

## Product datasheet

# Anti-BRG1 antibody [SMAR9G1F9] ab51509

[1 Image](#)

### Overview

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<b>Product name</b>	Anti-BRG1 antibody [SMAR9G1F9]
<b>Description</b>	Mouse monoclonal [SMAR9G1F9] to BRG1
<b>Host species</b>	Mouse
<b>Tested applications</b>	<b>Suitable for:</b> WB, Dot blot
<b>Species reactivity</b>	<b>Reacts with:</b> Recombinant fragment <b>Predicted to work with:</b> Human 
<b>Immunogen</b>	Recombinant fragment, C terminal (Human)

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term.
<b>Storage buffer</b>	Preservative: 0.05% Sodium Azide Constituents: 1% BSA, 8mM Dibasic monohydrogen sodium phosphate, 3.0mM Potassium chloride, 140mM Sodium chloride, 1.5mM Monobasic dihydrogen potassium phosphate, pH 7.4
<b>Purity</b>	Protein G purified
<b>Purification notes</b>	ab51509 was purified using protein G column chromatography from culture supernatant of hybridoma cultured in a medium containing bovine IgG-depleted (approximately 95%) fetal bovine serum.
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	SMAR9G1F9
<b>Isotype</b>	IgG1

### Applications

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#### The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab51509 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use at an assay dependent dilution. Predicted molecular weight: 185 kDa.
Dot blot		Use at an assay dependent dilution.

## Target

### Function

Transcriptional coactivator cooperating with nuclear hormone receptors to potentiate transcriptional activation. Component of the CREST-BRG1 complex, a multiprotein complex that regulates promoter activation by orchestrating a calcium-dependent release of a repressor complex and a recruitment of an activator complex. In resting neurons, transcription of the c-FOS promoter is inhibited by BRG1-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 a release of HDAC1 and recruitment of CREBBP. Belongs to the neural progenitors-specific chromatin remodeling complex (npBAF complex) and the neuron-specific chromatin remodeling complex (nBAF complex). During neural development a switch from a stem/progenitor to a post-mitotic chromatin remodeling mechanism occurs as neurons exit the cell cycle and become committed to their adult state. The transition from proliferating neural stem/progenitor cells to post-mitotic neurons requires a switch in subunit composition of the npBAF and nBAF complexes. As neural progenitors exit mitosis and differentiate into neurons, npBAF complexes which contain ACTL6A/BAF53A and PHF10/BAF45A, are exchanged for homologous alternative ACTL6B/BAF53B and DPF1/BAF45B or DPF3/BAF45C subunits in neuron-specific complexes (nBAF). The npBAF complex is essential for the self-renewal/proliferative capacity of the multipotent neural stem cells. The nBAF complex along with CREST plays a role regulating the activity of genes essential for dendrite growth. SMARCA4/BAF190A may promote neural stem cell self-renewal/proliferation by enhancing Notch-dependent proliferative signals, while concurrently making the neural stem cell insensitive to SHH-dependent differentiating cues (By similarity). Also involved in vitamin D-coupled transcription regulation via its association with the WINAC complex, a chromatin-remodeling complex recruited by vitamin D receptor (VDR), which is required for the ligand-bound VDR-mediated transrepression of the CYP27B1 gene. Acts as a corepressor of ZEB1 to regulate E-cadherin transcription and is required for induction of epithelial-mesenchymal transition (EMT) by ZEB1.

### Tissue specificity

Colocalizes with ZEB1 in E-cadherin-negative cells from established lines, and stroma of normal colon as well as in de-differentiated epithelial cells at the invasion front of colorectal carcinomas (at protein level).

### Involvement in disease

Defects in SMARCA4 are the cause of rhabdoid tumor predisposition syndrome type 2 (RTPS2) [MIM:613325]. RTPS2 is a familial cancer syndrome predisposing to renal or extrarenal malignant rhabdoid tumors and to a variety of tumors of the central nervous system, including choroid plexus carcinoma, medulloblastoma, and central primitive neuroectodermal tumors. Rhabdoid tumors are the most aggressive and lethal malignancies occurring in early childhood.

### Sequence similarities

Belongs to the SNF2/RAD54 helicase family.  
Contains 1 bromo domain.  
Contains 1 helicase ATP-binding domain.

Contains 1 helicase C-terminal domain.

Contains 1 HSA domain.

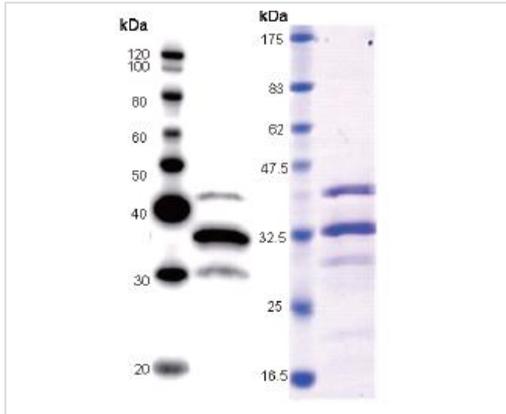
**Post-translational modifications**

Phosphorylated upon DNA damage, probably by ATM or ATR.

**Cellular localization**

Nucleus.

**Images**



Left: WB analysis of immunized recombinant protein, using ab51509. Right: CBB staining of immunized recombinant protein.. This antibody has only been tested in WB against the recombinant fragment used as immunogen. We have no data on the detection of endogenous protein.

Western blot - Anti-BRG1 antibody [SMAR9G1F9] (ab51509)

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