ARG66199
anti-Vimentin antibody [SQab1721]

Package: 100 µl, 50 µl
Store at: -20°C

Summary

Product Description	Recombinant Rabbit Monoclonal antibody [SQab1721] recognizes Vimentin
Tested Reactivity	Hu, Ms
Tested Application	FACS, ICC/IF, IHC-Fr, IHC-P, IP, WB
Host	Rabbit
Clonality	Monoclonal
Clone	SQab1721
Isotype	IgG
Target Name	Vimentin
Species	Human
Immunogen	Synthetic peptide around the C-terminus of Vimentin
Conjugation	Un-conjugated
Alternate Names	Vimentin; CTRCT30; HEL113

Application Instructions

Application table

Application	Dilution
FACS	1:100 - 1:500
ICC/IF	1:10000 - 1:25000
IHC-Fr	Assay-dependent
IHC-P	1:500 - 1:1000
IP	1:50
WB	1:1000 - 1:2000

Application Note

IHC-P: Antigen retrieval: Heat mediated was performed using Tris/EDTA buffer pH 9.0
IHC-Fr: guaranteed based on publication PMID: 35011683
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

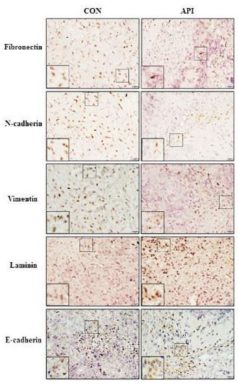
Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS, 0.01% Sodium azide, 40% Glycerol and 0.05% BSA.
Preservative	0.01% Sodium azide

Stabilizer	40% Glycerol and 0.05% BSA
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	VIM
Gene Full Name	vimentin
Background	Vimentin is a type III intermediate filament protein. Intermediate filaments, along with microtubules and actin microfilaments, make up the cytoskeleton. The encoded protein is responsible for maintaining cell shape and integrity of the cytoplasm, and stabilizing cytoskeletal interactions. This protein is involved in neuritogenesis and cholesterol transport and functions as an organizer of a number of other critical proteins involved in cell attachment, migration, and signaling. Bacterial and viral pathogens have been shown to attach to this protein on the host cell surface. Mutations in this gene are associated with congenital cataracts in human patients. [provided by RefSeq, Aug 2017]
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. Involved with LARP6 in the stabilization of type I collagen mRNAs for CO1A1 and CO1A2. [UniProt]
Highlight	Related Antibody Duos and Panels: ARG30320 EMT Marker Antibody Panel ARG30322 Myofibroblast Differentiation Antibody Duo ARG30347 CAF Marker Antibody Panel Related products: Vimentin antibodies; Vimentin Duos / Panels; Related news: New antibody panels for Myofibroblasts and CAFs Cancer Pathology Markers (SQ clones) New EMT antibody panel is released New antibody panels and duos for Tumor immune microenvironment Anti-SerpinB9 therapy, a new strategy for cancer therapy m6A reader YTHDF2 in mRNA decay and aggresome formation;
Research Area	Cancer antibody; Controls and Markers antibody; Developmental Biology antibody; Neuroscience antibody; Signaling Transduction antibody; Cancer-associated fibroblast antibody; CAF Marker antibody; EMT Study antibody; Mesenchymal Markers antibody; Fibroblast Marker antibody; Muller Cell Marker antibody; Sarcoma Marker antibody
Calculated Mw	54 kDa
PTM	Filament disassembly during mitosis is promoted by phosphorylation at Ser-55 as well as by nestin (By similarity). One of the most prominent phosphoproteins in various cells of mesenchymal origin. Phosphorylation is enhanced during cell division, at which time vimentin filaments are significantly reorganized. Phosphorylation by PKN1 inhibits the formation of filaments. Phosphorylated at Ser-56 by CDK5 during neutrophil secretion in the cytoplasm. Phosphorylated by STK33. O-glycosylated during cytokinesis at sites identical or close to phosphorylation sites, this interferes with the phosphorylation status. S-nitrosylation is induced by interferon-gamma and oxidatively-modified low-density lipoprotein (LDL(ox)) possibly implicating the iNOS-S100A8/9 transnitrosylase complex.

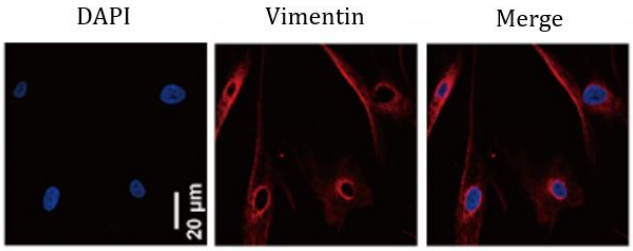
Images



ARG66199 anti-Vimentin antibody [SQab1721] IHC-P image

Immunohistochemistry: C33A stained with ARG66162 anti-Fibronectin antibody , ARG22587 anti-N Cadherin antibody [13A9], ARG66199 anti-Vimentin antibody [SQab1721], ARG59198 anti-Laminin antibody and ARG66195 anti-E Cadherin antibody [SQab1717] .

