

# BCAS2 (F-5): sc-376554

## BACKGROUND

BCAS2 (breast carcinoma amplified sequence 2), also designated DAM1 (DNA amplified in mammary carcinoma 1 protein) or spliceosome-associated SPF 27, is a ubiquitously expressed nuclear protein that was originally identified as being overexpressed in various breast cancer cell lines. BCAS2 is now known to be a component of the spliceosome, participating in the removal of introns from mRNA precursors. BCAS2 specifically interacts (in a ligand-independent manner) with TR $\beta$  (thyroid hormone receptor  $\beta$ ), ER $\alpha$  (estrogen receptor  $\alpha$ ), ER $\beta$ , PR (progesterone receptor), and PPAR $\gamma$  (peroxisome proliferator-activated receptor  $\gamma$ ). BCAS2 functions as an ER coactivator and is capable of enhancing ER-mediated transcription. This suggests that BCAS2 is involved in the development of breast cancer.

## REFERENCES

1. Nagasaki, K., et al. 1999. Identification of a novel gene, DAM1, amplified at chromosome 1p13.3-21 region in human breast cancer cell lines. *Cancer Lett.* 140: 219-226.
2. Maass, N., et al. 2002. Amplification of the BCAS2 gene at chromosome 1p13.3-21 in human primary breast cancer. *Cancer Lett.* 185: 219-223.
3. Lee, S., et al. 2002. Mouse DAM1 regulates pro-apoptotic activity of BLK in mammary epithelial cells. *Cancer Lett.* 188: 121-126.
4. Qi, C., et al. 2005. Potentiation of estrogen receptor transcriptional activity by breast cancer amplified sequence 2. *Biochem. Biophys. Res. Commun.* 328: 393-398.
5. Worsham, M.J., et al. 2006. High-resolution mapping of molecular events associated with immortalization, transformation, and progression to breast cancer in the MCF10 model. *Breast Cancer Res. Treat.* 96: 177-186.

## CHROMOSOMAL LOCATION

Genetic locus: BCAS2 (human) mapping to 1p13.2; Bcas2 (mouse) mapping to 3 F2.2.

## SOURCE

BCAS2 (F-5) is a mouse monoclonal antibody raised against amino acids 45-225 mapping at the C-terminus of BCAS2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BCAS2 (F-5) is available conjugated to agarose (sc-376554 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376554 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376554 PE), fluorescein (sc-376554 FITC), Alexa Fluor<sup>®</sup> 488 (sc-376554 AF488), Alexa Fluor<sup>®</sup> 546 (sc-376554 AF546), Alexa Fluor<sup>®</sup> 594 (sc-376554 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-376554 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-376554 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-376554 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

BCAS2 (F-5) is recommended for detection of BCAS2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for BCAS2 siRNA (h): sc-88190, BCAS2 siRNA (m): sc-105116, BCAS2 shRNA Plasmid (h): sc-88190-SH, BCAS2 shRNA Plasmid (m): sc-105116-SH, BCAS2 shRNA (h) Lentiviral Particles: sc-88190-V and BCAS2 shRNA (m) Lentiviral Particles: sc-105116-V.

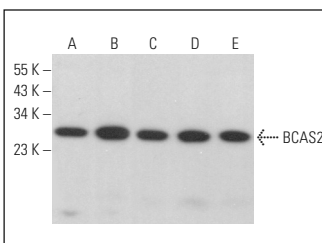
Molecular Weight of BCAS2: 26 kDa.

Positive Controls: MCF7 nuclear extract: sc-2149, HEL 92.1.7 cell lysate: sc-2270 or 3T3-L1 cell lysate: sc-2243.

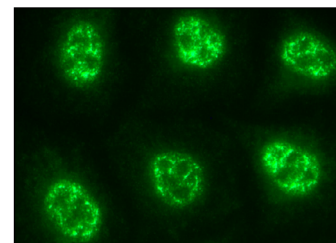
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



BCAS2 (F-5): sc-376554. Western blot analysis of BCAS2 expression in MCF7 nuclear extract (A) and HEL 92.1.7 (B), 3T3-L1 (C), Neuro-2A (D) and C6 (E) whole cell lysates.



BCAS2 (F-5): sc-376554. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

## SELECT PRODUCT CITATIONS

1. Klimesova, K., et al. 2021. TSSC4 is a component of U5 snRNP that promotes tri-snRNP formation. *Nat. Commun.* 12: 3646.

## STORAGE

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

## RESEARCH USE

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