

Vimentin (5G3F10): sc-66002

BACKGROUND

Cytoskeletal intermediate filaments (IFs) constitute a diverse group of proteins that are expressed in a highly tissue-specific manner. Intermediate filaments are constructed from two-chain, α -helical, coiled-coil molecules arranged on an imperfect helical lattice and have been widely used as markers for distinguishing individual cell types within a tissue and identifying the origins of metastatic tumors. One such intermediate filament protein, Vimentin, is a general marker of cells originating in the mesenchyme. Vimentin is frequently coexpressed with other members of the intermediate filament family, such as the cytokeratins, in neoplasms including melanoma and breast carcinoma.

CHROMOSOMAL LOCATION

Genetic locus: VIM (human) mapping to 10p13; Vim (mouse) mapping to 2 A1.

SOURCE

Vimentin (5G3F10) is a mouse monoclonal antibody raised against purified truncated recombinant Vimentin of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Vimentin (5G3F10) is available conjugated to agarose (sc-66002 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-66002 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-66002 PE), fluorescein (sc-66002 FITC), Alexa Fluor® 488 (sc-66002 AF488), Alexa Fluor® 546 (sc-66002 AF546), Alexa Fluor® 594 (sc-66002 AF594) or Alexa Fluor® 647 (sc-66002 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-66002 AF680) or Alexa Fluor® 790 (sc-66002 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Vimentin (5G3F10) is recommended for detection of Vimentin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Vimentin (5G3F10) is also recommended for detection of Vimentin in additional species, including monkey.

Suitable for use as control antibody for Vimentin siRNA (h): sc-29522, Vimentin siRNA (m): sc-29523, Vimentin shRNA Plasmid (h): sc-29522-SH, Vimentin shRNA Plasmid (m): sc-29523-SH, Vimentin shRNA (h) Lentiviral Particles: sc-29522-V and Vimentin shRNA (m) Lentiviral Particles: sc-29523-V.

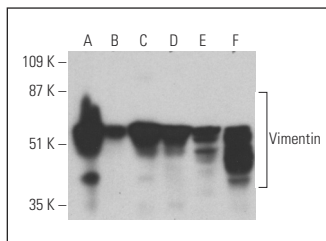
Molecular Weight of Vimentin: 57 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HEK293 whole cell lysate: sc-45136 or A549 cell lysate: sc-2413.

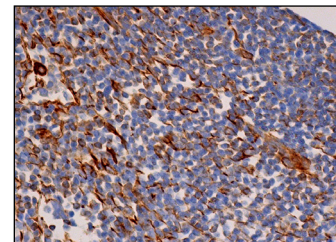
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Vimentin (5G3F10) HRP: sc-66002 HRP. Direct western blot analysis of Vimentin expression in HEK293 (A), A549 (B), HeLa (C), Jurkat (D), C6 (E) and SJRH30 (F) whole cell lysates.



Vimentin (5G3F10): sc-66002. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing membrane and cytoplasmic staining of cells in germinal and non-germinal centers.

SELECT PRODUCT CITATIONS

1. Inanc, B., et al. 2009. *In vitro* differentiation and attachment of human embryonic stem cells on periodontal tooth root surfaces. *Tissue Eng. Part A* 15: 3427-3435.
2. Lv, N., et al. 2015. Inflammatory mediators, tumor necrosis factor- α and interferon- γ , induce EMT in human PTC cell lines. *Oncol. Lett.* 10: 2591-2597.
3. Wang, W., et al. 2016. Epigenetically regulated miR-145 suppresses colon cancer invasion and metastasis by targeting *LASP1*. *Oncotarget* 7: 68674-68687.
4. Li, F.J., et al. 2017. Autoimmunity to Vimentin is associated with outcomes of patients with idiopathic pulmonary fibrosis. *J. Immunol.* 199: 1596-1605.
5. Jin, D., et al. 2018. Norcantharidin reverses cisplatin resistance and inhibits the epithelial mesenchymal transition of human non-small lung cancer cells by regulating the YAP pathway. *Oncol. Rep.* 40: 609-620.
6. Wang, W., et al. 2019. CCL18-induced HOTAIR upregulation promotes malignant progression in esophageal squamous cell carcinoma through the miR-130a-5p-ZEB1 axis. *Cancer Lett.* 460: 18-28.
7. Li, S., et al. 2020. Effect of DEC1 on the proliferation, adhesion, invasion and epithelial-mesenchymal transition of osteosarcoma cells. *Exp. Ther. Med.* 19: 2360-2366.
8. Li, Y., et al. 2021. Overexpression of STAT4 under hypoxia promotes EMT through miR-200a/STAT4 signal pathway. *Life Sci.* 273: 119263.
9. Zhuang, Y., et al. 2022. CircRNA ACVR2A sponges miR-1290 to modulate cell progression in gastric cancer. *J. Oncol.* 2022: 9461054.
10. Tanaka, M., et al. 2022. The role of H3K9me3 in oral squamous cell carcinoma. *Biochem. Biophys. Res. Commun.* 640: 56-63.

RESEARCH USE

For research use only, not for use in diagnostic procedures.