

# Vimentin (V9): sc-6260



The Power to Question

## 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,  $\alpha$ -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 (V9) is a mouse monoclonal antibody raised against purified Vimentin from eye lens of porcine origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Vimentin (V9) is available conjugated to agarose (sc-6260 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-6260 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-6260 PE), fluorescein (sc-6260 FITC), Alexa Fluor<sup>®</sup> 488 (sc-6260 AF488), Alexa Fluor<sup>®</sup> 546 (sc-6260 AF546), Alexa Fluor<sup>®</sup> 594 (sc-6260 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-6260 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-6260 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-6260 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, Vimentin (V9) is available conjugated to either TRITC (sc-6260 TRITC, 200  $\mu$ g/ml) or Alexa Fluor<sup>®</sup> 405 (sc-6260 AF405, 200  $\mu$ g/ml), for IF, IHC(P) and FCM.

## APPLICATIONS

Vimentin (V9) 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  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Vimentin (V9) is also recommended for detection of Vimentin in additional species, including porcine.

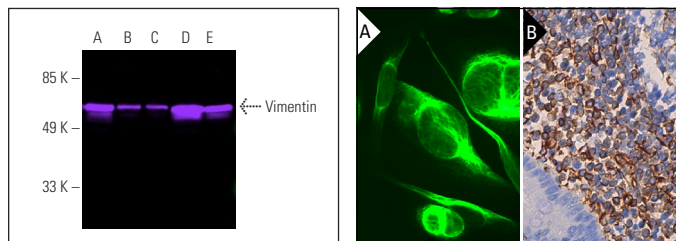
Suitable for use as control antibody for Vimentin siRNA (h): sc-29522, Vimentin siRNA (m): sc-29523, Vimentin siRNA (r): sc-156015, Vimentin shRNA Plasmid (h): sc-29522-SH, Vimentin shRNA Plasmid (m): sc-29523-SH, Vimentin shRNA Plasmid (r): sc-156015-SH, Vimentin shRNA (h) Lentiviral Particles: sc-29522-V, Vimentin shRNA (m) Lentiviral Particles: sc-29523-V and Vimentin shRNA (r) Lentiviral Particles: sc-156015-V.

Molecular Weight of Vimentin: 57 kDa.

## STORAGE

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

## DATA



Vimentin (V9): sc-6260. Fluorescent western blot analysis of Vimentin expression in U-251-MG (A), Jurkat (B), HeLa (C), A-10 (D) and KNRK (E) whole cell lysates. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214. Detection reagent used: m-IgG<sub>k</sub> BP-CFL 555: sc-516177.

Vimentin (V9) FITC: sc-6260 FITC. Direct immunofluorescence staining of formalin-fixed SW480 cells showing cytoskeletal localization. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 (A). Vimentin (V9): sc-6260. Immunoperoxidase detection of vimentin in formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic and membrane staining of lymphoid cells and endothelial cells. Detection reagent used: m-IgG<sub>k</sub> BP-HRP: sc-516102 (B).

## SELECT PRODUCT CITATIONS

- Guo, Z., et al. 1998. Relocation of the t-SNARE SNAP-23 from lamellipodia-like cell surface projections regulates compound exocytosis in mast cells. *Cell* 94: 537-548.
- Peuhu, E., et al. 2017. Epithelial vimentin plays a functional role in mammary gland development. *Development* 144: 4103-4113.
- Lin, M., et al. 2018. Overexpression of FOXA1 inhibits cell proliferation and EMT of human gastric cancer AGS cells. *Gene* 642: 145-151.
- Jeong, Y.J., et al. 2019. Bee venom suppresses EGF-induced epithelial-mesenchymal transition and tumor invasion in lung cancer cells. *Am. J. Chin. Med.* 47: 1869-1883.
- Omar, A., et al. 2020. Soyasapogenol-A targets CARF and results in suppression of tumor growth and metastasis in p53 compromised cancer cells. *Sci. Rep.* 10: 6323.
- Gunjigake, K., et al. 2021. Interleukin-17A derived from mast cells contributes to fibrosis in gastric cancer with peritoneal dissemination. *Gastric Cancer* 24: 31-44.
- Avalle, L., et al. 2022. Stat3 induces breast cancer growth via ANGPTL4, MMP13 and STC1 secretion by cancer associated fibroblasts. *Oncogene* 41: 1456-1467.
- Romero, D.J., et al. 2023. Sphingosine-1-phosphate receptor 2 plays a dual role depending on the stage of cell differentiation in renal epithelial cells. *Life Sci.* 316: 121404.

## RESEARCH USE

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

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