Datasheet for ABIN94491

# anti-Vimentin antibody

9 Images | 4 Publications

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## Overview

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|---|---|
| Quantity: | 0.1 mg |
| Target: | Vimentin (VIM) |
| Reactivity: | Mammalian |
| Host: | Mouse |
| Clonality: | Monoclonal |
| Conjugate: | This Vimentin antibody is un-conjugated |
| Application: | Western Blotting (WB), Flow Cytometry (FACS), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Immunocytochemistry (ICC) |

## Product Details

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| Immunogen: | Pellet of porcine brain cold stable proteins after depolymerization of microtubules. |
| Clone: | VI-01 |
| Isotype: | IgM |
| Specificity: | The antibody VI-01 reacts with vimentin, a 57 kDa intermediate filament intracellular protein expressed in variety of mesenchymal and mesodermal cell types. Cross-reactivity was found with smooth muscle desmin. |
| Cross-Reactivity (Details): | Mammalian |
| Purification: | Purified by sequential steps of physicochemical fractionation (differential precipitation and solid-phase chromatography methods). |
| Purity: | > 95 % (by SDS-PAGE) |

## Target Details

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| Target: | Vimentin (VIM) |
| Alternative Name: | Vimentin (VIM Products) |
| Background: | Vimentin,Vimentin (57 kDa) is the most ubiquituos intermediate filament protein and the first to be expressed during cell differentiation. All primitive cell types express vimentin but in most non-mesenchymal cells it is replaced by other intermediate filament proteins during differentiation. Vimentin is expressed in a wide variety of mesenchymal cell types - fibroblasts, endothelial cells etc., and in a number of other cell types derived from mesoderm, e.g., mesothelium and ovarian granulosa cells. In non-vascular smooth muscle cellsand striated muscle, vimentin is often replaced by desmin, however, during regeneration, vimentin is reexpressed. Cells of the lymfo-haemopoietic system (lymphocytes, macrophages etc.) also express vimentin, sometimes in scarce amounts. Vimentin is also found in mesoderm derived epithelia, e.g. kidney (Bowman capsule), endometrium and ovary (surface epithelium), in myoepithelial cells (breast, salivary and sweat glands), an in thyroid gland epithelium. In these cell types, as in mesothelial cells, vimentin is coexpressed with cytokeratin.Furthermore, vimentin is detected in many cells from the neural crest. Particularly melanocytes express abundant vimentin. In glial cells vimentin is coexpressed with Glial Fibrillary Acidic Protein (GFAP). Vimentin is present in many different neoplasms but is particulary expressed in those originated from mesenchymal cells. Sarcomas e.g., fibrosarcoma, malignt fibrous histiocytoma, angiosarcoma, and leio- and rhabdomyosarcoma, as well as lymphomas, malignant melanoma and schwannoma, are virtually always vimentin positive. Mesoderm derived carcinomas like renal cell carcinoma, adrenal cortical carcinoma and adenocarcinomas from endometrium and ovary usually express vimentin. Also thyroid carcinomas are vimentin positive. Any low differentiated carcinoma may express some vimentin. Vimentin is frequently included in the so-called primary panel (together with CD45, cytokeratin, and S-100 protein). Intense staining reaction for vimentin without coexpression of other intermediate filament proteins is strongly suggestive of a mesenchymal tumour or malignant melanoma. |
| Gene ID: | 7431 |
| UniProt: | P08670 |
| Pathways: | Caspase Cascade in Apoptosis |

## Application Details

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| Application Notes: | Immunocytochemistry: Staining technique: (a) fix cells for 10 min in methanol at -20 °C and for 6 min in acetone at -20 °C, (b) fix cells directly in methanol for 10 min at -20 °C or in acetone for |

## Application Details

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| | 10 min at -20 °C. Positive control: 3T3 murine Swiss albino fibroblast cell line, RBL rat basophilic leukemia cell line.<br>Flow cytometry: Recommended dilution: 1-5 µg/mL. Intracellular staining. |
| Restrictions: | For Research Use only |

## Handling

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| Concentration: | 1 mg/mL |
| Buffer: | Tris buffered saline (TBS), pH 8.0, 15 mM sodium azide |
| Preservative: | Sodium azide |
| Precaution of Use: | This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only. |
| Handling Advice: | **Do not freeze.** |
| Storage: | 4 °C |
| Storage Comment: | Store at 2-8°C. Do not freeze. |

