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SMARCA1

Purified Mouse Monoclonal Antibody
Catalog # AO2534a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	P28370
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Clone Names	2H7B9
Isotype	Mouse IgG1
Calculated MW	121142
Immunogen	Purified recombinant fragment of human SMARCA1 (AA: 933-1070) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	6594
Other Names	SWI; ISWI; SWI2; SNF2L; SNF2L1; SNF2LB; SNF2LT; hSNF2L; NURF140
Dilution	WB~~ 1/500 - 1/2000 IHC~~ 1/200 - 1/1000 ICC~~N/A E~~ 1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SMARCA1 is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SMARCA1 (HGNC:11097)
Synonyms	SNF2L, SNF2L1
Function	[Isoform 1]: ATPase that possesses intrinsic ATP-dependent chromatin-remodeling activity (PubMed:14609955, PubMed:15310751, PubMed:15640247, PubMed:28801535). ATPase activity is substrate-dependent, and is increased when nucleosomes are the substrate, but is also catalytically active when DNA alone is the substrate (PubMed:14609955, PubMed:15310751, PubMed:15640247). Catalytic subunit of ISWI chromatin-remodeling complexes, which form ordered nucleosome arrays on

chromatin and facilitate access to DNA during DNA-templated processes such as DNA replication, transcription, and repair (PubMed:14609955, PubMed:15310751, PubMed:15640247, PubMed:28801535). Within the ISWI chromatin-remodeling complexes, slides edge- and center-positioned histone octamers away from their original location on the DNA template (PubMed:28801535). Catalytic activity and histone octamer sliding propensity is regulated and determined by components of the ISWI chromatin-remodeling complexes (PubMed:28801535). The BAZ1A-, BAZ1B-, BAZ2A- and BAZ2B-containing ISWI chromatin-remodeling complexes regulate the spacing of nucleosomes along the chromatin and have the ability to slide mononucleosomes to the center of a DNA template (PubMed:28801535). The CECR2- and RSF1-containing ISWI chromatin-remodeling complexes do not have the ability to slide mononucleosomes to the center of a DNA template (PubMed:28801535). Within the NURF-1 and CERF-1 ISWI chromatin remodeling complexes, nucleosomes are the preferred substrate for its ATPase activity (PubMed:14609955, PubMed:15640247). Within the NURF-1 ISWI chromatin-remodeling complex, binds to the promoters of En1 and En2 to positively regulate their expression and promote brain development (PubMed:14609955). May promote neurite outgrowth (PubMed:14609955). May be involved in the development of luteal cells (PubMed:16740656). Facilitates nucleosome assembly during DNA replication, ensuring replication fork progression and genomic stability by preventing replication stress and nascent DNA gaps (PubMed:39413208).

Cellular Location Nucleus. Chromosome

Tissue Location [Isoform 1]: Expressed in lung, breast, kidney, ovary, skeletal muscle and brain.

References

1.Yonsei Med J. 2013 May 1;54(3):772-7.2.BMC Med Genet. 2008 Feb 26;9:11.

Images

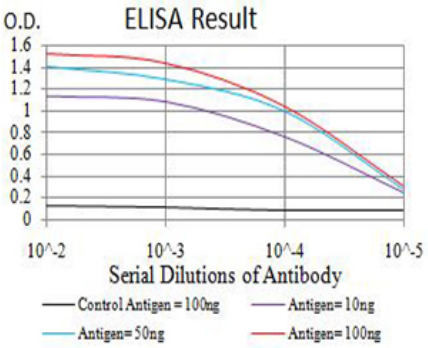
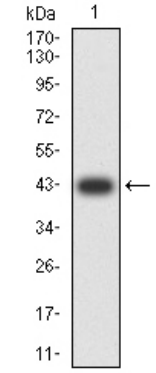


Figure 1:Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

Figure 2:Western blot analysis using SMARCA1 mAb against human SMARCA1 (AA: 933-1070) recombinant protein. (Expected MW is 42.4 kDa)



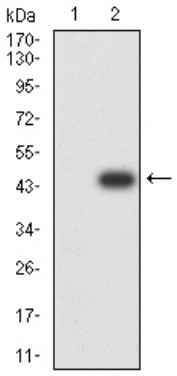


Figure 3:Western blot analysis using SMARCA1 mAb against HEK293 (1) and SMARCA1 (AA: 933-1070)-hIgGFc transfected HEK293 (2) cell lysate.

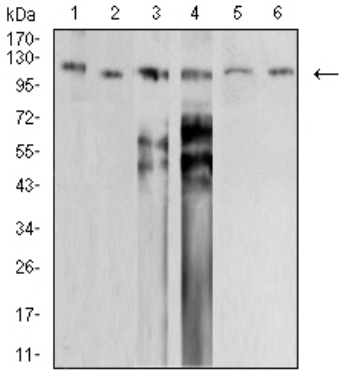


Figure 4:Western blot analysis using SMARCA1 mouse mAb against PANC-1 (1), HEK293 (2), SW620 (3), HT-29 (4), SH-SY5Y (5), and SK-OV-3 (6) cell lysate.

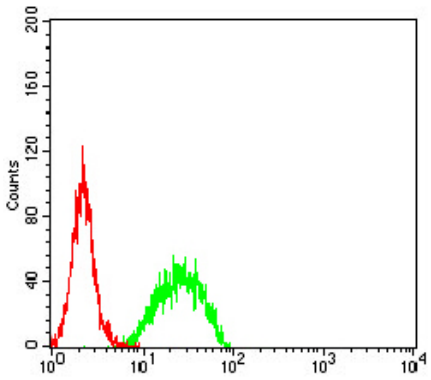


Figure 5:Flow cytometric analysis of NIH/3T3 cells using SMARCA1 mouse mAb (green) and negative control (red).

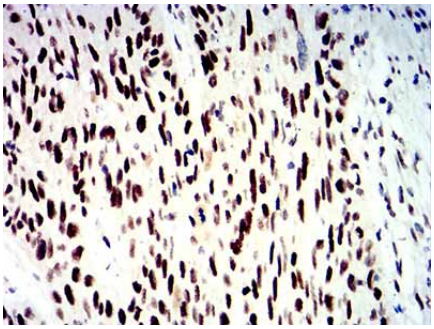


Figure 6:Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using SMARCA1 mouse mAb with DAB staining.

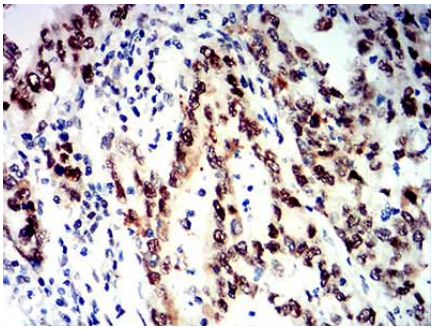


Figure 7:Immunohistochemical analysis of paraffin-embedded stomach cancer tissues using SMARCA1 mouse mAb with DAB staining.