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

SMARCD3 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20613a

Product Information

Application	WB, IF, E
Primary Accession	Q6STE5
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB48016
Calculated MW	55016

Additional Information

Gene ID	6604
Other Names	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3, 60 kDa BRG-1/Brm-associated factor subunit C, BRG1-associated factor 60C, BAF60C, SMARCD3, BAF60C
Target/Specificity	This SMARCD3 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 27-60 amino acids from the N-terminal region of human SMARCD3.
Dilution	WB~~1:1000 IF~~1:25 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	SMARCD3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SMARCD3
Synonyms	BAF60C
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. Stimulates nuclear receptor mediated transcription. 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).
Cellular Location	Nucleus.
Tissue Location	Isoform 2 and isoform 1 are expressed in brain, heart, kidney, placenta, prostate, salivary gland, spleen, testis, thyroid, trachea and uterus. Isoform 1 is also expressed in skeletal muscle and adipose tissue

Background

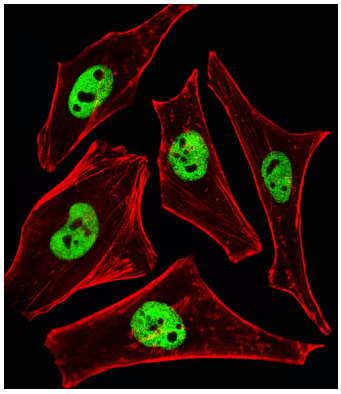
Plays a role in ATP dependent nucleosome remodeling by SMARCA4 containing complexes. Stimulates nuclear receptor mediated transcription. Belongs to the neural progenitors-specific chromatin remodeling complex (npBAF complex) and the neuron- specific chromatin remodeling complex (nBAF complex). During 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 (By similarity).

References

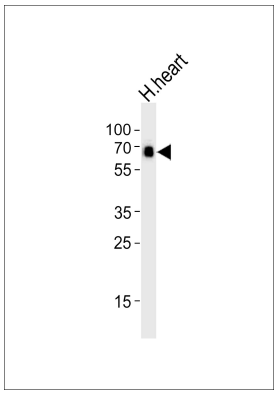
Wang W.,et al.Genes Dev. 10:2117-2130(1996).
Debril M.-B.,et al.J. Biol. Chem. 279:16677-16686(2004).
Hillier L.W.,et al.Nature 424:157-164(2003).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.
Olsen J.V.,et al.Cell 127:635-648(2006).

Images

Fluorescent image of Hela cells stained with SMARCD3 Antibody (N-term)(Cat#AP20613a). AP20613a was diluted at 1:25 dilution. An Alexa Fluor 488-conjugated goat anti-rabbit lgG at 1:400 dilution was used as the



secondary antibody (green). Cytoplasmic actin was counterstained with Alexa Fluor® 555 conjugated with Phalloidin (red).



Western blot analysis of lysate from human heart tissue lysate, using SMARCD3 Antibody (N-term)(Cat. #AP20613a). AP20613a was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.