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

SMARCC1 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP5097a

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q92922
Other Accession	P97496
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB21016
Calculated MW	122867
Antigen Region	268-297

Additional Information

Gene ID	6599
Other Names	SWI/SNF complex subunit SMARCC1, BRG1-associated factor 155, BAF155, SWI/SNF complex 155 kDa subunit, SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily C member 1, SMARCC1, BAF155
Target/Specificity	This SMARCC1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 268-297 amino acids from the N-terminal region of human SMARCC1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 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	SMARCC1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SMARCC1 (HGNC:11104)

Synonyms	BAF155
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. May stimulate the ATPase activity of the catalytic subunit of the complex (PubMed:10078207, PubMed:29374058). 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. Cytoplasm
Tissue Location	Expressed in brain, heart, muscle, placenta, lung, liver, muscle, kidney and pancreas

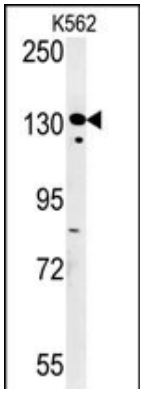
Background

SMARCC1 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 contains a predicted leucine zipper motif typical of many transcription factors.

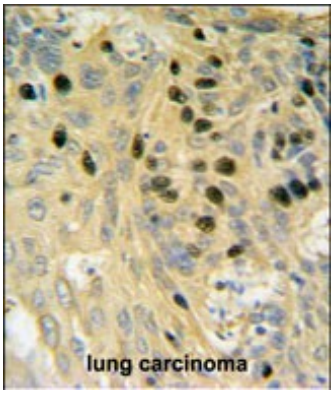
References

So, H.C., et al. Am. J. Med. Genet. B Neuropsychiatr. Genet. 153B (1), 103-113 (2010)
Andersen, C.L., et al. Br. J. Cancer 100(3):511-523(2009)
Heeboll, S., et al. Histol. Histopathol. 23(9):1069-1076(2008)

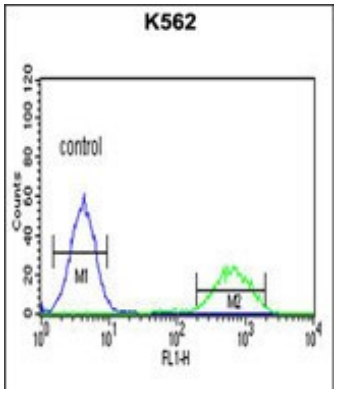
Images



Western blot analysis of SMARCC1 Antibody (N-term) (Cat. #AP5097a) in K562 cell line lysates (35ug/lane).SMARCC1 (arrow) was detected using the purified Pab.



SMARCC1 Antibody (N-term) (Cat. #AP5097a) IHC analysis in formalin fixed and paraffin embedded lung carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the SMARCC1 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.



SMARCC1 Antibody (N-term) (Cat. #AP5097a) flow cytometric analysis of K562 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

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

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