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SMARCD1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP16186b

Product Information

Application	WB, E
Primary Accession	Q96GM5
Other Accession	Q61466, Q2TBN1, NP_003067.3, NP_620710.2
Reactivity	Human
Predicted	Bovine, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB35569
Calculated MW	58233
Antigen Region	431-459

Additional Information

Gene ID	6602
Other Names	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 1, 60 kDa BRG-1/Brm-associated factor subunit A, BRG1-associated factor 60A, BAF60A, SWI/SNF complex 60 kDa subunit, SMARCD1 {ECO:0000312|EMBL:AAD233901}
Target/Specificity	This SMARCD1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 431-459 amino acids from the C-terminal region of human SMARCD1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
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	SMARCD1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SMARCD1 {ECO:0000312|EMBL:AAD23390.1}

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 (PubMed:29374058, PubMed:8804307). 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 regulating the activity of genes essential for dendrite growth (By similarity). Has a strong influence on vitamin D-mediated transcriptional activity from an enhancer vitamin D receptor element (VDRE). May be a link between mammalian SWI-SNF-like chromatin remodeling complexes and the vitamin D receptor (VDR) heterodimer (PubMed:14698202). Mediates critical interactions between nuclear receptors and the BRG1/SMARCA4 chromatin-remodeling complex for transactivation (PubMed:12917342). Interacts with AKIRIN2 (By similarity).
Cellular Location	Nucleus {ECO:0000269|PubMed:8804307, ECO:0000305}
Tissue Location	Expressed in all tissues tested, including brain, heart, kidney, liver, lung, muscle, pancreas and placenta

Background

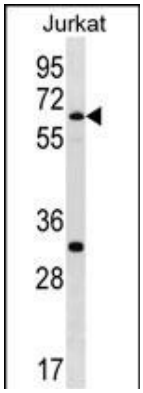
The protein encoded by this gene is a member of the SWI/SNF family of proteins, whose members display helicase and ATPase activities and which are thought to regulate transcription of certain genes by altering the chromatin structure around those genes. The encoded protein is part of the large ATP-dependent chromatin remodeling complex SNF/SWI and has sequence similarity to the yeast Swp73 protein. Two transcript variants encoding different isoforms have been found for this gene.

References

van de Wijngaart, D.J., et al. Mol. Endocrinol. 23(11):1776-1786(2009)
Wu, C., et al. Proteomics 7(11):1775-1785(2007)
Assmann, E.M., et al. J. Biol. Chem. 281(15):9869-9881(2006)
Hsiao, P.W., et al. Mol. Cell. Biol. 23(17):6210-6220(2003)
Kitagawa, H., et al. Cell 113(7):905-917(2003)

Images

SMARCD1 Antibody (C-term) (Cat. #AP16186b) western blot analysis in Jurkat cell line lysates (35ug/lane).This demonstrates the SMARCD1 antibody detected the SMARCD1 protein (arrow).



Citations

- SWI/SNF factors required for cellular resistance to DNA damage include ARID1A and ARID1B and show interdependent protein stability.