

# PRODUCT INFORMATION



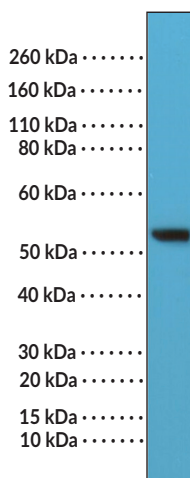
## Vimentin Rabbit Monoclonal Antibody (Clone RM289)

Item No. 42826

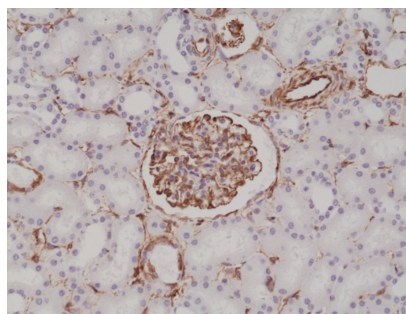
### Overview and Properties

|                            |                                                                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Contents:</b>           | This vial contains 100 µl of protein A-affinity purified monoclonal antibody.                                                                                                                                                                             |
| <b>Synonym:</b>            | VIM                                                                                                                                                                                                                                                       |
| <b>Immunogen:</b>          | A peptide corresponding to the C-terminus of human vimentin                                                                                                                                                                                               |
| <b>Species Reactivity:</b> | (+) Human, mouse, rat                                                                                                                                                                                                                                     |
| <b>Form:</b>               | Liquid                                                                                                                                                                                                                                                    |
| <b>Storage:</b>            | -20°C (as supplied)                                                                                                                                                                                                                                       |
| <b>Stability:</b>          | ≥1 year                                                                                                                                                                                                                                                   |
| <b>Storage Buffer:</b>     | PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide                                                                                                                                                                                                     |
| <b>Clone:</b>              | RM289                                                                                                                                                                                                                                                     |
| <b>Host:</b>               | Rabbit                                                                                                                                                                                                                                                    |
| <b>Isotype:</b>            | IgG                                                                                                                                                                                                                                                       |
| <b>Applications:</b>       | Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:100-1:200 for IHC and 1:200-1:500 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically. |

### Images



WB of HeLa lysates using Vimentin Rabbit Monoclonal Antibody (Clone RM289) at a dilution of 1:400.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human kidney tissue sections using Vimentin Rabbit Monoclonal Antibody (Clone RM289) at a dilution of 1:200.

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**  
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## Description

Vimentin is a cytoskeleton intermediate filament protein.<sup>1</sup> It is composed of monomers that each contain a central  $\alpha$ -helix rod domain, which facilitates formation of a coiled-coil dimer required for vimentin filament assembly, as well as N-terminal head and C-terminal tail domains.<sup>1,2</sup> It is expressed in mesenchymal stem cells and cells of mesenchymal origin, including leukocytes, endothelial cells, and smooth muscle cells.<sup>3</sup> Vimentin is attached to nuclei, endoplasmic reticulum, and mitochondria, and has a role in positioning organelles in the cytosol.<sup>2</sup> It regulates glial morphology, facilitates motility and directional migration of fibroblasts, and is critical to mechanotransduction of shear stress and maintenance of vascular endothelial integrity.<sup>1</sup> Vimentin controls transport of LDL-derived cholesterol from lysosomes to esterification sites.<sup>4</sup> It is an aggresome component, forming a cage-like structure around aggregated, undegraded proteins at the microtubule organizing center.<sup>5</sup> Vimentin is subject to citrullination under high calcium concentrations, which can occur during macrophage apoptosis, and citrullinated vimentin has been shown to have a role in the production of anti-citrullinated protein antibodies (ACPAs).<sup>6,7</sup> ACPAs against citrullinated proteins, such as vimentin, are considered to be highly specific markers for rheumatoid arthritis and other autoimmune diseases.<sup>6</sup> Cayman's Vimentin Rabbit Monoclonal Antibody (Clone RM289) can be used for immunohistochemistry (IHC) and Western blot (WB) applications. The antibody recognizes vimentin at 54 kDa from human, mouse, or rat samples.

## References

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