## Publications

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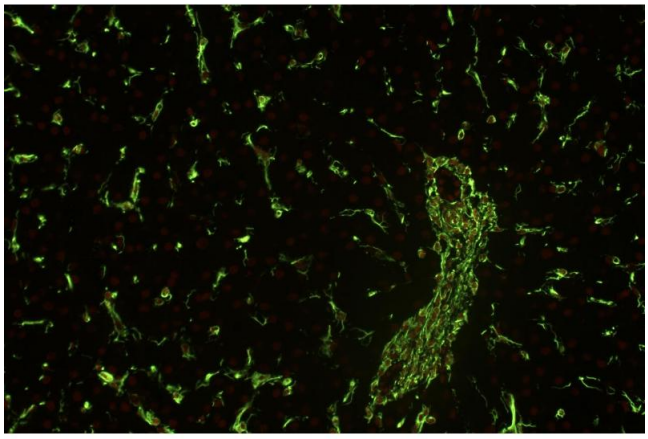
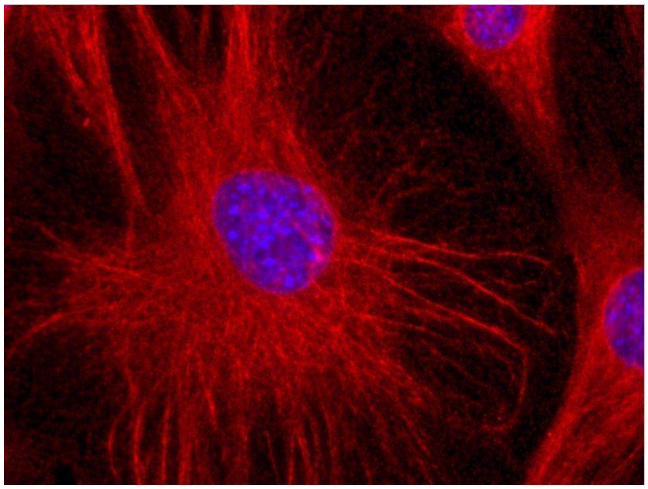
| Product cited in: | Sengez, Aygün, Shehwana, Toyran, Tercan Avci, Konu, Stemmler, Alotaibi: "The Transcription Factor Elf3 Is Essential for a Successful Mesenchymal to Epithelial Transition." in: **Cells**, Vol. 8, Issue 8, (2019) (PubMed).<br><br>Kotb, Hierholzer, Kemler: "Replacement of E-cadherin by N-cadherin in the mammary gland leads to fibrocystic changes and tumor formation." in: **Breast cancer research : BCR**, Vol. 13, Issue 5, pp. R104, (2012) (PubMed).<br><br>Bacáková, Mares, Lisá, Svorcík: "Molecular mechanisms of improved adhesion and growth of an endothelial cell line cultured on polystyrene implanted with fluorine ions." in: **Biomaterials**, Vol. 21, Issue 11, pp. 1173-9, (2000) (PubMed).<br><br>Dráberová, Dráber, Havlícek, Viklický: "A common antigenic determinant of vimentin and desmin defined by monoclonal antibody." in: **Folia biologica**, Vol. 32, Issue 5, pp. 295-303, (1989) (PubMed). |



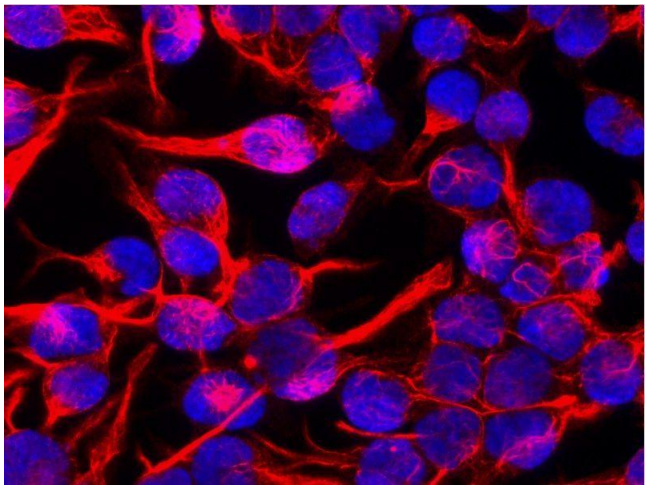
**Immunohistochemistry (Paraffin-embedded Sections)**

**Image 1.** Immunohistochemistry staining (paraffin sections) of vimentin in human liver using mouse monoclonal antibody VI-01 ((ABIN94491), diluted 1:400), detected with GAM IgM-Alexa Fluor488 (diluted 1:200, green), cell nuclei stained with PI (1 µg/mL, orange).



**Immunofluorescence**

**Image 2.** Immunofluorescence staining (mouse fibroblasts) Immunofluorescence staining of 3T3 mouse embryonal fibroblast cell line with anti-Vimentin (VI-01) Dyomics 547. Nuclei are stained with DAPI (blue).



**Immunofluorescence**

**Image 3.** Immunofluorescence staining (rat basophils)

Please check the product details page for more images. Overall 9 images are available for ABIN94491.