

SMARCA1

Purified Mouse Monoclonal Antibody
Catalog # AO2533a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	P28370
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Clone Names	2H7B8
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

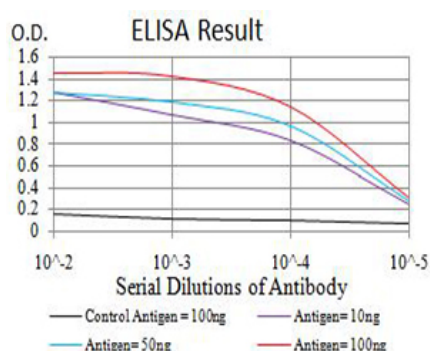


Figure 1:Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

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

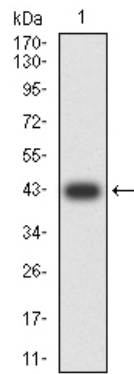


Figure 3: Western blot analysis using SMARCA1 mAb against HEK293 (1) and SMARCA1 (AA: 933-1070)-hIgGfc transfected HEK293 (2) cell lysate.

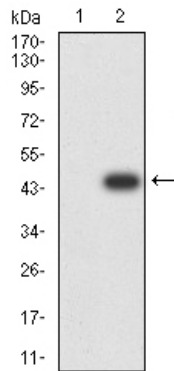


Figure 4: Western blot analysis using SMARCA1 mouse mAb against SW620 (1) and HT-29 (2) cell lysate.

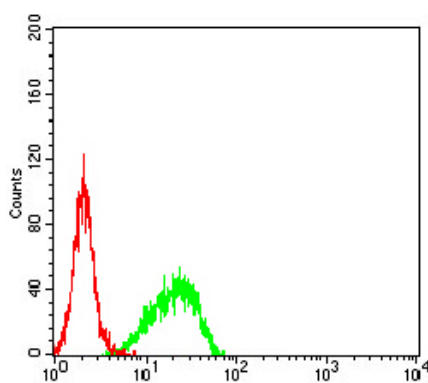
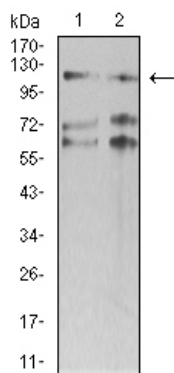


Figure 5: Flow cytometric analysis of NIH/3T3 cells using SMARCA1 mouse mAb (green) and negative control (red).

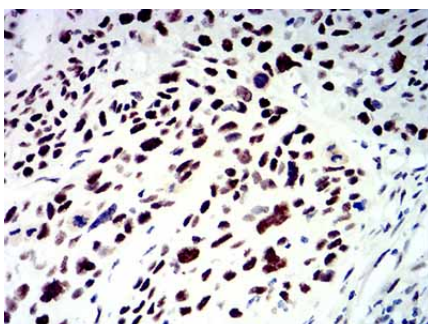


Figure 6: Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using SMARCA1 mouse mAb with DAB staining.

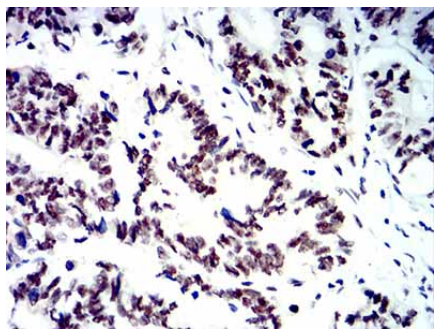


Figure 7:Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using SMARCA1 mouse mAb with DAB staining.

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