

# BCAS4 (C-16): sc-85293



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

- 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.
- 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/>
- 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.
- 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.
- 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.
- 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.
- 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 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-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-85293 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

BCAS4 (C-16) 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 1:50-1:5000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with isoform 2 and isoform 3.

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](http://www.scbt.com) or our catalog for detailed protocols and support products.