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Product datasheet for BM5501

Vimentin (VIM) Mouse Monoclonal Antibody [Clone ID: VIM 3B4]

Product data:

Product Type:	Primary Antibodies
Clone Name:	VIM 3B4
Applications:	ELISA, IF, IHC, WB
Recommended Dilution:	**Immunoblotting.** **ELISA.** **Immunofluorescence Microscopy.** **Immunohistochemistry on Frozen Sections:** 1/100. **Immunohistochemistry on Paraffin Sections:** 1/100 for 1 h at RT. Protease pretreatment is required prior to antibody application.
Reactivity:	Amphibian, Bovine, Chicken, Human, Monkey, Canine
Host:	Mouse
Isotype:	IgG2a
Clonality:	Monoclonal
Immunogen:	Vimentin (purified from bovine lens)
Specificity:	The antibody is highly specific for the intermediate filament protein vimentin which is present in all cells of mesenchymal origin. VIM 3B4 has turned out to be the most avid mab to vimentin. Polypeptide reacting: Mr 57 000 intermediate filament protein (vimentin) of mesenchymal cells. Tumors specifically detected: sarcoma (including myosarcoma), lymphoma, melanoma. The binding region of monoclonal antibody VIM3B4 has been characterized by Bohn et al.(1992). According to these authors, the epitope has been localized on the alpha-helical part of vimentin (rod domain coil 2). Due to an aa substitution at position of aa 353 in murine vimentin (that could explain for the weak cross-reaction of the antibody with murine vimentin) they were able to narrow down the binding region around position 353. These findings were confirmed by truncation mutagenesis experiments using human vimentin (Rogers et al., 1995).
Formulation:	PBS pH 7.4 containing 0.09 % sodium azide, 0.5 % BSA State: Purified State: Lyophilized purified IgG fraction
Reconstitution Method:	Reconstitute in 1 ml distilled water
Purification:	Affinity Chromatography on Protein A

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Conjugation:	Unconjugated
Storage:	Upon receipt, store undiluted (in aliquots) at -20°C. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	vimentin
Database Link:	Entrez Gene 7431 Human P08670
Background:	Vimentin is the major subunit protein of the intermediate filaments of mesenchymal cells. It is believed to be involved with the intracellular transport of proteins between the nucleus and plasma membrane. Vimentin has been implicated to be involved in the rate of steroid synthesis via its role as a storage network for steroidogenic cholesterol containing lipid droplets. Vimentin phosphorylation by a protein kinase causes the breakdown of intermediate filaments and activation of an ATP and myosin light chain-dependent contractile event. This results in cytoskeletal changes that facilitate the interaction of the lipid droplets within mitochondria, and subsequent transport of cholesterol to the organelles leading to an increase in steroid synthesis. Immunohistochemical staining for Vimentin is characteristic of sarcomas (of neural, muscle and fibroblast origin) compared with carcinomas which are generally negative. Melanomas, lymphomas and vascular tumors may all stain for Vimentin. Vimentin antibodies are thus of value in the differential diagnosis of undifferentiated neoplasms and malignant tumors. They are generally used with a panel of other antibodies including those recognizing cytokeratins, lymphoid markers, S100, desmin and neurofilaments.
Synonyms:	VIM