Product datasheet

anti-Vimentin, VIM 3B4 + positive western blot control

Short overview

Cat. No.	61013-WBC
Quantity	50 µg anti-Vimentin + 50 µg western blot control

Product description

Host	Mouse
Antibody Type	Monoclonal
Isotype	IgG2a kappa
Clone	VIM 3B4
Immunogen	Vimentin purified from bovine lens
Formulation	Antibody: lyophilized; reconstitute in 1 ml dist. water (final solution contains 0.09% sodium azide, 0.5% BSA in PBS buffer, pH 7.4); western blot control: lyophilized, reconstitute in 50 µl 1x SDS buffer (lysis buffer composition: PBS + Pefablock)
UniprotID	P48616 (Bovine),P09654 (Chicken),P08670 (Human),V9HWE1 (Human)
Synomym	Vimentin, VIM
Conjugate	Unconjugated
Purification	Affinity chromatography, Cell culture lysate
Storage	Antibody: short term at 2-8°C; long term in aliquots at -20°C; western blot control: lyophilized at 2-8°C, reconstituted at -20°C; avoid freeze/thaw cycles for both components
Intended use	Research use only
Application	ELISA, ICC, IHC, WB
Reactivity	Amphibia, Bovine, Chicken, Human, Monkey

Applications

ELISA	anti-Vimentin: assay dependent
Immunocytochemistry (ICC)	anti-Vimentin: assay dependent
Immunohistochemistry (IHC) - frozen	anti-Vimentin: 1:100-1:200
Immunohistochemistry (IHC) - paraffin	anti-Vimentin: 1:100-1:200 (microwave treatment recommended)
Western Blot (WB)	anti-Vimentin: 1:500; western blot control: 10 µg total protein per lane

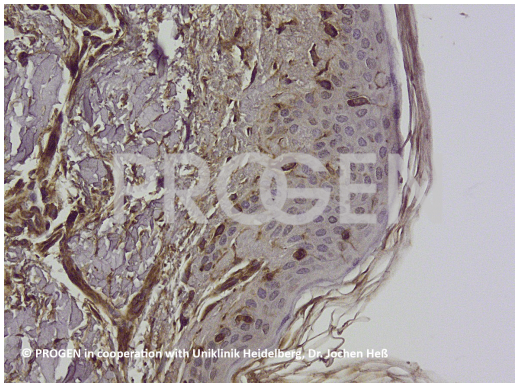
Background

anti-Vimentin antibody: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

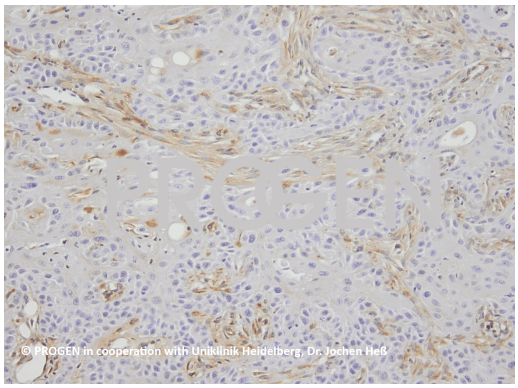
were confirmed by truncation mutagenesis experiments using human vimentin (Rogers et al., 1995).
Bohn W, Wiegers W, Beuttenmueller M, Traub P: Species-specific recognition patterns of monoclonal antibodies directed against vimentin. Exp Cell Res 201: 1-7 (1992). Rogers KR, Eckelt A, Nimmrich V, Janssen K-P, Schliwa M, Herrmann H, Franke WW: Truncation mutagenesis of the non-alpha-helical carboxyterminal tail domain of vimentin reveals contributions to cellular localization but not to filament assembly. Eur J Cell Biol 66: 136-150 (1995).
Positive western blot control: Whole Cell Lysate from SV80 Human Lung fibroblast (SV40-transformed) as positive western blot control.SV80 whole cell lysate was prepared by homogenization in PBS containing Pefablock. Protein concentration was determined using Bradford assay.

Set content: Cat. No. 61013, anti-Vimentin mouse monoclonal, VIM 3B4, lyophilized, purifiedCat. No. 64001, Positive western blot control: anti-Vimentin antibody

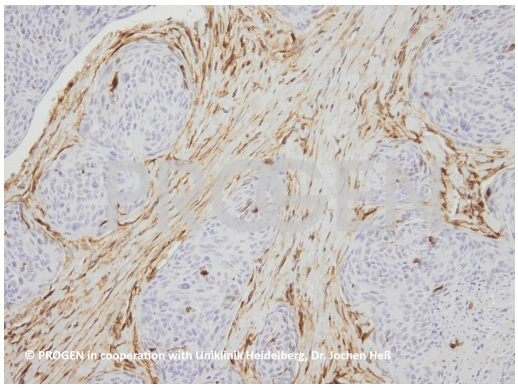
Product images



IHC-P with anti-Vimentin antibody on human skin (courtesy of J.Heß, University Hospital Heidelberg)



IHC-P with anti-Vimentin antibody on mouse squamous-cell carcinoma (SCC)(courtesy of J.Heß, University Hospital Heidelberg)



IHC-P with anti-Vimentin antibody on human head and neck squamous-cell carcinoma (HNSCC)(courtesy of J.Heß, University Hospital Heidelberg)

References

Publication	Species	Application
Soglia, F. et al. Distribution and Expression of Vimentin and Desmin in Broiler Pectoralis major Affected by the Growth-Related Muscular Abnormalities. Front.Physiol. 10, 1581 (2020)	chicken	WB,IHC (frozen),IHC
Aguirre-PortolÃ©s, C., et al. ABCA1 overexpression worsens colorectal cancer prognosis by facilitating tumour growth and caveolin-1-dependent invasiveness, and ... Mol. Oncol. 12, 1735â€“1752 (2018).	human	ICC-IF
Cossu, G. et al. An exceptional presentation of pituicytoma apoplexy: A case report. Oncol.Lett. 16, 643-647 (2018)	human	IHC (paraffin)
Zayas-Santiago, A. et al. Unidirectional photoreceptor-to-MÃ¼ller glia coupling and unique K+ channel expression in Caiman retina. PLoS One 9, (2014).	caiman	IHC
Heid, H. et al. On the formation of lipid droplets in human adipocytes: the organization of the perilipin-vimentin cortex. PLoS One 9, e90386 (2014).	human	WB,ICC-IF