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KD-Validated Anti-SMARCD1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI2285

Product Information

Application	WB
Primary Accession	Q96GM5
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	25GB4745
Calculated MW	58233
Gene Name	SMARCD1
Aliases	SMARCD1; SWI/SNF Related BAF Chromatin Remodeling Complex Subunit D1; BAF60A; SWI/SNF Related, Matrix Associated, Actin Dependent Regulator Of Chromatin, Subfamily D, Member 1; CRACD1; Rsc6p; 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; Mammalian Chromatin Remodeling Complex BRG1-Associated Factor 60A; Chromatin Remodeling Complex BAF60A Subunit; SWI/SNF Complex 60 KDa Subunit A; SWI/SNF Complex 60 KDa Subunit; Swp73-Like Protein; CSS11
Immunogen	A synthesized peptide derived from human SMARCD1

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:AAD23390.1}

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