

PRODUCT INFORMATION

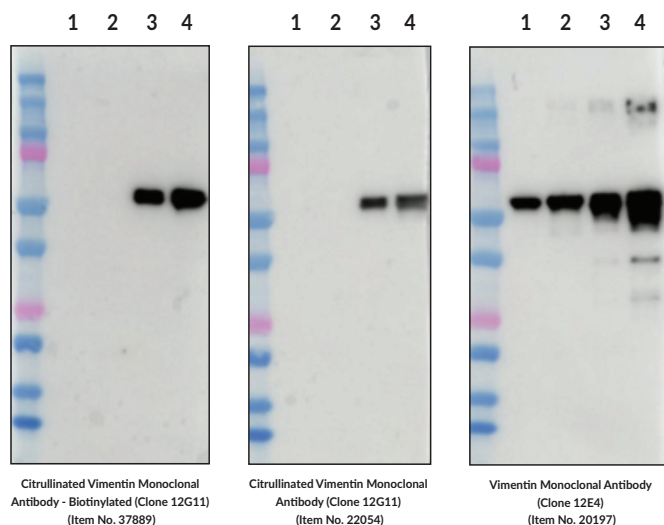
Citrullinated Vimentin Monoclonal Antibody - Biotinylated (Clone 12G11)

Item No. 37889

Overview and Properties

Contents:	This vial contains 100 µg of biotinylated protein G-purified monoclonal antibody.
Immunogen:	Synthetic peptide from human vimentin with citrullines at 144 and 146 (G146R mutation)
Cross Reactivity:	(+) Citrullinated vimentin; (-) Unmodified vimentin
Species Reactivity:	(+) Human; other species not tested
Molecular Weight:	54 kDa
Uniprot No.:	P08670
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥2 years
Storage Buffer:	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Clone:	12G11
Host:	Mouse
Isotype:	IgG1
Applications:	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

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.¹ Citrullinated vimentin has been shown to have a role in the production of anti-citrullinated protein antibodies (ACPAs).^{1,2} Serum levels of immune complexes targeting citrullinated vimentin are increased in patients with rheumatoid arthritis and positive for ACPAs.³ Serum and plasma levels of citrullinated vimentin are also increased in patients with lung cancer or idiopathic pulmonary fibrosis, respectively.^{4,5} 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

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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