

Vimentin (J144): sc-53464

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.

REFERENCES

1. Drabero, 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.

CHROMOSOMAL LOCATION

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

SOURCE

Vimentin (J144) is a mouse monoclonal antibody raised against rhabdomyosarcoma cell line JR1 of human origin.

PRODUCT

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

APPLICATIONS

Vimentin (J144) 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).

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.

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

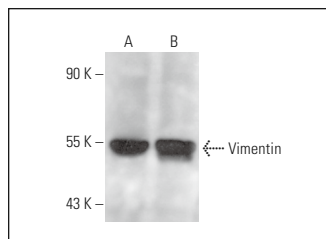
STORAGE

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

RESEARCH USE

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

DATA



Vimentin (J144): sc-53464. Western blot analysis of Vimentin expression in SJRH30 (A) and RD (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Huang, Y., et al. 2008. Midkine induces epithelial-mesenchymal transition through Notch2/Jak2-Stat3 signaling in human keratinocytes. *Cell Cycle* 7: 1613-1622.
3. Buhrmann, C., et al. 2014. Curcumin suppresses crosstalk between colon cancer stem cells and stromal fibroblasts in the tumor microenvironment: potential role of EMT. *PLoS ONE* 9: e107514.
4. Hou, K.Z., et al. 2015. Chemokine ligand 20 enhances progression of hepatocellular carcinoma via epithelial-mesenchymal transition. *World J. Gastroenterol.* 21: 475-483.
5. Hammam, O.A., et al. 2016. Wharton's jelly-derived mesenchymal stem cells combined with praziquantel as a potential therapy for *Schistosoma mansoni*-induced liver fibrosis. *Sci. Rep.* 6: 21005.
6. He, M., et al. 2017. MiR-143-5p deficiency triggers EMT and metastasis by targeting HIF-1 α in gallbladder cancer. *Cell. Physiol. Biochem.* 42: 2078-2092.
7. Weng, D., et al. 2018. 2-aminopurine suppresses the TGF- β 1-induced epithelial-mesenchymal transition and attenuates bleomycin-induced pulmonary fibrosis. *Cell Death Discov.* 4: 17.
8. Han, F., et al. 2019. SOX30 is a prognostic biomarker and chemotherapeutic indicator for advanced-stage ovarian cancer. *Endocr. Relat. Cancer* 26: 303-319.
9. Jobin, P.G., et al. 2020. Moonlighting matrix metalloproteinase substrates: Enhancement of proinflammatory functions of extracellular tyrosyl-tRNA synthetase upon cleavage. *J. Biol. Chem.* 295: 2186-2202.

CONJUGATES

See **Vimentin (E-5): sc-373717** for Vimentin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.