

Product datasheet

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

Short overview

Cat. No.	690013
Quantity	1 ml
Concentration	50 µg/ml (50 µg)

Product description

Host	Mouse
Antibody Type	Monoclonal
Isotype	IgG2a kappa
Clone	VIM 3B4
Immunogen	Vimentin purified from bovine lens
Formulation	PBS pH 7.4 with 0.09% sodium azide and 0.5% BSA
UniprotID	P48616 (Bovine), P09654 (Chicken), P08670 (Human)
Synonym	Vimentin, VIM
Conjugate	Unconjugated
Purification	Affinity chromatography
Storage	Short term 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 ng/ml, protease treatment and/or microwave treatment recommended)
Western Blot (WB)	1:500-1:5,000 (10-100 ng/ml)

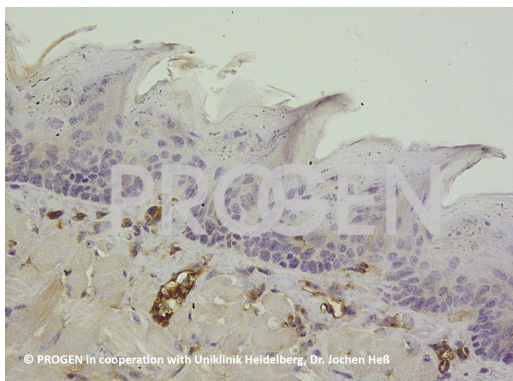
Background

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 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).

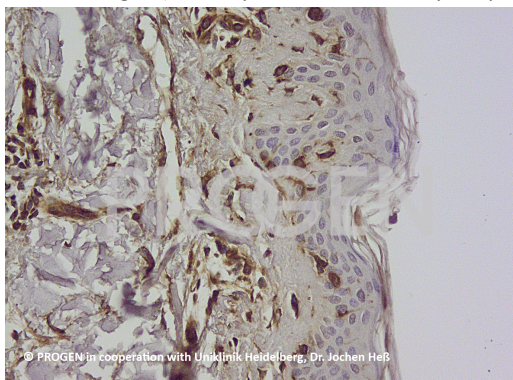
Tested cultured cell lines: fibroblasts (SV-80).

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).

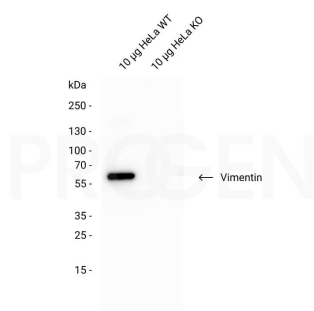
Product images



Mouse tongue (courtesy of J.Heß, University Hospital Heidelberg)



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



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.

References

Publication	Species	Application
Martinez-Iglesias, O., Garcia-Silva, S., Regadera, J. & Aranda, A. Hypothyroidism Enhances Tumor Invasiveness and Metastasis Development. PLoS One 4, (2009).	human	IHC (paraffin)
Akat, K. et al. Molecular characterization of desmosomes in meningiomas and arachnoidal tissue. Acta Neuropathol. 106, 337-347 (2003).	human	IHC (frozen)
Bohn, W., Wieggers, W., Beuttenmüller, M. & Traub, P. Species-specific recognition patterns of monoclonal antibodies directed against vimentin. Exp. Cell Res. 201, 1-7 (1992).	human, monkey, rabbit, bovine, chicken, dog, equine	WB, ICC-IF
Aguirre-Porto, 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
Rungger-Brandle, E., Achtschatter, T. & Franke, W. W. An epithelium-type cytoskeleton in a glial cell: Astrocytes of amphibian optic nerves contain cytokeratin filaments and are connected by desmosomes. J. Cell Biol. 109, 705-716 (1989).	xenopus	IHC (frozen)