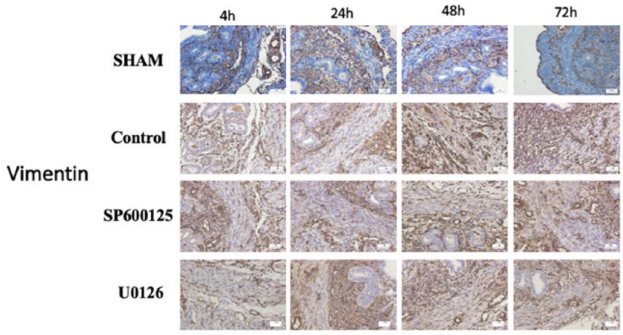
From Ya-Hui Chen et al. Cancers (Basel)- (2022), doi: 10.3390/cancers14071824, Fig. 6. E.



ARG66199 anti-Vimentin antibody [SQab1721] ICC/IF image

Immunofluorescence: Human keloid stained with ARG66199 anti-Vimentin antibody [SQab1721].

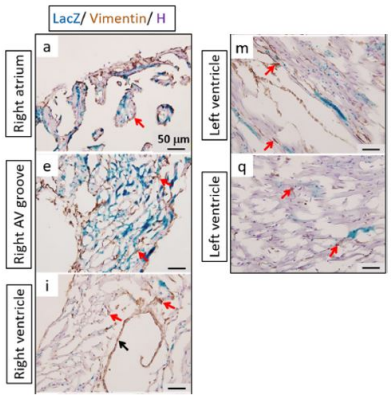
From Xiaoqian Li et al. preprint. (2024), doi: 10.21203/rs.3.rs-4780437/v1, Fig. 1. C.



ARG66199 anti-Vimentin antibody [SQab1721] IHC-P image

Immunohistochemistry: Mouse myometrium stained with ARG66199 anti-Vimentin antibody [SQab1721].

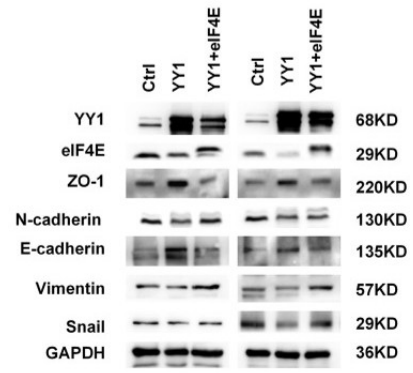
From Xi Wang et al. Biomedicines (2022), doi: 10.3390/biomedicines10061218, Fig. 4. B.



ARG66199 anti-Vimentin antibody [SQab1721] IHC-Fr image

Immunohistochemistry: Frozen mouse heart stained with ARG66199 anti-Vimentin antibody [SQab1721].

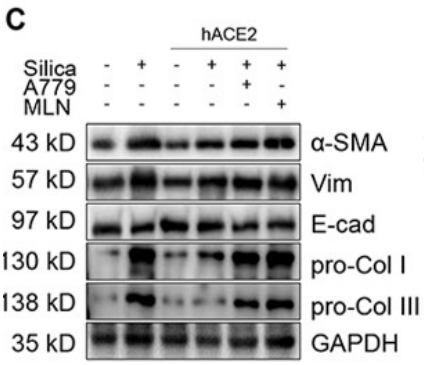
From Yi-Chao Hsu et al. Cells (2022), doi: 10.3390/cells11010121, Fig. 5. A, 5. E, 5. I,5. M, and 5. Q.



ARG66199 anti-Vimentin antibody [SQab1721] WB image

Western blot: Human nasopharyngeal carcinom cell stained with ARG66199 anti-Vimentin antibody [SQab1721].

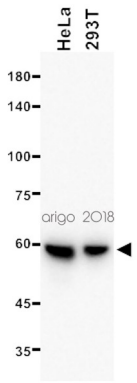
From Mengna Li et al. Am J Cancer Res. (2023), PMID: 37693135, Fig. 4. C.



