

# BAF53 (D-3): sc-271226

## BACKGROUND

The SWI/SNF complex regulates gene expression via ATP-dependent chromatin remodeling. Brm (SNF2- $\alpha$ ), Brg-1 (SNF2- $\beta$ ), Ini1 (integrase interactor 1, SNF5), BAF53 (ARP $\beta$ ), BAF57, BAF155 (SRG3) and BAF170 make up the functional core. BAF53 homologues from yeast to humans contain a conserved N-terminal motif, which contains residues at Serine 2 and Tyrosine 6, which play important roles in BAF53 activity. The BAF53 protein shuttles between the nucleus and cytoplasm. BAF53 also forms a complex with TIP49 and TIP48, which mediates c-Myc oncogenic activity.

## REFERENCES

1. Imbalzano, A.N., et al. 1996. Nucleosome disruption by human SWI/SNF is maintained in the absence of continued ATP hydrolysis. *J. Biol. Chem.* 271: 20726-20733.
2. Phelan, M.L., et al. 1999. Reconstitution of a core chromatin remodeling complex from SWI/SNF subunits. *Mol. Cell* 3: 247-253.
3. Ohfuchi, E., et al. 2002. Alternative splicing products of the gene for a protein, hArpN $\beta$ /Baf53, that encode a protein isoform, hArpN $\beta$ S, in the cytoplasm. *Biosci. Biotechnol. Biochem.* 66: 1740-1743.
4. Park, J., et al. 2002. BAF53 forms distinct nuclear complexes and functions as a critical c-Myc-interacting nuclear cofactor for oncogenic transformation. *Mol. Cell. Biol.* 22: 1307-1316.
5. Lee, J.H., et al. 2003. Cytoplasmic localization and nucleo-cytoplasmic shuttling of BAF53, a component of chromatin-modifying complexes. *Mol. Cells* 16: 78-83.
6. Lee, J.H., et al. 2005. Effects of Ser2 and Tyr6 mutants of BAF53 on cell growth and p53-dependent transcription. *Mol. Cells* 19: 289-293.

## CHROMOSOMAL LOCATION

Genetic locus: ACTL6A (human) mapping to 3q26.33; Actl6a (mouse) mapping to 3 A3.

## SOURCE

BAF53 (D-3) is a mouse monoclonal antibody raised against amino acids 47-171 mapping near the N-terminus of BAF53 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-271226 X, 200  $\mu$ g/0.1 ml.

## STORAGE

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

## PROTOCOLS

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

## APPLICATIONS

BAF53 (D-3) is recommended for detection of BAF53 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 BAF53 siRNA (h): sc-60239, BAF53 siRNA (m): sc-60240, BAF53 shRNA Plasmid (h): sc-60239-SH, BAF53 shRNA Plasmid (m): sc-60240-SH, BAF53 shRNA (h) Lentiviral Particles: sc-60239-V and BAF53 shRNA (m) Lentiviral Particles: sc-60240-V.

BAF53 (D-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

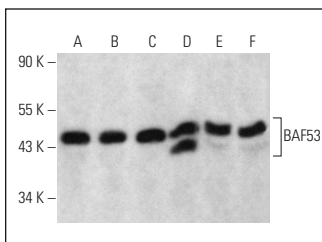
Molecular Weight of BAF53: 45 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

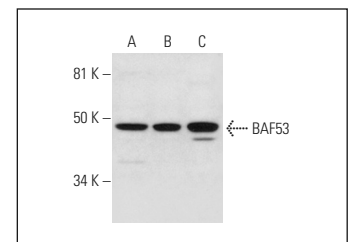
## RECOMMENDED SUPPORT REAGENTS

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™ 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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



BAF53 (D-3): sc-271226. Western blot analysis of BAF53 expression in Hep G2 (A), RT-4 (B), NIH/3T3 (C), BW5147 (D), NRK (E) and C6 (F) whole cell lysates.



BAF53 (D-3): sc-271226. Western blot analysis of BAF53 expression in HeLa (A), K-562 (B) and Ramos (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Song, J., et al. 2012. DNA and chromatin modification networks distinguish stem cell pluripotent ground states. *Mol. Cell. Proteomics* 11: 1036-1047.

## RESEARCH USE

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