10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

(Mouse) Smarca4 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21288b

Specification

(Mouse) Smarca4 Antibody (C-term) - Product Information

Application	**WB,E**
Primary Accession	Q3TKT4
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**181427**

(Mouse) Smarca4 Antibody (C-term) - Additional Information

Gene ID 20586

Other Names
Transcription activator BRG1, 364-, ATP-dependent helicase SMARCA4, BRG1-associated factor 190A, BAF190A, Protein brahma homolog 1, SNF2-beta, SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily A member 4, Smarca4, Baf190a, Brg1, Snf2b, Snf2l4

Target/Specificity
This Mouse Smarca4 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 1352-1386 amino acids from the C-terminal region of mouse Smarca4.

Dilution
WB~~1:2000

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
(Mouse) Smarca4 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

(Mouse) Smarca4 Antibody (C-term) - Protein Information

Name Smarca4

Synonyms Baf190a, Brg1, Snf2b, Snf2l4

Function 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 (By similarity). 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 postmitotic 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 postmitotic 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 in 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. Acts as a corepressor of ZEB1 to regulate E-cadherin transcription and is required for induction of epithelial-mesenchymal transition (EMT) by ZEB1 (By similarity). Binds via DLX1 to enhancers located in the intergenic region between DLX5 and DLX6 and this binding is stabilized by the long non-coding RNA (lncRNA) Evf2 (PubMed:26138476). Binds to RNA in a promiscuous manner (PubMed:26138476). Binding to RNAs including lncRNA Evf2 leads to inhibition of SMARCA4 ATPase and chromatin remodeling activities (PubMed:26138476). In brown adipose tissue, involved in the regulation of thermogenic genes expression (PubMed:34910916).

Cellular Location
Nucleus {ECO:0000255|PROSITE-ProRule:PRU00549, ECO:0000269|PubMed:26138476}. Note=Colocalizes with long non-coding RNA Evf2 in nuclear RNA clouds (PubMed:26138476). Localizes to sites of DNA damage (By similarity). {ECO:0000250|UniProtKB:P51532, ECO:0000269|PubMed:26138476}

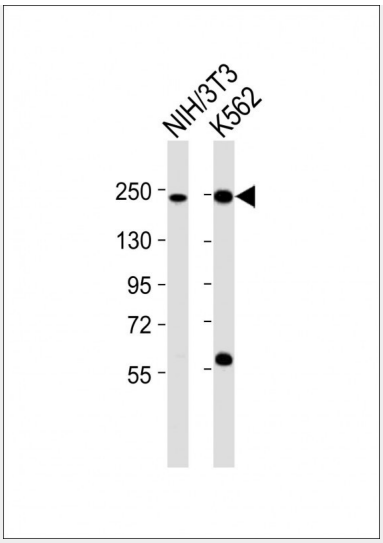
(Mouse) Smarca4 Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

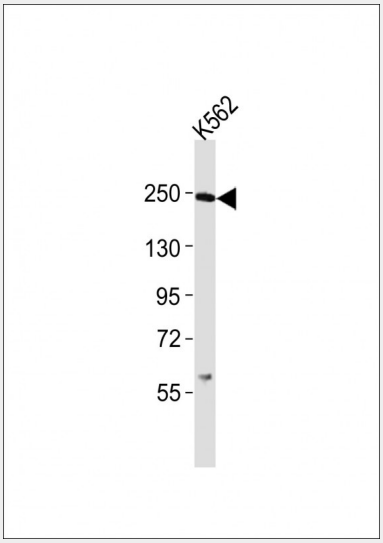
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

(Mouse) Smarca4 Antibody (C-term) - Images

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All lanes : Anti-Smarca4 Antibody (C-term) at 1:2000 dilution Lane 1: NIH/3T3 whole cell lysates Lane 2: K562 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 181 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Anti-Smarca4 Antibody (C-term)at 1:2000 dilution + K562 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 181 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

(Mouse) Smarca4 Antibody (C-term) - Background

Transcriptional coactivator cooperating with nuclear hormone receptors to potentiate transcriptional activation. 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. 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

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(Mouse) Smarca4 Antibody (C-term) - References

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Ohkawa Y.,et al.EMBO J. 25:490-501(2006).
Villen J.,et al.Proc. Natl. Acad. Sci. U.S.A. 104:1488-1493(2007).