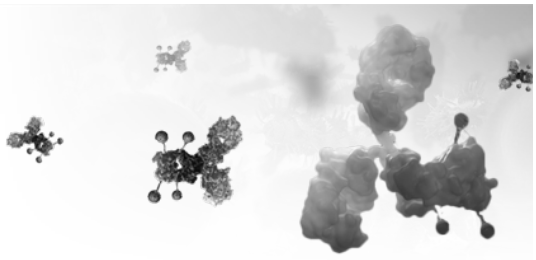

Anti-SMARCA4 monoclonal antibody, clone FQODJS222B (DCABH-308)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	Rabbit monoclonal to BRG1
Antigen Description	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

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	regulate E-cadherin transcription and is required for induction of epithelial-mesenchymal transition (EMT) by ZEB1.
Immunogen	A synthetic peptide corresponding to residues in Mouse BRG1.
Isotype	IgG
Source/Host	Rabbit
Species Reactivity	Mouse, Rat, Human
Clone	FQODJS222B
Conjugate	Unconjugated
Applications	WB, IP, IHC-P, ICC/IF
Positive Control	K562, HeLa, MOLT4, NIH3T3, and PC12 cell lysates; Human kidney and testis tissues; HeLa cells.
Format	Liquid
Size	100 µl
Buffer	PBS 49%,Sodium azide 0.01%,Glycerol 50%,BSA 0.05%
Storage	Store at -20°C. Stable for 12 months at -20°C

GENE INFORMATION

Gene Name	Smarca4 SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 4 [Mus musculus]
Official Symbol	SMARCA4
Synonyms	SMARCA4; SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 4; transcription activator BRG1; BAF190A; SNF2-beta; protein brahma homolog 1; BRG1-associated factor 190A; ATP-dependent helicase SMARCA4; SWI/SNF-re
Entrez Gene ID	20586
Protein Refseq	NP_001167549
UniProt ID	Q3TKT4
Pathway	PluriNetWork, organism-specific biosystem; TNF-alpha NF-kB Signaling Pathway, organism-specific biosystem;

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Function	ATP binding; ATPase activity; DNA binding; DNA-dependent ATPase activity; RNA polymerase II regulatory region sequence-specific DNA binding; Tat protein binding; androgen receptor binding; chromatin binding; helicase activity; histone acetyl-lysine bindin

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