

# PRODUCT INFORMATION



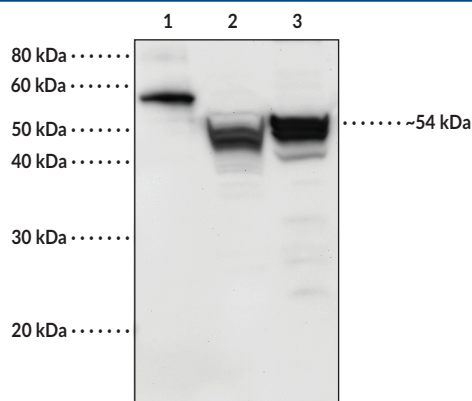
## Vimentin Polyclonal Antibody

Item No. 25341

### Overview and Properties

**Contents:** This vial contains 500 µg of protein A-purified polyclonal antibody.  
**Synonym:** VIM  
**Immunogen:** Full-length human recombinant vimentin protein  
**Cross Reactivity:** (+) Vimentin  
**Species Reactivity:** (+) Human  
**Uniprot No.:** P08670  
**Form:** Liquid  
**Storage:** -20°C (as supplied)  
**Stability:** ≥3 years  
**Storage Buffer:** PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide  
**Host:** Rabbit  
**Applications:** ELISA and Western blot (WB); the recommended starting dilution for ELISA and WB is 1:200. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Image



Lane 1: Recombinant Human Vimentin (100 ng)

Lane 2: HEK293 Cell Lysate (50 µg)

Lane 3: HeLa Cell Lysate (50 µg)

**Note:** The predicted size of vimentin is 54 kDa. The recombinant vimentin sample used in this Western blot is tagged, and therefore runs higher than native vimentin.

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  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM

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## Description

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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. 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 Monoclonal Antibody (Clone 12E4) can be used for ELISA and Western blot (WB) applications. The antibody recognizes vimentin at approximately 54 kDa from human samples.

## References

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CAYMAN CHEMICAL  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
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