

SAF-B2 (E-2): sc-393689

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

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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: 3542-3549.
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. Arao, 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.
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CHROMOSOMAL LOCATION

Genetic locus: SAFB2 (human) mapping to 19p13.3; Safb2 (mouse) mapping to 17 D.

SOURCE

SAF-B2 (E-2) 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 IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SAF-B2 (E-2) is recommended for detection of SAF-B2 of mouse, rat and human 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 (h): sc-44645, SAF-B2 siRNA (m): sc-44646, SAF-B2 shRNA Plasmid (h): sc-44645-SH, SAF-B2 shRNA Plasmid (m): sc-44646-SH, SAF-B2 shRNA (h) Lentiviral Particles: sc-44645-V and SAF-B2 shRNA (m) Lentiviral Particles: sc-44646-V.

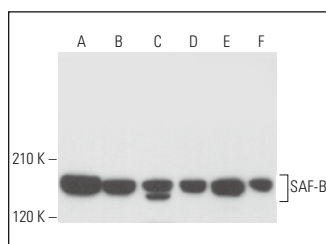
Molecular Weight of SAF-B2: 150 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, KNRK whole cell lysate: sc-2214 or NIH/3T3 whole cell lysate: sc-2210.

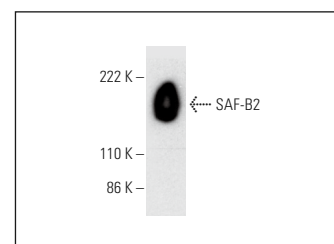
RECOMMENDED SUPPORT REAGENTS

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, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (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 (E-2): sc-393689. Western blot analysis of SAF-B2 expression in CCRF-CEM (A), NIH/3T3 (B), KNRK (C) and PC-12 (D) whole cell lysates and HeLa (E) and MCF7 (F) nuclear extracts.



SAF-B2 (E-2): sc-393689. 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.