

30-1245: Anti-Vimentin Monoclonal Antibody (Clone:VI-RE/1)

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| Clonality : | Monoclonal |
| Clone Name : | VI-RE/1 |
| Application : | FACS |
| Reactivity : | Human |
| Gene : | VIM |
| Gene ID : | 7431 |
| Uniprot ID : | P08670 |
| Format : | Purified |
| Alternative Name : | VIM |
| Isotype : | Mouse IgG1 |
| Immunogen Information : | Bacterially expressed full-length human vimentin |

Description

Vimentin (57 kDa) is the most ubiquitous 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 cells and striated muscle, vimentin is often replaced by desmin, however, during regeneration, vimentin is reexpressed. Cells of the lympho-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), 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 filament acidic protein (GFAP). Vimentin is present in many different neoplasms but is particularly expressed in those originated from mesenchymal cells. Sarcomas e.g., fibrosarcoma, malignant fibrous histiocytoma, angiosarcoma, and leiomyosarcoma, 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.

Product Info

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| Amount : | 0.1 mg |
| Purification : | Purified by protein-A affinity chromatography |
| Storage condition : | Store at 2-8°C. Do not freeze. |

Application Note

Flow Cytometry Recommended dilution: 1-10 µg/ml

Western Blotting Recommended dilution: 1-2 µg/ml, overnight in 4

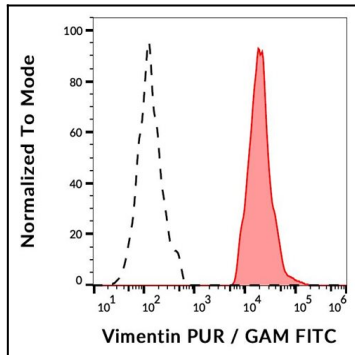


Figure 1: Flow cytometry analysis (intracellular staining) of vimentin expression in ESS-1 cells using anti-human vimentin (VI-RE/1) purified, GAM-FITC. Negative control: human lymphocytes

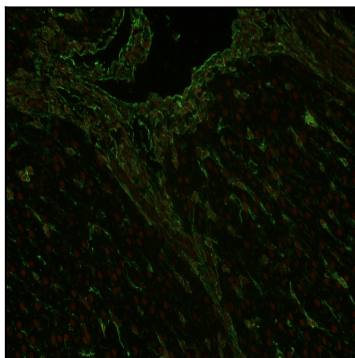


Figure 2: Immunohistochemistry staining (paraffin sections) of vimentin in human liver using mouse monoclonal antibody VI-RE/1 detected with GAM IgG-Alexa Fluor®488, ell nuclei stained with PI