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Vimentin Antibody (S82)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2739a

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	P08670
Other Accession	P31000, P20152, Q4R4X4, P48670, P48616
Reactivity	Human, Rat, Mouse
Predicted	Rat, Bovine, Hamster, Monkey
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB15215
Calculated MW	53652
Antigen Region	63-90

Additional Information

Gene ID	7431
Other Names	Vimentin, VIM
Target/Specificity	This Vimentin antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 63-90 amino acids from human Vimentin.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:25 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	Vimentin Antibody (S82) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	VIM (HGNC:12692)
Function	Vimentins are class-III intermediate filaments found in various non-epithelial cells, especially mesenchymal cells. Vimentin is attached to the

	nucleus, endoplasmic reticulum, and mitochondria, either laterally or terminally. Plays a role in cell directional movement, orientation, cell sheet organization and Golgi complex polarization at the cell migration front (By similarity). Protects SCRIB from proteasomal degradation and facilitates its localization to intermediate filaments in a cell contact-mediated manner (By similarity).
Cellular Location	Cytoplasm. Cytoplasm, cytoskeleton. Nucleus matrix {ECO:0000250|UniProtKB:P31000}. Cell membrane {ECO:0000250|UniProtKB:P20152}
Tissue Location	Highly expressed in fibroblasts, some expression in T- and B-lymphocytes, and little or no expression in Burkitt's lymphoma cell lines. Expressed in many hormone-independent mammary carcinoma cell lines.

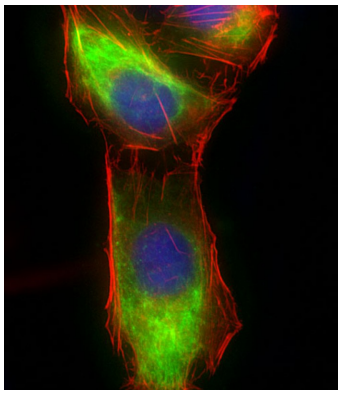
Background

Along with the microfilaments (actins) and microtubules (tubulins), the intermediate filaments represent a third class of well-characterized cytoskeletal elements. The subunits display a tissue-specific pattern of expression. Desmin (MIM 125660) is the subunit specific for muscle and vimentin the subunit specific for mesenchymal tissue.

References

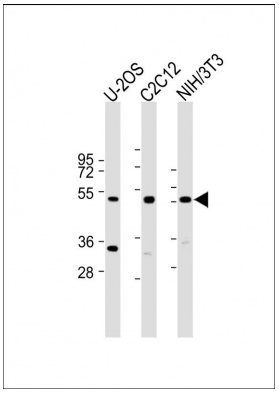
References for protein:
1.Whipple,R.A.,Cancer Res. 68 (14), 5678-5688 (2008)
2. Garcia-Verdugo,I.,Biochemistry 47 (18), 5127-5138 (2008)
3. Merdes,A., J. Cell Biol. 115 (2), 397-410 (1991)
References for SY5Y (SH-SY5Y; ATCC#CRL-2266): 1. Ross RA, et al. Coordinate morphological and biochemical interconversion of human neuroblastoma cells. J. Natl. Cancer Inst. 71: 741-749, 1983. [PubMed: 6137586]; 2. Biedler JL, et al. Multiple neurotransmitter synthesis by human neuroblastoma cell lines and clones. Cancer Res. 38: 3751-3757, 1978. [PubMed: 29704]

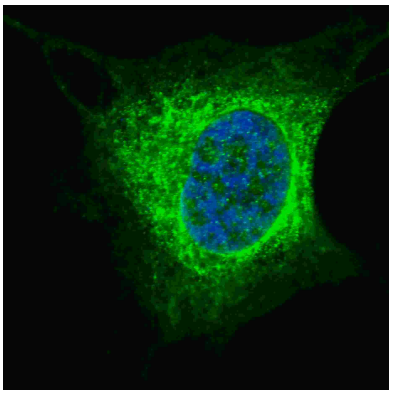
Images



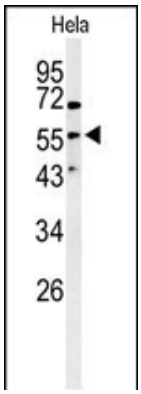
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized U-2 OS (human osteosarcoma cell line) cells labeling Vimentin with AP2739a at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-rabbit IgG (1583138) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplaasm and weak nucleus staining on U-2 OS cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin (PD18466410) at 1/100 dilution (red).The nuclear counter stain is DAPI (blue).

All lanes : Anti-Vimentin Antibody (S82) at 1:2000 dilution Lane 1: U-2OS whole cell lysate Lane 2: C2C12 whole cell lysate Lane 3: NIH/3T3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 54 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

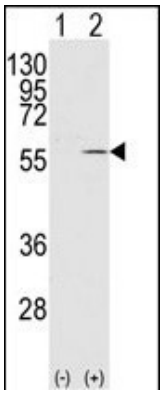




Fluorescent confocal image of SY5Y cells stained with Vimentin (S82) antibody. SY5Y cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AP2739a Vimentin (S82) primary antibody (1:200, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:1000, 1h). Nuclei were counterstained with Hoechst 33342 (blue) (10 µg/ml, 5 min). Note the highly specific localization of the Vimentin immunosignal to the cytoskeleton, supported by Human Protein Atlas Data (http://www.proteinatlas.org/ENSG00000026025).

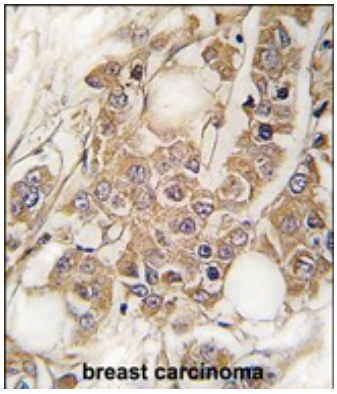


Western blot analysis of Vimentin-S82 (Cat. #AP2739a) in Hela cell line lysates (35ug/lane). Vimentin (arrow) was detected using the purified Pab.



Western blot analysis of VIM(arrow) using rabbit polyclonal Vimentin Antibody (S82) (Cat.#AP2739a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the VIM gene (Lane 2) (Origene Technologies).

Formalin-fixed and paraffin-embedded human breast carcinoma tissue reacted with Vimentin Antibody (S82) (Cat.#AP2739a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Citations

- Isolation and feeder-free primary culture of four cell types from a single human skin sample
- Pirfenidone inhibits epithelial-mesenchymal transition in keloid keratinocytes