

## BAF53 (E-3): sc-137062



The Power to Question

## BACKGROUND

The SWI/SNF complex regulates gene expression via ATP-dependent chromatin remodeling. Brm (SNF2-a), Brg-1 (SNF2-b), Ini1 (integrator interactor 1, SNF5), BAF53 (ARPN $\beta$ ), 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.

## REFERENCE

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.

## CHROMOSOMAL LOCATION

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

## SOURCE

BAF53 (E-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 87-129 near the N-terminus of BAF53 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $_1$  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-137062 X, 200  $\mu$ g/0.1 ml.

BAF53 (E-3) is available conjugated to agarose (sc-137062 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137062 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137062 PE), fluorescein (sc-137062 FITC), Alexa Fluor<sup>®</sup> 488 (sc-137062 AF488), Alexa Fluor<sup>®</sup> 546 (sc-137062 AF546), Alexa Fluor<sup>®</sup> 594 (sc-137062 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-137062 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-137062 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-137062 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-137062 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## STORAGE

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

## APPLICATIONS

BAF53 (E-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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BAF53 (E-3) is also recommended for detection of BAF53 in additional species, including canine, bovine and porcine.

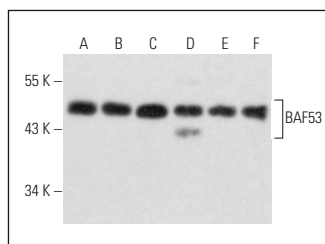
Suitable for use as control antibody for BAF53 siRNA (h): sc-60239, BAF53 siRNA (m): sc-60240, BAF53 shRNA Plasmid (h): sc-60239-SH, BAF53 shRNA Plasmid (m): sc-60240-SH, BAF53 shRNA (h) Lentiviral Particles: sc-60239-V and BAF53 shRNA (m) Lentiviral Particles: sc-60240-V.

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

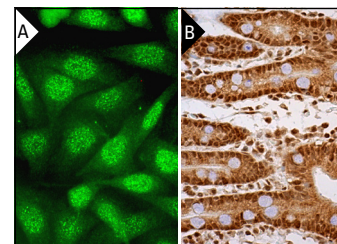
Molecular Weight of BAF53: 45 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, NRK whole cell lysate: sc-364197 or C6 whole cell lysate: sc-364373.

## DATA



BAF53 (E-3): sc-137062. 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 (E-3): sc-137062. Immunofluorescence staining of formalin-fixed SW480 cells showing nuclear and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing nuclear and cytoplasmic staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

1. Taulli, R., et al. 2014. Failure to downregulate the BAF53a subunit of the SWI/SNF chromatin remodeling complex contributes to the differentiation block in rhabdomyosarcoma. *Oncogene* 33: 2354-2362.
2. Beon, J., et al. 2022. Inositol polyphosphate multikinase physically binds to the SWI/SNF complex and modulates BRG1 occupancy in mouse embryonic stem cells. *Elife* 11: e73523.
3. Duplaquet, L., et al. 2024. Mammalian SWI/SNF complex activity regulates POU2F3 and constitutes a targetable dependency in small cell lung cancer. *Cancer Cell* 42: 1352-1369.e13.

## RESEARCH USE

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