10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

BCAS3 Antibody

Catalog # ASC11077

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9H6U6
Other Accession	EAW51415, 119571800
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	101237
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	BCAS3 antibody can be used for detection of BCAS3 by Western blot at 0.5 - 1 g/mL. Antibody can also be used for immunohistochemistry starting at 5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	54828
Other Names	Breast carcinoma-amplified sequence 3 {ECO:0000312|HGNC:HGNC:14347, ECO:0000312|MIM:607470}, GAOB1, BCAS3 {ECO:0000312|HGNC:HGNC:14347, ECO:0000312|MIM:607470}
Target/Specificity	BCAS3;
Reconstitution & Storage	BCAS3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	BCAS3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BCAS3 {ECO:0000312|HGNC:HGNC:14347, ECO:0000312|MIM:607470}
Function	Plays a role in angiogenesis. Participates in the regulation of cell polarity and directional endothelial cell migration by mediating both the activation and recruitment of CDC42 and the reorganization of the actin cytoskeleton at the cell leading edge. Promotes filipodia formation (By similarity). Functions synergistically with PELP1 as a transcriptional coactivator of estrogen receptor- responsive genes. Stimulates histone acetyltransferase activity. Binds to chromatin. Plays a regulatory role in autophagic activity. In complex with PHAF1, associates with the preautophagosomal structure during both

	non-selective and selective autophagy (PubMed:33499712). Probably binds phosphatidylinositol 3-phosphate (PtdIns3P) which would mediate the recruitment preautophagosomal structures (PubMed:33499712).
Cellular Location	Nucleus. Cytoplasm. Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:Q8CCN5}. Preautophagosomal structure. Note=Localizes in the cytoplasm in stationary cells. Translocates from the cytoplasm to the leading edge in motile cells. Colocalizes with microtubules and intermediate filaments in both stationary and motile cells (By similarity) Associates with chromatin. Recruited to estrogen receptor-induced promoters in a PELP1-dependent manner. The BCAS3:PHAF1 complex is recruited to the preautophagosomal structures adjacent to the damaged mitochondria upon mitophagy in a PRKN-PINK1 dependent manner (PubMed:33499712). {ECO:0000250|UniProtKB:Q8CCN5, ECO:0000269|PubMed:17505058, ECO:0000269|PubMed:33499712}
Tissue Location	Expressed in stomach, liver, lung, kidney, prostate, testis, thyroid gland, adrenal gland, brain, heart, skeletal muscle, colon, spleen, small intestine, placenta, blood leukocyte and mammary epithelial cells. Expressed in undifferentiated ES cells Expressed in blood islands and nascent blood vessels derived from differentiated ES cells into embryoid bodies (BD). Expressed in endothelial cells. Not detected in brain. Expressed in brain tumors (at protein level). Expressed in brain. Highly expressed in breast cancers and in glioma cell lines.

Background

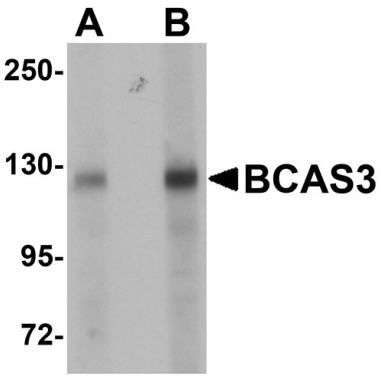
BCAS3 Antibody: The Breast carcinoma amplified sequence (BCAS3) gene is localized to 17q23, a region that is often amplified in breast cancers. Copy number gains at this region have also been reported in other tumors such as brain, lung, liver, testis and bladder. BCAS3 is thought to be an estrogen receptor (ER)-alpha co-activator that acts through PELP1, another ER-alpha that in turn activates BCAS3 expression. This may set up a positive feedback loop leading to ER-a signal amplification in the cell which may play a significant role in breast cancer. BCAS3 expression has also been observed in embryonic stem cells and vascular precursors, suggesting that it may also play a role in embryogenesis and tumor angiogenesis.

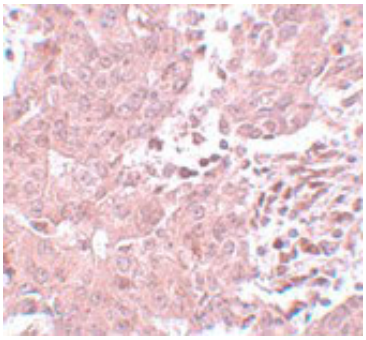
References

Barlund M, Monni O, Weaver JD, et al. Cloning of BCAS3 (17q23) and BCAS4 (20q13) genes that undergo amplification, overexpression, and fusion in breast cancer. Genes Chromosomes Cancer2002; 35:311-7.
Sinclair CS, Rowley M, Naderi A, et al. The 17q23 amplicon and breast cancer. Breast Cancer Res. Treat.2003; 78:313-22.
Gururaj AE, Peng S, Vadlamudi RK, et al. Estrogen induces expression of BCAS3, a novel estrogen receptor-a coactivator, through Proline-, Glutamic acid-, and leucine-rich protein -1 (PELP1). Mol. Endocrinol.2007; 21:1847-60.
Siva K, Venu P, Mahadevan A, et al. Human BCAS3 expression in embryonic stem cells and vascular precursors suggests a role,in human ebryogenesis and tumor angiogenesis. PloS One2007; 11:e1202.

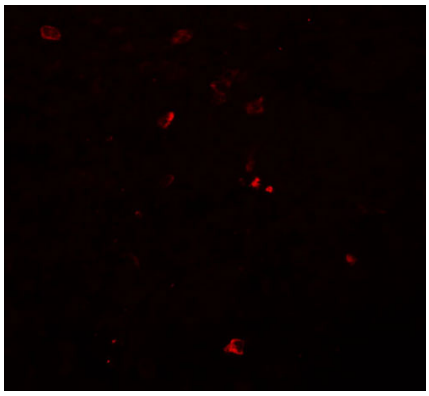
Images

Western blot analysis of BCAS3 in rat brain tissue lysate with BCAS3 antibody at (A) 0.5 and (B) 1 µg/mL.





Immunohistochemistry of BCAS3 in human breast carcinoma with BCAS3 antibody at 5 µg/mL.



Immunofluorescence of BCAS3 in human breast carcinoma tissue with BCAS3 antibody at 20 µg/mL.