ARG62694
anti-BRG1 antibody [BRG-01]

Package: 100 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [BRG-01] recognizes BRG1
Tested Reactivity	Hu
Tested Application	WB
Specificity	The clone BRG-01 recognizes an epitope within C-terminal part of human Brg1, a 205 kDa catalytic subunit of SWI2/SNF2-family chromatin-remodeling complexes.
Host	Mouse
Clonality	Monoclonal
Clone	BRG-01
Isotype	IgG2a
Target Name	BRG1
Species	Human
Immunogen	Bacterially produced GST-fused protein representing 242 C-terminal amino acids of human Brg1.
Conjugation	Un-conjugated
Alternate Names	BRG1-associated factor 190A; SNF2-beta; RTPS2; SNF2L4; SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily A member 4; Transcription activator BRG1; BAF190A; EC 3.6.4.-; Protein BRG-1; SNF2LB; ATP-dependent helicase SMARCA4; MRD16; BAF190; Mitotic growth and transcription activator; BRG1; Protein brahma homolog 1; SNF2; hSNF2b; SWI2

Application Instructions

Application table

Application	Dilution
WB	10 µg/ml

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Positive Control	WB: HEK293

Properties

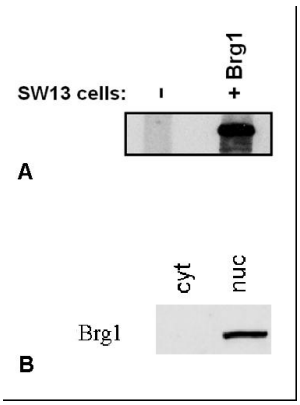
Form	Liquid
Purification	Purified from ascites by protein-A affinity chromatography.
Purity	> 95% (by SDS-PAGE)
Buffer	PBS (pH 7.4) and 15 mM Sodium azide
Preservative	15 mM Sodium azide
Concentration	1 mg/ml

Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Database links	GeneID: 6597 Human Swiss-port # P51532 Human
Gene Symbol	SMARCA4
Gene Full Name	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 4
Background	Brg1 (Brahma-related gene 1) is an ATPase subunit of SWI2/SNF2-like chromatin-remodeling complexes that enable access of regulatory and effector proteins in transcription, DNA repair and DNA replication. Although Brg1-containing complexes are not essential for general cell survival, they participate in transcriptional regulation of several hundred genes including those involved in interferon and stress response, immune cells differentiation, neurogenesis, cell cycle etc. and is absolutely necessary for mouse embryogenesis. Brg1 is also involved in cell growth arrest, senescence and tumour supression.
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). Acts as a corepressor of ZEB1 to regulate E-cadherin transcription and is required for induction of epithelial-mesenchymal transition (EMT) by ZEB1. [UniProt]
Research Area	Cancer antibody; Developmental Biology antibody; Gene Regulation antibody; Neuroscience antibody; Signaling Transduction antibody
Calculated Mw	185 kDa

Images



ARG62694 anti-BRG1 antibody [BRG-01] WB image

Western blot: A. Brg1-negative SW13 cells transfected with Brg1-expression plasmid B. HEK293 cytoplasmic (cyt) and nuclear (nuc) lysates stained with ARG62694 anti-BRG1 antibody [BRG-01].