

PRODUCT INFORMATION



Vimentin (human, recombinant)

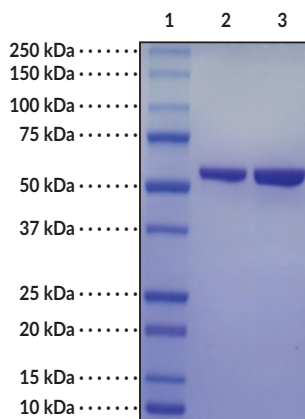
Item No. 11234

Overview and Properties

Source: Recombinant N-terminal histidine-tagged vimentin purified from *E. coli*
Amino acids: 2-466
Uniprot No.: P08670
Molecular Weight: 55.2 kDa
Storage: -80°C (as supplied); avoid freeze/thaw cycles by aliquoting protein
Stability: ≥2 years
Purity: ≥90% estimated by SDS-PAGE
Supplied in: 10 mM Tris, pH 8.0
Protein
Concentration: *batch specific*

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: Vimentin (2 μg)
Lane 3: Vimentin (4 μg)

Representative gel image shown; actual purity may vary between each batch.

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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Description

Vimentin is a cytoskeleton intermediate filament protein present in cells of mesenchymal origin, including leukocytes, endothelial cells, and smooth muscle cells.¹ Each vimentin monomer contains a central α -helix that facilitates formation of the coil-coil dimer required for vimentin filament assembly.² 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.¹ Vimentin controls transport of LDL-derived cholesterol from lysosomes to esterification sites.³ It is an aggresome component, forming a cage-like structure around aggregated, undegraded proteins at the microtubule organizing center.⁴ 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).^{5,6} ACPAs against citrullinated proteins, such as vimentin, are considered to be highly specific markers for rheumatoid arthritis and other autoimmune diseases.⁵

References

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3. Sarria, A.J., Panini, S.R., and Evans, R.M. A functional role for vimentin intermediate filaments in the metabolism of lipoprotein-derived cholesterol in human SW-13 cells. *J. Biol. Chem.* **267(27)**, 19455-19463 (1992).
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