# Product datasheet

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

### Short overview

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

### Product description

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|---|---|
| **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) |
| **Synomym** | 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

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|---|---|
| **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) |

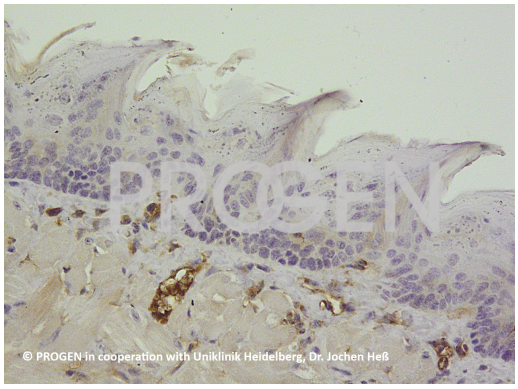
### Background

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).

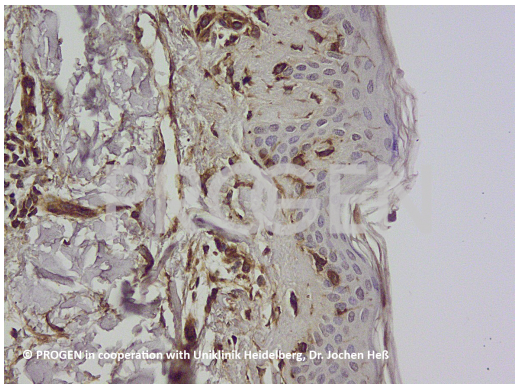
Tested cultured cell lines: fibroblasts (SV-80).

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).

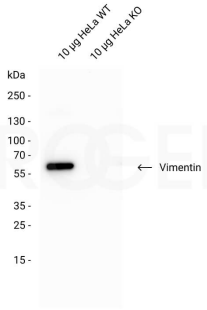
## Product images



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 PierceTM ECL Western Blotting Substrate.

## 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 pituicytoma apoplexy: A case report. Oncol.Lett. 16, 643-647 (2018) | human | IHC (paraffin) |
| 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 |
| 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 |