

# Vimentin (VI-RE/1): sc-51721

## 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.

## REFERENCE

1. Draberova, E., et al. 1986. A common antigenic determinant of Vimentin and Desmin defined by monoclonal antibody. *Folia Biol.* 32: 295-303.
2. Van Muijen, G.N., et al. 1987. Coexpression of intermediate filament polypeptides in human fetal and adult tissues. *Lab. Invest.* 57: 359-369.
3. Lukas, Z., et al. 1989. Expression of Vimentin and glial fibrillary acidic protein in human developing spinal cord. *Histochem. J.* 21: 693-701.
4. Lukas, Z., et al. 1993. Expression of phosphorylated high molecular weight neurofilament protein (NF-H) and Vimentin in human developing dorsal root ganglia and spinal cord. *Histochemistry* 100: 495-502.
5. Stewart, M., 1993. Intermediate filament structure and assembly. *Curr. Opin. Cell. Biol.* 5: 3-11.

## CHROMOSOMAL LOCATION

Genetic locus: VIM (human) mapping to 10p13.

## SOURCE

Vimentin (VI-RE/1) is a mouse monoclonal antibody raised against recombinant Vimentin of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Vimentin (VI-RE/1) is recommended for detection of Vimentin of 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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

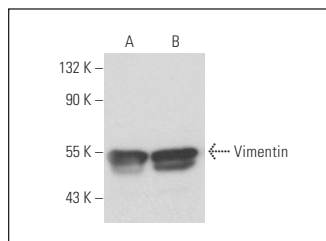
Molecular Weight of Vimentin: 57 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, SJRH30 cell lysate: sc-2287 or RD whole cell lysate: sc-364791.

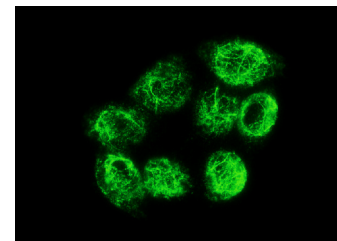
## STORAGE

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

## DATA



Vimentin (VI-RE/1): sc-51721. Western blot analysis of Vimentin expression in SJRH30 (A) and RD (B) whole cell lysates.



Vimentin (VI-RE/1): sc-51721. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization.

## SELECT PRODUCT CITATIONS

1. Brandl, M., et al. 2010. IKK $\alpha$  controls canonical TGF $\beta$ -SMAD signaling to regulate genes expressing SNAIL and SLUG during EMT in panc1 cells. *J. Cell Sci.* 123: 4231-4239.
2. Rodríguez-Tirado, C., et al. 2012. *Neisseria gonorrhoeae* induced disruption of cell junction complexes in epithelial cells of the human genital tract. *Microbes Infect.* 14: 290-300.
3. Zhang, W., et al. 2014. Deferoxamine enhances cell migration and invasion through promotion of HIF-1 $\alpha$  expression and epithelial-mesenchymal transition in colorectal cancer. *Oncol. Rep.* 31: 111-116.
4. Della Pietra, E., et al. 2015. Repeated sub-optimal photodynamic treatments with pheophorbide a induce an epithelial mesenchymal transition in prostate cancer cells via nitric oxide. *Nitric Oxide* 45: 43-53.
5. Płuciennik, E., et al. 2015. The role of WWOX tumor suppressor gene in the regulation of EMT process via regulation of CDH1-ZEB1-VIM expression in endometrial cancer. *Int. J. Oncol.* 46: 2639-2648.
6. Rapozzi, V., et al. 2017. A photodynamic bifunctional conjugate for prostate cancer: an *in vitro* mechanistic study. *Invest. New Drugs* 35: 115-123.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **Vimentin (E-5): sc-373717** for Vimentin antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647.