

Product datasheet

anti-Vimentin mouse monoclonal, VIM 3B4, lyophilized, purified

Short overview

Cat. No.	61013
Quantity	50 µg
Concentration	50 µg/ml after reconstitution with 1 ml dist. water

Product description

Host	Mouse
Antibody Type	Monoclonal
Isotype	IgG2a kappa
Clone	VIM 3B4
Immunogen	Vimentin purified from bovine lens
Formulation	Lyophilized; reconstitute in 1 ml dist. water (final solution contains 0.09% sodium azide, 0.5% BSA in PBS buffer, pH 7.4)
UniprotID	P48616 (Bovine), P09654 (Chicken), P08670 (Human)
Synonym	Vimentin, VIM
Conjugate	Unconjugated
Purification	Affinity chromatography
Storage before reconstitution	2-8°C until indicated expiry date
Storage after reconstitution	Up to 3 months at 2-8°C; long term storage in aliquots at -20°C; avoid freeze/thaw cycles
Intended use	Research use only
Application	ICC/IF, IHC, WB
Reactivity	Amphibia, Bovine, Chicken, Human, Monkey, Mouse

Applications

Immunocytochemistry (ICC)	Assay dependent
Immunohistochemistry (IHC) - frozen	1:100-1:200 (250-500 ng/ml)
Immunohistochemistry (IHC) - paraffin	1:100-1:200 (250-500 µg/ml, protease treatment and/or microwave treatment recommended)
Western Blot (WB)	1:500-1:5,000 (10-100 ng/ml)

Background

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: 57 kDa 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

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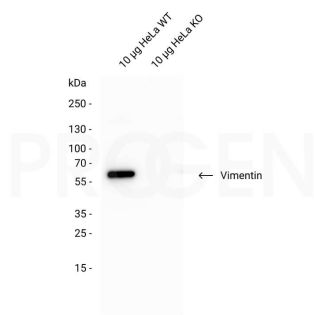
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domain coil 2). Due to an aa substitution at position of aa 353 in murine vimentin (that could explain for the weak cross-reaction of the antibody with murine vimentin) they were able to narrow down the binding region around position 353. These findings were confirmed by truncation mutagenesis experiments using human vimentin (Rogers et al., 1995).

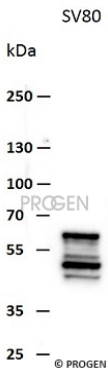
Tested cultured cell lines: fibroblasts (SV-80).

Bohn W, Wiegers W, Beuttenmüller 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).

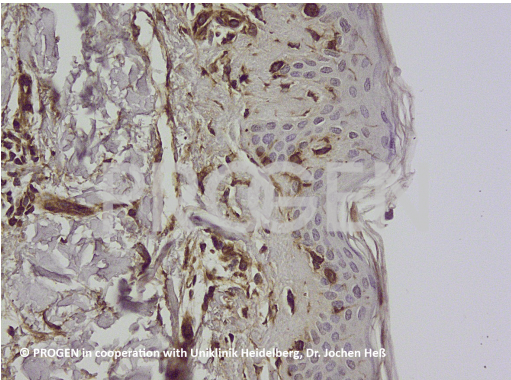
Product images



Western blot analysis of HeLa lysate with anti-Vimentin antibody. Western blot analysis was performed on 10 µg wild type (WT) and 10 µg Vimentin knockout (KO) HeLa lysate. The PVDF membrane was blocked with 5% milk in PBST (PBS + 0.1% Tween 20) for 1 h at RT. The primary antibody anti-Vimentin mouse monoclonal, VIM 3B4 (Cat. No. 690013) was diluted in blocking buffer (antibody concentration 33 ng/ml) and incubated for 1 h at RT. The secondary antibody anti-mouse IgG, HRP conjugate was also diluted in blocking buffer (antibody concentration 200 ng/ml) and incubated for 1 h at RT. The bands were visualized by chemiluminescent detection using Pierce™ ECL Western Blotting Substrate.



WB with anti-Vimentin antibody (Cat. No. 61013, 1:500), SV80 whole cell lysate (10 µg)



human skin (courtesy of J.Heß, University Hospital Heidelberg)

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References

Publication	Species	Application
Soglia, F. et al. The evolution of vimentin and desmin in Pectoralis major muscles of broiler chickens supports their essential role in muscle regeneration. Front. Physiol. 13, (2022).	chicken	WB
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
Cossu, G. et al. An exceptional presentation of pituitary apoplexy: A case report. Oncol.Lett. 16, 643-647 (2018)	human	IHC (paraffin)
Aguirre-Portols, C., et al. ABCA1 overexpression worsens colorectal cancer prognosis by facilitating tumour growth and caveolin-1-dependent invasiveness, and ... Mol. Oncol. 12, 17351752 (2018).	human	ICC-IF
Zayas-Santiago, A. et al. Unidirectional photoreceptor-to-Mller glia coupling and unique K+ channel expression in Caiman retina. PLoS One 9, (2014).	caiman	IHC