SANTA CRUZ BIOTECHNOLOGY, INC.

BCAS4 (N-15): sc-85295

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The gene encoding BCAS4 (breast carcinoma-amplified sequence 4), a 211 amino acid protein, is found in a region on chromosome 20 that is frequently amplified in human breast cancer. This 20q13 locus amplification is found in 12%–39% of primary breast tumors, which correlates with a 17q23 locus amplification that is found in 20% of primary breast tumors. The amplification and translocation between the BCAS4 gene and the BCAS3 gene, with a 17q23 locus, results in a fusion transcript that is overexpressed in MCF-7 cells. Also, deletion of chromosomal region 20q13.13-q13.2 and resultant deletion of BCAS4, as well as three other genes, is the cause of Okihiro syndrome, a disease characterized by ocular and upper limb anomalies. BCAS4 is normally expressed in thymus, kidney, spleen, placenta and brain. There are three isoforms of BCAS4 which are produced as a result of alternative splicing events.

REFERENCES

1. Bärlund, M., Monni, O., Weaver, J.D., Kauraniemi, P., Sauter, G., Heiskanen, M., Kallioniemi, O.P. and Kallioniemi, A. 2002. Cloning of BCAS3 (17q23) and BCAS4 (20q13) genes that undergo amplification, overexpression, and fusion in breast cancer. Genes Chromosomes Cancer 35: 311-317.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607323. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Sinclair, C.S., Rowley, M., Naderi, A. and Couch, F.J. 2003. The 17q23 amplicon and breast cancer. Breast Cancer Res. Treat. 78: 313-322.
4. Hahn, Y., Bera, T.K., Gehlhaus, K., Kirsch, I.R., Pastan, I.H. and Lee, B. 2004. Finding fusion genes resulting from chromosome rearrangement by analyzing the expressed sequence databases. Proc. Natl. Acad. Sci. USA 101: 13257-13261.
5. Ruan, Y., Ooi, H.S., Choo, S.W., Chiu, K.P., Zhao, X.D., Srinivasan, K.G., Yao, F., Choo, C.Y., Liu, J., Ariyaratne, P., Bin, W.G., Kuznetsov, V.A., Shahab, A., Sung, W.K., Bourque, G., Palanisamy, N. and Wei, C.L. 2007. Fusion transcripts and transcribed retrotransposed loci discovered through comprehensive transcriptome analysis using paired-end diTags (PETs). Genome Res. 17: 828-838.
6. Borozdin, W., Graham, J.M., Böhm, D., Bamshad, M.J., Spranger, S., Burke, L., Leipoldt, M. and Kohlhase, J. 2007. Multigene deletions on chromosome 20q13.13-q13.2 including Sall4 result in an expanded phenotype of Okihiro syndrome plus developmental delay. Hum. Mutat. 28: 830.
7. Nowee, M.E., Snijders, A.M., Rockx, D.A., de Wit, R.M., Kosma, V.M., Hämäläinen, K., Schouten, J.P., Verheijen, R.H., van Diest, P.J., Albertson, D.G. and Dorsman, J.C. 2007. DNA profiling of primary serous ovarian and fallopian tube carcinomas with array comparative genomic hybridization and multiplex ligation-dependent probe amplification. J. Pathol. 213: 46-55.

CHROMOSOMAL LOCATION

Genetic locus: BCAS4 (human) mapping to 20q13.13.

STORAGE

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

SOURCE

BCAS4 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of BCAS4 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-85295 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BCAS4 (N-15) is recommended for detection of BCAS4 of 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); non cross-reactive with BCAS2 and BCAS3.

Suitable for use as control antibody for BCAS4 siRNA (h): sc-72626, BCAS4 shRNA Plasmid (h): sc-72626-SH and BCAS4 shRNA (h) Lentiviral Particles: sc-72626-V.

Molecular Weight of BCAS4: 23 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.

RESEARCH USE

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

PROTOCOLS

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