

PRODUCT INFORMATION



Citrullinated Vimentin Monoclonal Antibody (Clone 12G11) - HRP

Conjugated

Item No. 44903

Overview and Properties

Contents: This vial contains 100 µg of HRP-conjugated protein G-purified monoclonal antibody

Immunogen: Synthetic peptide from human vimentin with citrulline at R144 and R146 (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 0.05% ProClin™ 300 and proprietary stabilizers

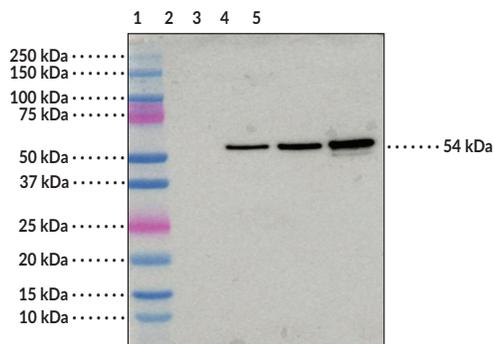
Clone: 12G11

Host: Mouse

Isotype: IgG1

Applications: Western blot (WB); the recommended starting dilution is 1:1,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Lane 1: Vimentin (human, recombinant) (Item No. 11234) (200 ng)
Lane 2: Citrullinated Vimentin (human, recombinant) (Item No. 21942) (50 ng)
Lane 3: Citrullinated Vimentin (human, recombinant) (Item No. 21942) (100 ng)
Lane 4: Citrullinated Vimentin (human, recombinant) (Item No. 21942) (200 ng)

Western Blot. Protein samples were reduced and run on SDS-PAGE followed by transfer to nitrocellulose, blocking, and probing with Citrullinated Vimentin Monoclonal Antibody (Clone 12G11) - HRP Conjugated.

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 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 (Clone 12G11) - HRP Conjugated can be used for Western blot (WB). The antibody recognizes citrullinated vimentin at 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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