Anti-BRG1 Antibody

HA500262

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse
Applications:	WB, IHC-P
Molecular Wt:	181/187 kDa

Description: Involved in transcriptional activation and repression of select genes by chromatin remodeling (alteration of DNA-nucleosome topology). Component of SWI/SNF chromatin remodeling complexes that carry out key enzymatic activities, changing chromatin structure by altering DNA-histone contacts within a nucleosome in an ATP-dependent manner. Component of the CREST-BRG1 complex, a multiprotein complex that regulates promoter activation by orchestrating the calcium-dependent release of a repressor complex and the recruitment of an activator complex. In resting neurons, transcription of the c-FOS promoter is inhibited by SMARCA4-dependent recruitment of a phospho-RB1-HDAC repressor complex. Upon calcium influx, RB1 is dephosphorylated by calcineurin, which leads to release of the repressor complex. At the same time, there is increased recruitment of CREBBP to the promoter by a CREST-dependent mechanism, which leads to transcriptional activation. The CREST-BRG1 complex also binds to the NR2B promoter, and activity-dependent induction of NR2B expression involves the release of HDAC1 and recruitment of CREBBP.

Immunogen: Synthetic peptide within human BRG1 aa 200-300 / 1647.

Positive control: 293 cell lysate, Daudi cell lysate, mouse testis tissue, human lung carcinoma tissue, Wild-type HepG2 whole cell lysate.

Subcellular location: Nucleus.

Database links: SwissProt: P51532 Human | Q3TKT4 Mouse

Recommended Dilutions:

WB	1:500-1:2,000
IHC-P	1:50-1:200

Storage Buffer: 1*TBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

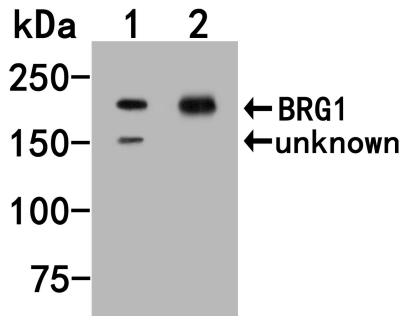

Fig1: Western blot analysis of BRG1 on different lysates. Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA500262, 1/1,000) was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:200,000 dilution was used for 1 hour at room temperature.
Positive control:
Lane 1: 293 cell lysate
Lane 2: Daudi cell lysate

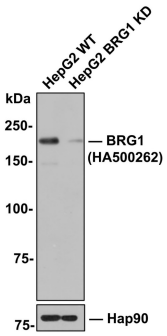

Fig2: All lanes: Western blot analysis of BRG1 with anti-BRG1 antibody (HA500262) at 1:500 dilution.
Lane 1: Wild-type HepG2 whole cell lysate (10 µg).
Lane 2: BRG1 knockdown HepG2 whole cell lysate (10 µg).

HA500262 was shown to specifically react with BRG1 in wild-type HepG2 cells. Weakened band was observed when BRG1 knockdown sample was tested. Wild-type and BRG1 knockdown samples were subjected to SDS-PAGE. Proteins were transferred to a PVDF membrane and blocked with 5% NFDM in TBST for 1 hour at room temperature. The primary antibody (HA500262, 1:500) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG-HRP Secondary Antibody (HA1001) at 1:300,000 dilution was used for 1 hour at room temperature.

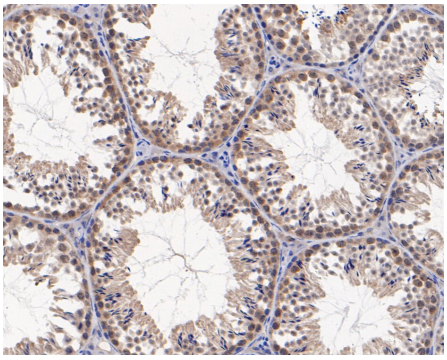

Fig3: Immunohistochemical analysis of paraffin-embedded mouse testis tissue using anti-BRG1 antibody. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 20 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA500262, 1/200) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

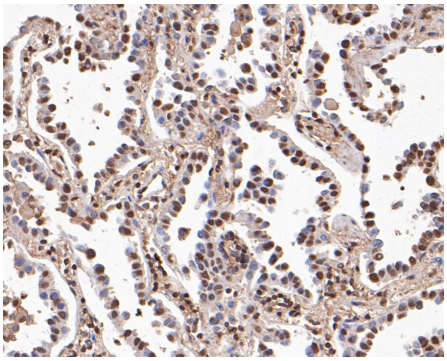

Fig4: Immunohistochemical analysis of paraffin-embedded human lung carcinoma tissue using anti-BRG1 antibody. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 20 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA500262, 1/400) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Euskirchen G. et. al. SWI/SNF chromatin-remodeling factors: multiscale analyses and diverse functions. J. Biol. Chem. 287:30897-30905(2012).