



Anti-BCAR1 (Breast cancer anti-estrogen resistance protein 1) Phospho-Polyclonal Antibody

Category: Phospho-Polyclonal Antibody

Catalog #: S639 Phospho-AB3J021-Human (Phospho site: 639S)

Antigen Synonym: CAS, CASS1 (Cas scaffolding protein family member 1), CRKAS (CRK-associated substrate; p130cas);

Species Reactivity: Human

Immunogen/Specificity:

Polyclonal antibody produced in rabbits immunizing with a synthetic peptide corresponding to C-terminal residues of human BCAR1 (Breast cancer anti-estrogen resistance protein 1)

Description: BCAR1 (Breast cancer anti-estrogen resistance protein 1) is a docking protein which plays a central coordinating role for tyrosine-kinase-based signaling related to cell adhesion. BCAR1 is implicated in induction of cell migration. Overexpression confers antiestrogen resistance on breast cancer cells. BCAR1 forms complexes in vivo with focal adhesion kinase 1, adapter protein CRKL and LYN kinase. BCAR1 can heterodimerize with CASL. BCAR1 interacts with BCAR3, NPHP1, PTK2B and SH2D3C and interacts with activated CSPG4 as well as interacts with INPPL1/SHIP2.

BCAR1 localizes in cell junction, focal adhesion, cytoplasm. The unphosphorylated form localizes in the cytoplasm and can move to the membrane upon tyrosine phosphorylation. BCAR1 is widely expressed with an abundant expression in the testis. Low level of expression seen in the liver, thymus, and peripheral blood leukocytes. The protein has been detected in a B-cell line.

BCAR1 contains a central domain (substrate domain) containing multiple potential SH2-binding sites and a C-terminal domain containing a divergent helix-loop-helix (HLH) motif. The SH2-binding sites putatively bind CRK, NCK and ABL SH2 domains. The HLH motif is absolutely required for the induction of pseudohyphal growth in yeast and mediates heterodimerization with CASL. A serine-rich region promotes activation of the serum response element (SRE).

The SH3 domain is necessary for the localization of the protein to focal adhesions and interacts with one proline-rich region of focal adhesion kinase 1. Focal adhesion kinase 1 phosphorylates the protein at the YDYVHL motif. SRC-family kinases are recruited to the phosphorylated sites and can phosphorylate other tyrosine residues. Tyrosine phosphorylation is triggered by integrin mediated adhesion of cells to the extracellular matrix.

Reference:

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