

SM3166P**Monoclonal Antibody to Vimentin - Purified****Alternate names:**

VIM

Quantity:

0.1 mg

Concentration:

1.0 mg/ml

Background:

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), and 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 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.

Uniprot ID:[P08670](#)**NCBI:**[NP_003371.2](#)**GeneID:**[7431](#)**Host / Isotype:**

Mouse / IgM

Recommended Isotype Controls:

SM13P

Clone:

VI-10

Format:	State: Liquid purified Ig fraction (> 95% pure by SDS-PAGE) Purification: Precipitation methods and Size-Exclusion Chromatography Buffer System: Phosphate buffered saline (PBS), pH~7.4 Preservatives: 15 mM Sodium Azide
Applications:	Immunohistochemistry on Paraffin Sections: 5 µg/ml. <u>Positive tissue:</u> Skin fibroblast. Western blotting. Immunocytochemistry. Immunoprecipitation. <u>Staining Technique:</u> RBL basophilic leukemia cell line: (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 10 min at -20°C. Incubation: 45 min RT. <u>Positive Control:</u> 3T3 mouse Swiss albino fibroblast cell line RBL rat basophilic cell line Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	The antibody VI-10 reacts with vimentin, a 57 kDa intermediate filament expressed in variety of mesenchymal and mesodermal cell types. Species: Human, Porcine, Mouse, Rat and Chicken. Other species not tested.
Storage:	Store the antibody at 2-8°C. DO NOT FREEZE! Shelf life: one year from despatch.
Product Citations:	Originator or purchased from resellers: 1. Dráberová E, Zíková M, Dráber P. Monoclonal antibody VI-10 specific for vimentin. Folia Biol (Praha). 1999;45(1):35-6. PubMed PMID: 10732717.
Pictures:	Figure 1. Immunofluorescence staining of chicken postnatal erythrocytes. Tubulin (red) was stained with anti-alpha-tubulin (TU-01; BM753S), vimentin (green) with anti-Vimentin (VI-10). Nuclei are stained with DAPI (blue). 

Figure 2. Immunofluorescence staining of RBL rat basophilic cell line with anti-Vimentin (VI-10) Dyomics 547. Nuclei are stained with DAPI (blue).

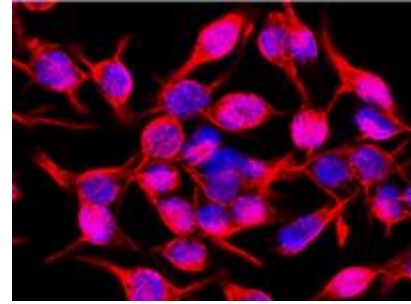


Figure 3. Immunoprecipitation of vimentin from HeLa cell lysate by antibody VI-10 and its detection by antibody VI-01. IgM heavy chain (76-92 kDa) and IgM light chain (25-30 kDa) indicated. Mr of vimentin is 57 kDa. Lr = lysate (reducing conditions) Lnr = lysate (non-reducing conditions) IPr = immunoprecipitate (reducing conditions) IPnr = immunoprecipitate (non-reducing conditions)

