

# BRF2 (A-12): sc-271182

## BACKGROUND

Human cells contain two types of RNA polymerase III transcription factor (TFIIIB), BRF1 and BRF2. BRF1, functions in recruitment of RNA polymerase III to the promoter for multiple rounds of transcription. BRF1 precisely positions TFIIIB on the upstream promoter-less DNA by creating stable protein-protein interactions with TATA-binding protein (TBP), another component of TFIIIB. BRF2, is recruited to type 3 promoters such as the human U6 snRNA promoter. It differs from BRF1-TFIIIB in that it contains the TFIIIB-related factor BRF2 instead of Brf1 and its three components do not form a stable complex.

## REFERENCES

1. Wang, Z. and Roeder, R.G. 1995. Structure and function of a human transcription factor TFIIIB subunit that is evolutionarily conserved and contains both TFIIIB- and high-mobility-group protein 2-related domains. *Proc. Natl. Acad. Sci. USA* 92: 7026-7030.
2. Kassavetis, G.A., et al. 1995. Cloning, expression, and function of TFC5, the gene encoding the B' component of the *Saccharomyces cerevisiae* RNA polymerase III transcription factor TFIIIB. *Proc. Natl. Acad. Sci. USA* 92: 9786-9790.
3. Whitehall, S.K., et al. 1995. The symmetry of the yeast U6 RNA gene's TATA box and the orientation of the TATA-binding protein in yeast TFIIIB. *Genes Dev.* 9: 2974-2985.
4. Ishiguro, A., et al. 2002. Essential roles of BDP1, a subunit of RNA polymerase III initiation factor TFIIIB, in transcription and tRNA processing. *Mol. Cell. Biol.* 22: 3264-3275.
5. Huang, Y., et al. 2003. The fission yeast TFIIIB-related factor limits RNA polymerase III to a TATA-dependent pathway of TBP recruitment. *Nucleic Acids Res.* 31: 2108-2116.
6. Hu, P., et al. 2004. CK2 phosphorylation of BDP1 executes cell cycle-specific RNA polymerase III transcription repression. *Mol. Cell* 16: 81-92.
7. Rollins, J., et al. 2007. Human MAF1 negatively regulates RNA polymerase III transcription via the TFIIIB family members BRF1 and BRF2. *Int. J. Biol. Sci.* 3: 292-302.

## CHROMOSOMAL LOCATION

Genetic locus: BRF2 (human) mapping to 8p11.23; Brf2 (mouse) mapping to 8 A2.

## SOURCE

BRF2 (A-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 371-405 at the C-terminus of BRF2 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-271182 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

BRF2 (A-12) is recommended for detection of BRF2 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 BRF2 siRNA (h): sc-106763, BRF2 siRNA (m): sc-141744, BRF2 shRNA Plasmid (h): sc-106763-SH, BRF2 shRNA Plasmid (m): sc-141744-SH, BRF2 shRNA (h) Lentiviral Particles: sc-106763-V and BRF2 shRNA (m) Lentiviral Particles: sc-141744-V.

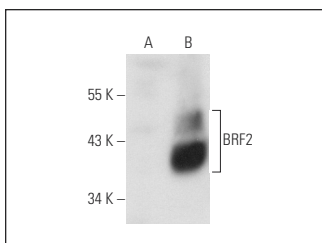
Molecular Weight of BRF2: 50 kDa.

Positive Controls: BRF2 (h): 293 Lysate: sc-111135.

## 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 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



BRF2 (A-12): sc-271182. Western blot analysis of BRF2 expression in non-transfected: sc-110760 (A) and human BRF2 transfected: sc-111135 (B) 293 whole cell lysates.

## 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.