

Product datasheet

Anti-Vimentin antibody [RV203] ab8979

★★★★★ [3 Abreviews](#) [28 References](#) [5 Images](#)

Overview

| | |
|----------------------------|--|
| Product name | Anti-Vimentin antibody [RV203] |
| Description | Mouse monoclonal [RV203] to Vimentin |
| Host species | Mouse |
| Specificity | This antibody reacts exclusively with vimentin which is expressed in mesenchymal cells and mesenchymal derived tumors e.g. lymphoma, sarcoma and melanoma. |
| Tested applications | Suitable for: IHC-P, Flow Cyt, IHC-Fr |
| Species reactivity | Reacts with: Human Does not react with: Mouse |
| Immunogen | Recombinant full length protein corresponding to Bovine Vimentin. Cytoskeletal vimentin extract of calf lens. Database link: P08670 |
| Positive control | Mesenchymal cells and mesenchymal derived tumors e.g. lymphoma, sarcoma and melanoma |
| General notes | <p>Vimentin (57 kDa) is the intermediate filament protein (IFP) of mesenchymal cells. This IFP however often deviates from the tissue-specific and developmentally regulated pattern of expression. Besides its typical expression in most cultured cells, vimentin is also expressed together with several other IFPs during early stages of development. As differentiation proceeds, vimentin is exchanged for the tissue-specific intermediate filament type. Also in cancers, vimentin is often expressed in addition to the tissue-specific IFP.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p> |

Properties

| | |
|-----------------------------|--|
| Form | Liquid |
| Storage instructions | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle. |

| | |
|-----------------------|--|
| Storage buffer | Preservative: 0.09% Sodium azide Constituent: PBS |
| Purity | Protein G purified |
| Clonality | Monoclonal |
| Clone number | RV203 |
| Myeloma | Sp2/0-Ag14 |
| Isotype | IgG1 |

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab8979 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|-------------|-----------|---|
| IHC-P | | Use a concentration of 5 µg/ml. |
| Flow Cyt | | 1/100 - 1/200. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. |
| IHC-Fr | | Use at an assay dependent concentration. Recommended range is 1/100 - 1/200 for Immunohistochemistry with avidin-biotinylated horseradish peroxidase complex (ABC) as detection reagent. |

Target

| | |
|---|--|
| 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. |
| Tissue specificity | 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. |
| Involvement in disease | Cataract 30 |
| Sequence similarities | Belongs to the intermediate filament family. |
| Domain | The central alpha-helical coiled-coil rod region mediates elementary homodimerization. The [IL]-x-C-x-x-[DE] motif is a proposed target motif for cysteine S-nitrosylation mediated by the iNOS-S100A8/A9 transnitrosylase complex. |
| Post-translational modifications | 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.

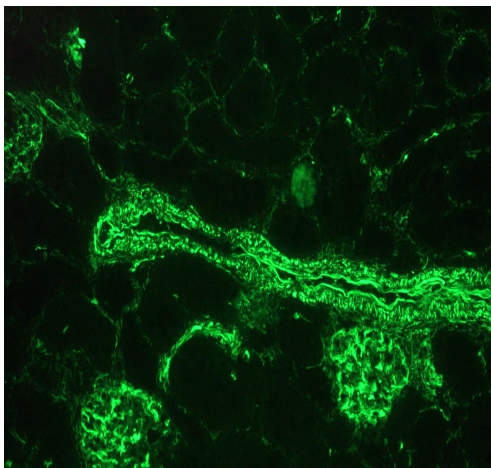
Cellular localization

Cytoplasm.

Form

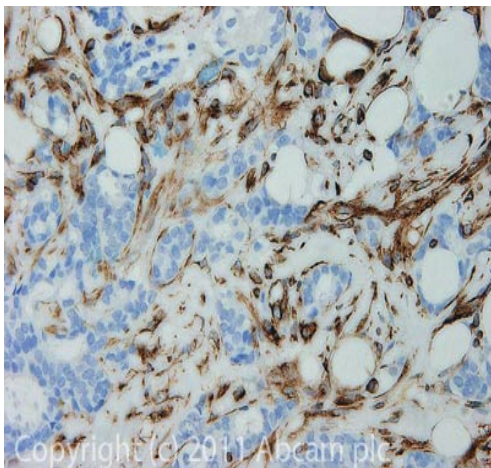
Vimentin is found in connective tissue and in the cytoskeleton.

Images



Immunohistochemistry (Frozen sections) - Anti-Vimentin antibody [RV203] (ab8979)

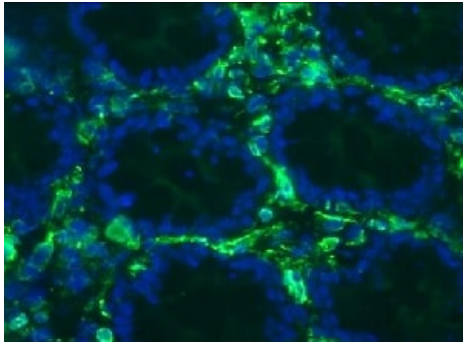
Immunohistochemistry with ab8979 on a frozen section of human kidney showing positive staining in blood vessels, glomeruli and connective tissue cells and no reactivity in epithelial cells.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Vimentin antibody [RV203] (ab8979)

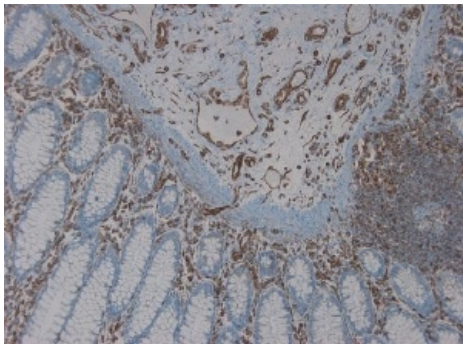
IHC image of ab8979 staining in Breast Cancer formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab8979, µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



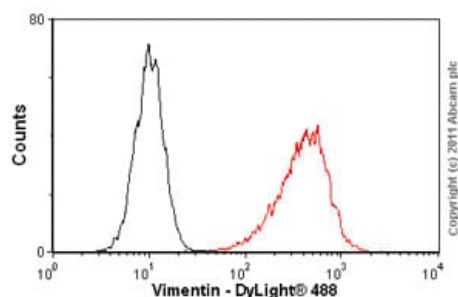
Immunohistochemistry (Frozen sections) - Anti-Vimentin antibody [RV203] (ab8979)

Immunohistochemistry on frozen section of human colon showing positive staining in connective tissue cells and no reactivity in epithelial cells



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Vimentin antibody [RV203] (ab8979)

Immunohistochemistry on paraffin section of human colon



Flow Cytometry - Anti-Vimentin antibody [RV203] (ab8979)

Overlay histogram showing HeLa cells stained with ab8979 (red line). The cells were fixed with methanol (5 min) and then permeabilized with 0.1% PBS-Triton for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab8979, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) ([ab96879](#)) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] ([ab91353](#), 2µg/1x10⁶ cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HeLa cells fixed with 4% paraformaldehyde (10 min)/permeabilized in 0.1% PBS-Triton used under the same conditions.

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