

# SAF-B2 (A-9): sc-393455

## BACKGROUND

Heterogeneous nuclear ribonucleoproteins (hnRNPs) constitute a set of polypeptides that contribute to pre-mRNA processing and transport. hnRNPs also bind heterogeneous nuclear RNA (hnRNA), the transcripts produced by RNA polymerase II. SAF-B2 (scaffold attachment factor B2) is a nuclear matrix-associated protein that binds to matrix- or scaffold-associating regions (MARs or SARs) on DNA and interacts with RNA polymerase II and serine-/arginine-rich RNA processing factors (SR proteins). SAF-B2, and the related SAF-B, bind to the estrogen receptor (ER) and are expressed in several breast cancer cell lines at varying levels. Subsequently, SAF-B and SAF-B2 may play a role in breast cancer by mediating cellular proliferation and division. Unlike SAF-B, which is exclusively nuclear, SAF-B2 is found in the cytoplasm as well as the nucleus.

## REFERENCES

1. Badolato, J., et al. 1995. Identification and characterization of a novel human RNA-binding protein. *Gene* 166: 323-327.
2. Oesterreich, S., et al. 1997. Novel nuclear matrix protein HET binds to and influences activity of the HSP27 promoter in human breast cancer cells. *J. Cell. Biochem.* 67: 275-286.
3. Nayler, O., et al. 1998. SAF-B protein couples transcription and pre-mRNA splicing to SAR/MAR elements. *Nucleic Acids Res.* 26: 3542-359.
4. Weighardt, F., et al. 1999. A novel hnRNP protein (HAP/SAF-B) enters a subset of hnRNP complexes and relocates in nuclear granules in response to heat shock. *J. Cell Sci.* 112: 1465-1476.
5. Chiodi, I., et al. 2000. Structure and dynamics of hnRNP-labelled nuclear bodies induced by stress treatments. *J. Cell Sci.* 113: 4043-4053.
6. Arai, Y., et al. 2000. A nuclear matrix-associated factor, SAF-B, interacts with specific isoforms of AUF1/hnRNP D. *Arch. Biochem. Biophys.* 380: 228-236.
7. Oesterreich, S., et al. 2000. Tamoxifen-bound estrogen receptor (ER) strongly interacts with the nuclear matrix protein HET/SAF-B, a novel inhibitor of ER-mediated transactivation. *Mol. Endocrinol.* 14: 369-381.
8. Townson, S.M., et al. 2000. HET/SAF-B overexpression causes growth arrest and multinuclearity and is associated with aneuploidy in human breast cancer. *Clin. Cancer Res.* 6: 3788-3796.

## CHROMOSOMAL LOCATION

Genetic locus: Safb2 (mouse) mapping to 17 D.

## SOURCE

SAF-B2 (A-9) is a mouse monoclonal antibody raised against amino acids 101-207 mapping within an internal region of SAF-B2 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

SAF-B2 (A-9) is recommended for detection of SAF-B2 of mouse origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 SAF-B2 siRNA (m): sc-44646, SAF-B2 shRNA Plasmid (m): sc-44646-SH and SAF-B2 shRNA (m) Lentiviral Particles: sc-44646-V.

Molecular Weight of SAF-B2: 150 kDa.

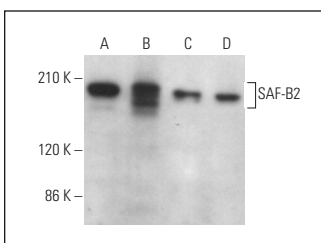
Positive Controls: NIH/3T3 whole cell lysate: sc-2210, LADMAC nuclear extract or SP2/0 whole cell lysate: sc-364795.

## RECOMMENDED SUPPORT REAGENTS

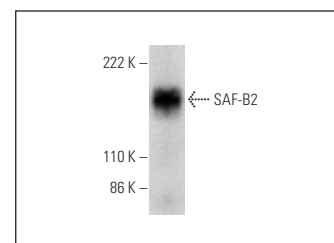
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



SAF-B2 (A-9): sc-393455. Western blot analysis of SAF-B2 expression in NIH/3T3 (A), SP2/0 (B), KNRK (C) and PC-12 (D) whole cell lysates.



SAF-B2 (A-9): sc-393455. Western blot analysis of SAF-B2 expression in LADMAC nuclear extract.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.