

## SAF-B2 (G-18): sc-32004

### BACKGROUND

Heterogeneous nuclear ribonucleoproteins (hnRNPs) constitute a set of polypeptides that contribute to pre-mRNA processing and transport, and also bind heterogeneous nuclear RNA (hnRNA), the transcripts produced by RNA polymerase II. SAF-B2, for scaffold attachment factor B2, is a nuclear matrix-associated protein that binds to MAR or SAR regions (for matrix- or scaffold-associated regions) 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 (human) mapping to 19p13.3; Safb2 (mouse) mapping to 17 D.

### SOURCE

SAF-B2 (G-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of SAF-B2 of human origin.

### RESEARCH USE

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

### 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-32004 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

SAF-B2 (G-18) is recommended for detection of SAF-B2 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, 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.

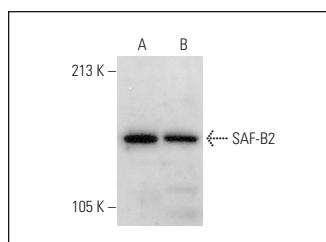
Molecular Weight of SAF-B2: 150 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, MCF7 nuclear extract: sc-2149 or HEK293 whole cell lysate: sc-45136.

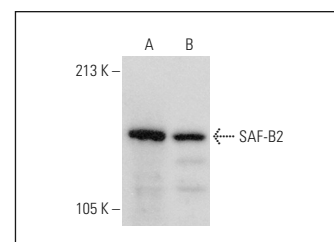
### RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

### DATA



SAF-B2 (G-18): sc-32004. Western blot analysis of SAF-B2 expression in HEK293 (A) and CCRF-CEM (B) whole cell lysates.



SAF-B2 (G-18): sc-32004. Western blot analysis of SAF-B2 expression in HeLa (A) and MCF7 (B) nuclear extracts.

### STORAGE

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