

# PRODUCT INFORMATION



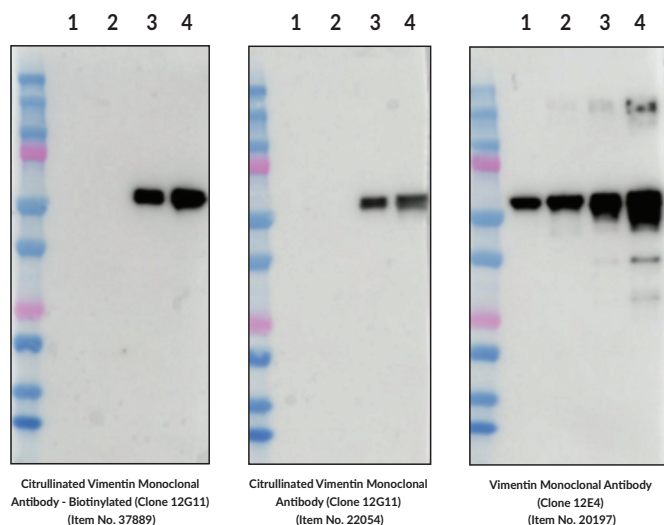
## Citrullinated Vimentin Monoclonal Antibody - Biotinylated (Clone 12G11)

Item No. 37889

### Overview and Properties

<b>Contents:</b>	This vial contains 100 µg of biotinylated protein G-purified monoclonal antibody.
<b>Immunogen:</b>	Synthetic peptide from human vimentin with citrullines at 144 and 146 (G146R mutation)
<b>Cross Reactivity:</b>	(+) Citrullinated vimentin; (-) Unmodified vimentin
<b>Species Reactivity:</b>	(+) Human; other species not tested
<b>Molecular Weight:</b>	54 kDa
<b>Uniprot No.:</b>	P08670
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Storage Buffer:</b>	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
<b>Clone:</b>	12G11
<b>Host:</b>	Mouse
<b>Isotype:</b>	IgG1
<b>Applications:</b>	ELISA, Immunoprecipitation (IP), and Western blot (WB); the recommended starting dilution for ELISA and WB is 1:1,000 and 5 µg/test for IP. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Images



**Lane 1:** Vimentin (human, recombinant) (Item No. 11234) (100 ng)  
**Lane 2:** Vimentin (human, recombinant) (Item No. 11234) (250 ng)  
**Lane 3:** Citrullinated Vimentin (human, recombinant) (Item No. 21942) (100 ng)  
**Lane 4:** Citrullinated Vimentin (human, recombinant) (Item No. 21942) (250 ng)

**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

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Vimentin is a cytoskeleton intermediate filament protein present in cells of mesenchymal origin, including leukocytes, endothelial cells, and smooth muscle cells. It is subject to citrullination by peptidyl arginine deiminase 2 (PAD2; Item No. 10785) under high calcium concentrations, which can occur during macrophage apoptosis.<sup>1</sup> Citrullinated vimentin has been shown to have a role in the production of anti-citrullinated protein antibodies (ACPAs).<sup>1,2</sup> Serum levels of immune complexes targeting citrullinated vimentin are increased in patients with rheumatoid arthritis and positive for ACPAs.<sup>3</sup> Serum and plasma levels of citrullinated vimentin are also increased in patients with lung cancer or idiopathic pulmonary fibrosis, respectively.<sup>4,5</sup> Cayman's Citrullinated Vimentin Monoclonal Antibody - Biotinylated (Clone 12G11) can be used for ELISA, immunoprecipitation (IP), and Western blot (WB) applications. The antibody recognizes citrullinated vimentin at approximately 54 kDa from human samples.

## References

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1. Asaga, H., Yamada, M., and Senshu, T. Selective deimination of vimentin in calcium ionophore-induced apoptosis of mouse peritoneal macrophages. *Biochem. Biophys. Res. Commun.* **243(3)**, 641-646 (1998).
2. Soós, L., Szekanecz, Z., Szabó, Z., *et al.* Clinical evaluation of anti-mutated citrullinated vimentin by ELISA in rheumatoid arthritis. *J. Rheumatol.* **34(8)**, 1658-1663 (2007).
3. Van Steendam, K., Tilleman, K., De Ceuleneer, M., *et al.* Citrullinated vimentin as an important antigen in immune complexes from synovial fluid of rheumatoid arthritis patients with antibodies against citrullinated proteins. *Arthritis Res. Ther.* **12(4)**, R132 (2010).
4. Willumsen, N., Bager, C.L., Leeming, D.J., *et al.* Serum biomarkers reflecting specific tumor tissue remodeling processes are valuable diagnostic tools for lung cancer. *Can. Med.* **3(5)**, 1136-1145 (2014).
5. Li, F.J., Surolia, R., Li, H., *et al.* Autoimmunity to vimentin is associated with outcomes of patients with idiopathic pulmonary fibrosis. *J. Immunol.* **199(5)**, 1596-1605 (2017).

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