SANTA CRUZ BIOTECHNOLOGY, INC.

Brg-1 (H-10): sc-374197

SANTA CRUZ BIOTECHNOLOGY

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 SNF2α) and Brg-1 (also designated SNF2β) 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, in-cluding the NURF (nucleosome remodeling factor).

REFERENCES

1. Muchardt, C., et al. 1993. A human homologue of *Saccharomyces cerevisiae* SNF2/SWI2 and *Drosophila* brm genes potentiates transcriptional activation by the glucocorticoid receptor. EMBO J. 12: 4279-4290.
2. Khavari, P.A., et al. 1993. BRG1 contains a conserved domain of the SWI2/SNF2 family necessary for normal mitotic growth and transcription. Nature 366: 170-174.

CHROMOSOMAL LOCATION

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

SOURCE

Brg-1 (H-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 115-149 near the N-terminus of Brg-1 of human origin.

PRODUCT

Each vial contains 200 µg 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-374197 X, 200 µg/0.1 ml.

Brg-1 (H-10) is available conjugated to agarose (sc-374197 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374197 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374197 PE), fluorescein (sc-374197 FITC), Alexa Fluor® 488 (sc-374197 AF488), Alexa Fluor® 546 (sc-374197 AF546), Alexa Fluor® 594 (sc-374197 AF594) or Alexa Fluor® 647 (sc-374197 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374197 AF680) or Alexa Fluor® 790 (sc-374197 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374197 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Brg-1 (H-10) is recommended for detection of Brg-1 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).

Brg-1 (H-10) is also recommended for detection of Brg-1 in additional species, including canine, bovine and porcine.

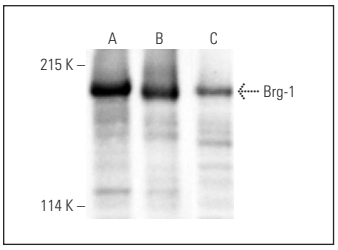
Suitable for use as control antibody for Brg-1 siRNA (h): sc-29827, Brg-1 siRNA (m): sc-29830, Brg-1 shRNA Plasmid (h): sc-29827-SH, Brg-1 shRNA Plasmid (m): sc-29830-SH, Brg-1 shRNA (h) Lentiviral Particles: sc-29827-V and Brg-1 shRNA (m) Lentiviral Particles: sc-29830-V.

Brg-1 (H-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

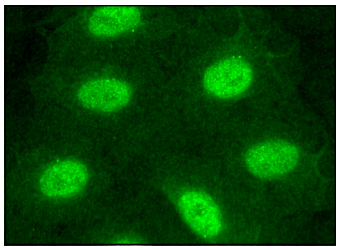
Molecular Weight of Brg-1: 200-205 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, K-562 nuclear extract: sc-2130 or mouse thymus extract: sc-2406.

DATA



Brg-1 (H-10) HRP: sc-374197 HRP. Direct western blot analysis of Brg-1 expression in Jurkat (**A**) and K-562 (**B**) nuclear extracts and mouse thymus tissue extract (**C**).



Brg-1 (H-10): sc-374197. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Han, P., et al. 2014. A long noncoding RNA protects the heart from pathological hypertrophy. Nature 514: 102-106.
2. Alasiri, A., et al. 2019. Novel interactions between the human T-cell leukemia virus type 1 antisense protein HBZ and the SWI/SNF chromatin remodeling family: implications for viral life cycle. J. Virol. 93: e00412-19.
3. Park, D.E., et al. 2020. Merkel cell polyomavirus activates LSD1-mediated blockade of non-canonical BAF to regulate transformation and tumorigenesis. Nat. Cell Biol. 22: 603-615.
4. Chang, C.Y., et al. 2021. Increased ACTL6A occupancy within mSWI/SNF chromatin remodelers drives human squamous cell carcinoma. Mol. Cell 81: 4964-4978.e8.

RESEARCH USE

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