

## BCAR3 (N-19): sc-47812

### BACKGROUND

BCAR3 (breast cancer anti-estrogen resistance 3, also designated AND-34 in murine; a novel SH2-containing protein 2 or NSP2, and SH2D3B) overexpression is a characteristic of antiestrogen resistance in human ZR-75-1 breast cancer cells. The deduced 825-amino acid BCAR3 protein contains a Src homology 2 (SH2) domain and shares homology to yeast CDC48. A 3.4-kb BCAR3 transcript is present in heart, placenta, skeletal muscle, spleen, prostate, testis, ovary, small intestine, colon, fetal kidney, and tamoxifen-resistant cancer cell lines. BCAR3 acts as a regulator of R-Ras to mediate the level of Insulin receptor substrate 1 (IRS-1) in MCF-7 and ZR-75-1 breast cancer cell lines. BCAR3 also interacts with p130Cas to enhance Src activation and cell migration.

### REFERENCES

1. Van Agthoven, T., et al. 1998. Identification of BCAR3 by a random search for genes involved in anti-estrogen resistance of human breast cancer cells. *EMBO J.* 17: 2799-2808.
2. Gotoh, T., et al. 2000. p130Cas regulates nucleotide exchange factor. *J. Biol. Chem.* 275: 30118-30123.
3. Cai, D., et al. 2003. AND-34/BCAR3, a GDP exchange factor whose overexpression confers anti-estrogen resistance, activates Rac, PAK1, and the cyclin D1 promoter. *Cancer Res.* 63: 6802-6808.
4. Riggins, R.B., et al. 2003. Synergistic promotion of c-Src activation and cell migration by Cas and AND-34/BCAR3. *J. Biol. Chem.* 278: 28264-28273.
5. Dorssers, L.C., et al. 2005. Breast cancer oestrogen independence mediated by BCAR1 or BCAR3 genes is transmitted through mechanisms distinct from the oestrogen receptor signalling pathway or the epidermal growth factor receptor signalling pathway. *Breast Cancer Res.* 7: R82-R92.
6. Yu, Y., et al. 2006. The R-Ras GTPase mediates cross talk between estrogen and insulin signaling in breast cancer cells. *Mol. Cell. Biol.* 26: 6372-6380.

### CHROMOSOMAL LOCATION

Genetic locus: BCAR3 (human) mapping to 1p22.1; Bcar3 (mouse) mapping to 3 G1.

### SOURCE

BCAR3 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of BCAR3 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-47809 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

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

### APPLICATIONS

BCAR3 (N-19) is recommended for detection of BCAR3 of mouse 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BCAR3 (N-19) is also recommended for detection of BCAR3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for BCAR3 siRNA (h): sc-60265, BCAR3 siRNA (m): sc-60266, BCAR3 shRNA Plasmid (h): sc-60265-SH, BCAR3 shRNA Plasmid (m): sc-60266-SH, BCAR3 shRNA (h) Lentiviral Particles: sc-60265-V and BCAR3 shRNA (m) Lentiviral Particles: sc-60266-V.

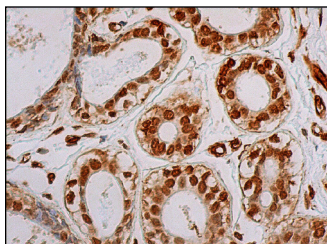
Molecular Weight of BCAR3: 93 kDa.

Positive Controls: SK-BR-3 cell lysate: sc-2218, BT-20 cell lysate: sc-2223 or MCF7 whole cell lysate: sc-2206.

### 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

### DATA



BCAR3 (N-19): sc-47812. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing nuclear staining of glandular cells and myoepithelial cells.

### 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.