on human chromosome 5q23-q33 by two-color fluorescence *in situ* hybridization. *Genomics* 16: 726-732.
- Law, S.F., Zhang, Y.Z., Klein-Szanto, A.J. and Golemis, E.A. 1998. Cell cycle-regulated processing of HEF1 to multiple protein forms differentially targeted to multiple subcellular compartments. *Mol. Cell. Biol.* 18: 3540-3551.
- Stanchi, F., Bertocco, E., Toppo, S., Dioguardi, R., Simionati, B., Cannata, N., Zimbello, R., Lanfranchi, G. and Valle, G. 2001. Characterization of 16 novel human genes showing high similarity to yeast sequences. *Yeast* 18: 69-80.
- Scherl, A., Coute, Y., Deon, C., Calle, A., Kindbeiter, K., Sanchez, J.C., Greco, A., Hochstrasser, D. and Diaz, J.J. 2002. Functional proteomic analysis of human nucleolus. *Mol. Biol. Cell.* 13: 4100-4109.
- Oh, J.H., Yang, J.O., Hahn, Y., Kim, M.R., Byun, S.S., Jeon, Y.J., Kim, J.M., Song, K.S., Noh, S.M., Kim, S., Yoo, H.S., Kim, Y.S. and Kim, N.S. 2005. Transcriptome analysis of human gastric cancer. *Mamm. Genome* 16: 942-954.
- South, S.T., Swensen, J.J., Maxwell, T., Rope, A., Brothman, A.R. and Chen, Z. 2006. A new genomic mechanism leading to cri-du-chat syndrome. *Am. J. Med. Genet. A* 140: 2714-2720.
- Hishida, T., Eguchi, T., Osada, S., Nishizuka, M. and Imagawa, M. 2008. A novel gene, *fad49*, plays a crucial role in the immediate early stage of adipocyte differentiation via involvement in mitotic clonal expansion. *FEBS J.* 275: 5576-5588.
- Vogel, C.I., Greene, B., Scherag, A., Müller, T.D., Friedel, S., Grallert, H., Heid, I.M., Illig, T., Wichmann, H.E., Schäfer, H., Hebebrand, J. and Hinney, A. 2009. Non-replication of an association of CTNBL1 polymorphisms and obesity in a population of Central European ancestry. *BMC Med. Genet.* 10: 14.

RESEARCH USE

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

CHROMOSOMAL LOCATION

Genetic locus: SH3PXD2B (human) mapping to 5q35.1; Sh3pxd2b (mouse) mapping to 11 A4.

SOURCE

SH3PXD2B (D-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SH3PXD2B of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-136855 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SH3PXD2B (D-12) is recommended for detection of SH3PXD2B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 SH3PXD2B siRNA (h): sc-91980, SH3PXD2B siRNA (m): sc-153439, SH3PXD2B shRNA Plasmid (h): sc-91980-SH, SH3PXD2B shRNA Plasmid (m): sc-153439-SH, SH3PXD2B shRNA (h) Lentiviral Particles: sc-91980-V and SH3PXD2B shRNA (m) Lentiviral Particles: sc-153439-V.

Molecular Weight of SH3PXD2B: 102 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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