

## Product datasheet

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

#### Short overview

|                 |       |
|-----------------|-------|
| <b>Cat. No.</b> | 65013 |
| <b>Quantity</b> | 5 ml  |

#### Product description

|                      |                                                                                       |
|----------------------|---------------------------------------------------------------------------------------|
| <b>Host</b>          | Mouse                                                                                 |
| <b>Antibody Type</b> | Monoclonal                                                                            |
| <b>Isotype</b>       | IgG2a                                                                                 |
| <b>Clone</b>         | VIM 3B4                                                                               |
| <b>Immunogen</b>     | Vimentin purified from bovine lens                                                    |
| <b>Formulation</b>   | PBS pH 7.4 with 0.5% BSA and 0.09% sodium azide                                       |
| <b>UniprotID</b>     | P48616 (Bovine), P09654 (Chicken), F1PLS4 (Dog, Canis familiaris), P08670 (Human)     |
| <b>Synonym</b>       | Vimentin, VIM                                                                         |
| <b>Conjugate</b>     | Unconjugated                                                                          |
| <b>Purification</b>  | Affinity chromatography                                                               |
| <b>Storage</b>       | Short term at 2-8°C; long term storage in aliquots at -20°C; avoid freeze/thaw cycles |
| <b>Intended use</b>  | Research use only                                                                     |
| <b>Application</b>   | ELISA, ICC, IHC, WB                                                                   |
| <b>Reactivity</b>    | Amphibia, Bovine, Chicken, Dog, Human, Monkey                                         |

#### Applications

|                                              |                                                                          |
|----------------------------------------------|--------------------------------------------------------------------------|
| <b>ELISA</b>                                 | Assay dependent                                                          |
| <b>Immunocytochemistry (ICC)</b>             | Assay dependent                                                          |
| <b>Immunohistochemistry (IHC) - frozen</b>   | Ready-to-use                                                             |
| <b>Immunohistochemistry (IHC) - paraffin</b> | Ready-to-use (protease treatment and/or microwave treatment recommended) |
| <b>Western Blot (WB)</b>                     | Assay dependent                                                          |

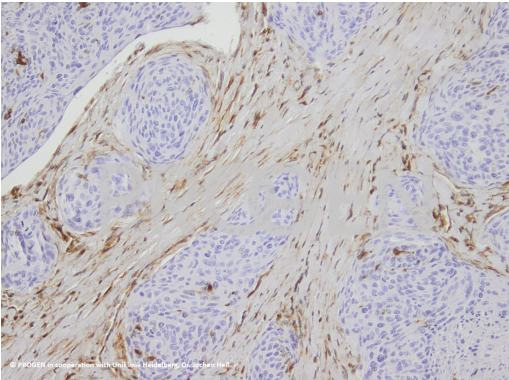
#### Background

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).

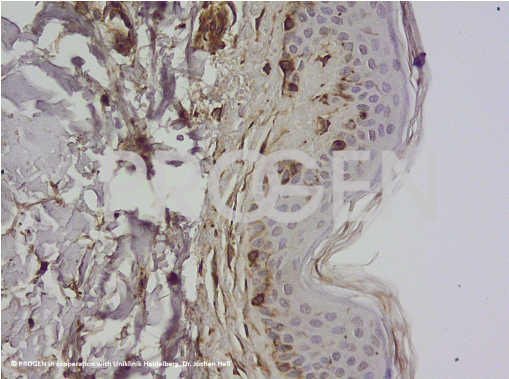
Tested cultured cell lines: fibroblasts (SV-80).

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).

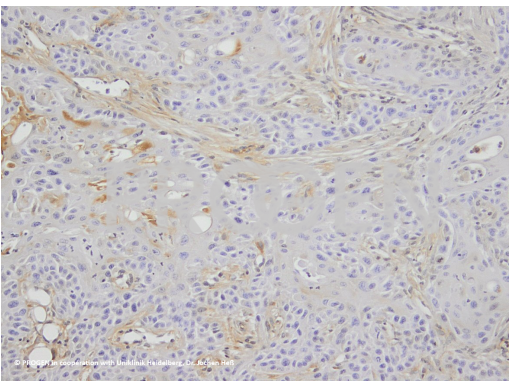
## Product images



Human head and neck squamous-cell carcinoma (HNSCC)(courtesy of J.Heß, University Hospital Heidelberg)



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



Mouse squamous-cell carcinoma (SCC)(courtesy of J.Heß, University Hospital Heidelberg)

## References

| Publication                                                                                                                                                                                                                                                      | Species                                           | Application    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|----------------|
| <a href="#">Martinez-Iglesias, O., Garcia-Silva, S., Regadera, J. &amp; Aranda, A. Hypothyroidism Enhances Tumor Invasiveness and Metastasis Development. PLoS One 4, (2009).</a>                                                                                | human                                             | IHC (paraffin) |
| <a href="#">Akat, K. et al. Molecular characterization of desmosomes in meningiomas and arachnoidal tissue. Acta Neuropathol. 106, 337-347 (2003).</a>                                                                                                           | human                                             | IHC (frozen)   |
| <a href="#">Bohn, W., Wieggers, W., Beuttenmüller, M. &amp; Traub, P. Species-specific recognition patterns of monoclonal antibodies directed against vimentin. Exp. Cell Res. 201, 1-7 (1992).</a>                                                              | human,monkey,rabbit,bovine,<br>chicken,dog,equine | WB,ICC-IF      |
| <a href="#">Aguirre-Portolés, 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).</a>                                             | human                                             | ICC-IF         |
| <a href="#">Rungger-Brandle, E., Achtstätter, T. &amp; 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).</a> | xenopus                                           | IHC (frozen)   |