

Product name:	BAF53 Rabbit Polyclonal Antibody
Cat number:	ABN07431
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human ACTL6A. AA range:201-250
Reactivity:	Human,Mouse,Rat
Applications:	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:200-1:1000,ELISA 1:5000-1:20000
Molecular Weight:	47kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

This gene encodes a family member 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 53 kDa subunit protein 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. Together with beta-actin, it is required for maximal ATPase activity of BRG1, and for the association of the BAF complex with chromatin/matrix. Three transcript variants that encode two different protein function: Involved in transcriptional activation and repression of select genes by chromatin remodeling (alteration of DNA-nucleosome topology). Required for maximal ATPase activity of SMARCA4/BRG1 and for association of the SMARCA4/BRG1 containing remodeling complex BAF with chromatin/nuclear matrix. Component of the NuA4 histone acetyltransferase (HAT) complex which is involved in transcriptional activation of select genes principally by acetylation of nucleosomal histones H4 and H2A. This modification may both alter nucleosome - DNA interactions and promote interaction of the modified histones with other proteins which positively regulate transcription. This complex may be required for the activation of transcriptional programs associated with oncogene and proto-oncogene mediated growth induction, tumor suppressor mediated growth arrest and replicative senescence, apoptosis, and DNA repair. NuA4 may also play a direct role in DNA repair when recruited to sites of DNA damage. Also involved in vitamin D-coupled transcription regulation via its association with the WINAC complex, a chromatin-remodeling complex recruited by vitamin D receptor (VDR), which is required for the ligand-bound VDR-mediated transrepression of the CYP27B1 gene. **Similarity:** Belongs to the actin family. **Subunit:** Component of numerous complexes with chromatin remodeling and histone acetyltransferase activity. Component of the NuA4 histone acetyltransferase complex which contains the catalytic subunit HTATIP/TIP60 and the subunits EP400, TRRAP/PAF400, BRD8/SMAP, EPC1, DMAP1/DNMAP1, RUVBL1/TIP49, RUVBL2, ING3, actin, ACTL6A/BAF53A, MORF4L1/MRG15, MORF4L2/MRGX, MRGBP, YEATS4/GAS41, VPS72/YL1 and EAF6. The NuA4 complex interacts with MYC and the adenovirus E1A protein. Component of a NuA4-related complex which contains EP400, TRRAP/PAF400, SRCAP, BRD8/SMAP, EPC1, DMAP1/DNMAP1, RUVBL1/TIP49, RUVBL2, actin, ACTL6A/BAF53A, VPS72 and YEATS4/GAS41. Component of the BAF complex, which includes at least actin (ACTB), ARID1A, ARID1B/BAF250, SMARCA2, SMARCA4/BRG1, ACTL6A/BAF53, ACTL6B/BAF53B, SMARCE1/BAF57, SMARCC1/BAF155, SMARCC2/BAF170, SMARCB1/SNF5/INI1, and one or more of SMARCD1/BAF60A, SMARCD2/BAF60B, or SMARCD3/BAF60C. In muscle cells, the BAF complex also contains DPF3. Component of the BAF53 complex, at least composed of ACTL6A/BAF53A, RUVBL1/TIP49, SMARCA2/BRM, and TRRAP/PAF400, and which may also include a HAT activity related to, but distinct from, that of HTATIP. ACTL6A interacts with SMARCA4/BRG1. Component of the chromatin-remodeling INO80 complex, at least composed of ACTL6A, ACTR5, ACTR8, RVBL1, RVBL2, INO80, INO80B, INO80C, INO80D and INO80E. Component of the WINAC complex, at least composed of SMARCA2, SMARCA4, SMARCB1, SMARCC1, SMARCC2, SMARCD1, SMARCE1, ACTL6A, BAZ1B/WSTF, ARID1A, SUPT16H, CHAF1A and TOP2B.