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ACTL6B Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP5327a

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	O94805
Other Accession	NP_057272.1
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB26766
Calculated MW	46877
Antigen Region	42-70

Additional Information

Gene ID	51412
Other Names	Actin-like protein 6B, 53 kDa BRG1-associated factor B, Actin-related protein Baf53b, ArpNalpha, BRG1-associated factor 53B, BAF53B, ACTL6B, ACTL6, BAF53B
Target/Specificity	This ACTL6B antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 42-70 amino acids from the N-terminal region of human ACTL6B.
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	ACTL6B Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ACTL6B (HGNC:160)

Synonyms	ACTL6, BAF53B
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. Belongs to the neuron-specific chromatin remodeling complex (nBAF complex), as such plays a role in remodeling mononucleosomes in an ATP-dependent fashion, and is required for postmitotic neural development and dendritic outgrowth. 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. ACTL6B/BAF53B is not essential for assembly of the nBAF complex but is required for targeting the complex and CREST to the promoter of genes essential for dendritic growth (By similarity). Essential for neuronal maturation and dendrite development (PubMed:31031012).
Cellular Location	Nucleus.

Background

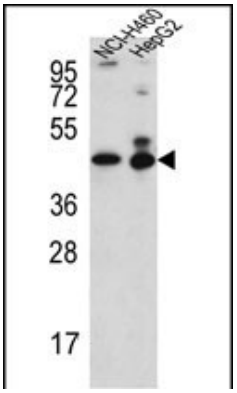
ACTL6B is a member of a family of actin-related proteins (ARPs) which share significant amino acid sequence identity to conventional actins. Both actins and ARPs have an actin fold, which is an ATP-binding cleft, as a common feature. The ARPs are involved in diverse cellular processes, including vesicular transport, spindle orientation, nuclear migration and chromatin remodeling. This gene encodes a subunit of the BAF (BRG1/brm-associated factor) complex in mammals, which is functionally related to SWI/SNF complex in S. cerevisiae and Drosophila; the latter is thought to facilitate transcriptional activation of specific genes by antagonizing chromatin-mediated transcriptional repression. This subunit may be involved in the regulation of genes by structural modulation of their chromatin, specifically in the brain.

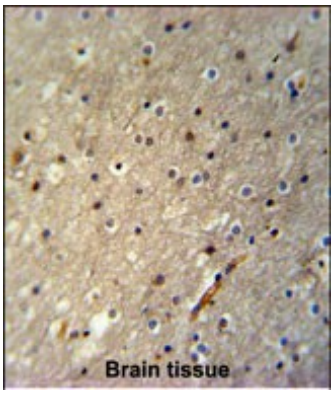
References

Oma, Y., et al. Biochem. Biophys. Res. Commun. 301(2):521-528(2003)
Kuroda, Y., et al. Biochem. Biophys. Res. Commun. 299(2):328-334(2002)
Olave, I., et al. Genes Dev. 16(19):2509-2517(2002)

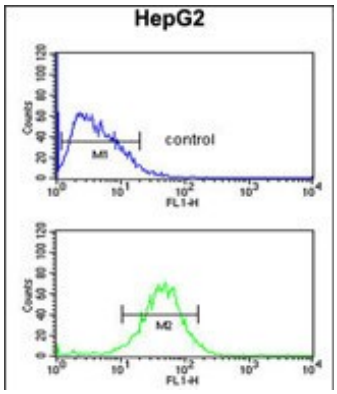
Images

ACTL6B Antibody (N-term) (Cat. #AP5327a) western blot analysis in NCI-H460,HepG2 cell line lysates (35ug/lane).This demonstrates the ACTL6B antibody detected the ACTL6B protein (arrow).





ACTL6B Antibody (N-term) (Cat. #AP5327a) immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the ACTL6B Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.



ACTL6B Antibody (N-term) (Cat. #AP5327a) flow cytometric analysis of HepG2 cells (bottom histogram) compared to a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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