

## Brg-1 (G-7): sc-17796



The Power to Question

## BACKGROUND

The SWI-SNF complex is involved in the activation of transcription via the remodeling of nucleosome structure in an ATP-dependent manner. Brm (also designated SNF2 $\alpha$ ) and Brg-1 (also designated SNF2 $\beta$ ) are the ATPase subunits of the mammalian SWI/SNF complex. Brm, Brg-1, Ini1 (integrase interactor 1, also designated SNF5), BAF155 (also designated SRG3) and BAF170 are thought to comprise the functional core of the SWI/SNF complex. Addition of Ini1, BAF155 and BAF170 to Brg-1 appears to increase remodeling activity. Other complex subunits are thought to play regulatory roles. hSNF2L and hSNF2H both appear to be homologs of *Drosophila* ISWI, a Brm related ATPase that is present in chromatin remodeling complexes other than SWI/SNF, including the NURF (nucleosome remodeling factor).

## CHROMOSOMAL LOCATION

Genetic locus: SMARCA4 (human) mapping to 19p13.2; Smarca4 (mouse) mapping to 9 A3.

## SOURCE

Brg-1 (G-7) is a mouse monoclonal antibody raised against amino acids 209-296 mapping near the N-terminus of Brg-1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</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-17796 X, 200  $\mu$ g/0.1 ml.

Brg-1 (G-7) is available conjugated to agarose (sc-17796 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17796 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17796 PE), fluorescein (sc-17796 FITC), Alexa Fluor<sup>®</sup> 488 (sc-17796 AF488), Alexa Fluor<sup>®</sup> 546 (sc-17796 AF546), Alexa Fluor<sup>®</sup> 594 (sc-17796 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-17796 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-17796 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-17796 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Brg-1 (G-7) is recommended for detection of Brg-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:1,000, dilution range 1:1,000-1:10,000), 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).

Suitable for use as control antibody for Brg-1 siRNA (h): sc-29827, Brg-1 siRNA (m): sc-29830, Brg-1 shRNA Plasmid (h): sc-29827-SH, Brg-1 shRNA Plasmid (m): sc-29830-SH, Brg-1 shRNA (h) Lentiviral Particles: sc-29827-V and Brg-1 shRNA (m) Lentiviral Particles: sc-29830-V.

Brg-1 (G-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

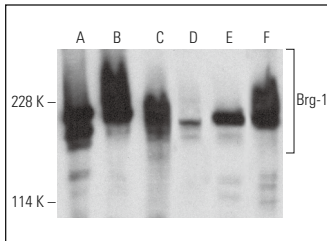
Molecular Weight of Brg-1: 200-205 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

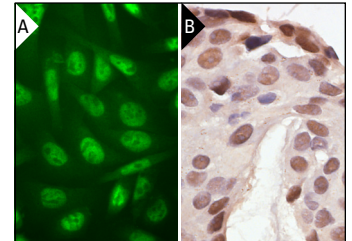
## STORAGE

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

## DATA



Brg-1 (G-7) HRP: sc-17796 HRP. Direct western blot analysis of Brg-1 expression in K-562 (A) and HeLa (B) nuclear extracts, mouse thymus (C) and mouse colon (D) tissue extracts and HeLa (E) and HCT-116 (F) whole cell lysates.



Brg-1 (G-7) Alexa Fluor<sup>®</sup> 488: sc-17796 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing nuclear localization. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 (A). Brg-1 (G-7): sc-17796. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast tumor showing nuclear staining (B).

## SELECT PRODUCT CITATIONS

- Angus, S.P., et al. 2003. Retinoblastoma tumor suppressor: analyses of dynamic behavior in living cells reveal multiple modes of regulation. *Mol. Cell. Biol.* 23: 8172-8188.
- Curtis, C.D. and Griffin, C.T. 2012. The chromatin-remodeling enzymes BRG1 and CHD4 antagonistically regulate vascular Wnt signaling. *Mol. Cell. Biol.* 32: 1312-1320.
- Klattenhoff, C.A., et al. 2013. Braveheart, a long noncoding RNA required for cardiovascular lineage commitment. *Cell* 152: 570-583.
- Liu, W., et al. 2014. BRD4 regulates Nanog expression in mouse embryonic stem cells and preimplantation embryos. *Cell Death Differ.* 21: 1950-1960.
- Albini, S., et al. 2015. Brahma is required for cell cycle arrest and late muscle gene expression during skeletal myogenesis. *EMBO Rep.* 16: 1037-1050.
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- Morrison, E.A., et al. 2017. DNA binding drives the association of BRG1/hBRM bromodomains with nucleosomes. *Nat. Commun.* 8: 16080.
- Limi, S., et al. 2018. Transcriptional burst fraction and size dynamics during lens fiber cell differentiation and detailed insights into the denucleation process. *J. Biol. Chem.* 293: 13176-13190.
- Pan, J., et al. 2019. The ATPase module of mammalian SWI/SNF family complexes mediates subcomplex identity and catalytic activity-independent genomic targeting. *Nat. Genet.* 51: 618-626.

## RESEARCH USE

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

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