ARG66199 anti-Vimentin antibody [SQab1721] WB image

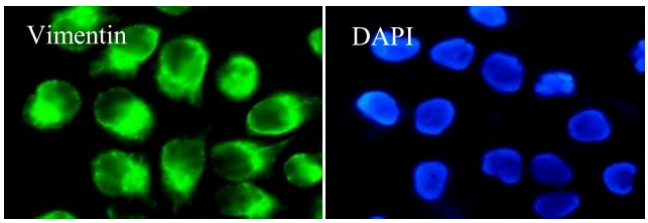
Western blot: MLE-12 stained with ARG66199 anti-Vimentin antibody [SQab1721].

From Li S et al. Drug Des Devel Ther- (2020), doi: 10.2147/DDDT.S252351, Fig. 4. C.



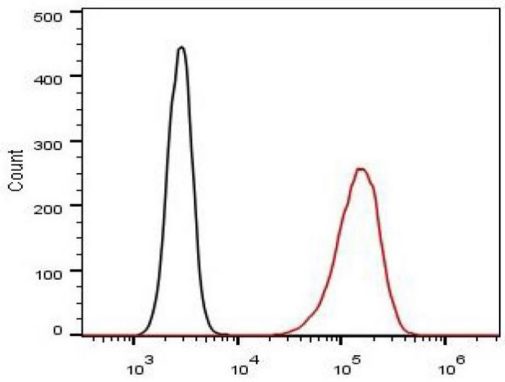
ARG66199 anti-Vimentin antibody [SQab1721] WB image

Western blot: 20 µg of HeLa and 293T cell lysates stained with ARG66199 anti-Vimentin antibody [SQab1721] at 1:1000 dilution.



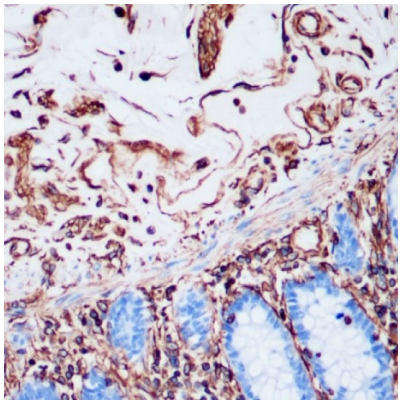
ARG66199 anti-Vimentin antibody [SQab1721] ICC/IF image

Immunofluorescence: HeLa cells were fixed with 4% paraformaldehyde for 30 min at RT, permeabilized with 0.1% Triton X-100 for 10 min at RT then blocked with 10% goat serum for 30 min at room temperature. Cells were stained with ARG66199 anti-Vimentin antibody [SQab1721] (green) at 1:25000 and 4°C. DAPI (blue) was used as the nuclear counter stain.



ARG66199 anti-Vimentin antibody [SQab1721] FACS image

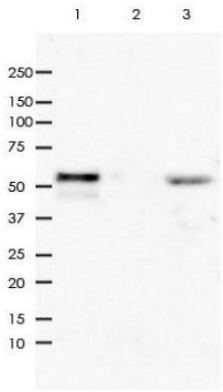
Flow Cytometry: HeLa cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% TritonX-100 for 15 min. The cells were then stained with ARG66199 anti-Vimentin antibody [SQab1721] (red) at 1:500 dilution in 1x PBS/1% BSA for 30 min at 4°C, followed by Alexa Fluor® 488 labelled secondary antibody. Unlabelled sample (black) was used as a control.



ARG66199 anti-Vimentin antibody [SQab1721] IHC-P image

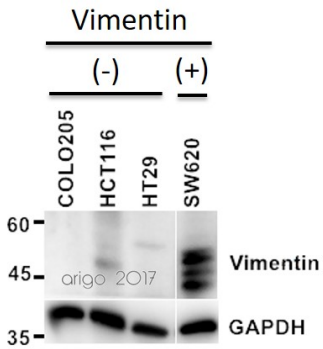
Immunohistochemistry: Formalin-fixed and paraffin-embedded Human colon tissue stained with ARG66199 anti-Vimentin antibody [SQab1721] at 1:1000 dilution.

Antigen retrieval: Heat mediated was performed using Tris/EDTA buffer pH 9.0



ARG66199 anti-Vimentin antibody [SQab1721] IP image

Immunoprecipitation: 0.4 mg of HeLa cell lysate immunoprecipitated and stained with ARG66199 anti-Vimentin antibody [SQab1721]. 1) IP in HeLa whole cell lysate, 2) Rabbit IgG instead of primary antibody in HeLa whole cell lysate and 3) HeLa whole cell lysate, 10 µg (input).



ARG66199 anti-Vimentin antibody [SQab1721] WB image

Western blot: 20 µg of COLO205, HCT116, HT29 (Vimentin unexpression cell lines) and SW620 (Vimentin expression cell line). Cell lysates stained with ARG66199 anti-Vimentin antibody [SQab1721] at 1:1000 dilution.