

# Vimentin (S-20): sc-7558

## 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 co-expressed 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 (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Vimentin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7558 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-7558 AC, 500  $\mu$ g/0.25 ml agarose in 1 ml; as phycoerythrin (sc-7558 PE), fluorescein (sc-7558 FITC), PerCP (sc-7558 PerCP) or PerCP-Cy5.5 (sc-7558 PCPC5) conjugates for flow cytometry, 100 tests; and as Alexa Fluor<sup>®</sup> 405 (sc-7558 AF405), Alexa Fluor<sup>®</sup> 488 (sc-7558 AF488) or Alexa Fluor<sup>®</sup> 647 (sc-7558 AF647) conjugates for flow cytometry or immunofluorescence; 100  $\mu$ g/2 ml.

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## APPLICATIONS

Vimentin (S-20) 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), flow cytometry (1  $\mu$ g per  $1 \times 10^6$  cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Vimentin (S-20) is also recommended for detection of Vimentin in additional species, including equine, canine, bovine and porcine.

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.

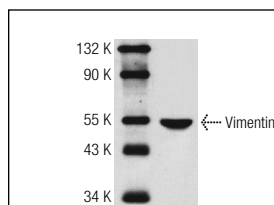
## STORAGE

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

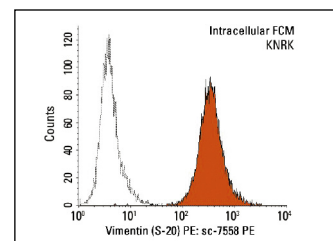
## RESEARCH USE

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

## DATA



Vimentin (S-20): sc-7558. Western blot analysis of Vimentin expression in HISM whole cell lysate.



Vimentin (S-20) PE: sc-7558 PE. Intracellular FCM analysis of methanol permeabilized KNRK cells. Solid black line histogram represents control goat IgG.

## SELECT PRODUCT CITATIONS

1. Suzuki, R., et al. 2003. Expression of the receptor for pituitary adenylate cyclase activating polypeptide (PAC1-R) in reactive astrocytes. *Brain Res.* 115: 10-20.
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3. Iliopoulos, D., et al. 2009. MicroRNAs differentially regulated by Akt isoforms control EMT and stem cell renewal in cancer cells. *Sci. Signal.* 2: ra62.
4. Vuononvirta, R., et al. 2009. Expression of hepatocyte growth factor and its receptor met in Wilms' tumors and nephrogenic rests reflects their roles in kidney development. *Clin. Cancer Res.* 15: 2723-2730.
5. Kanlaya, R., et al. 2010. Vimentin interacts with heterogeneous nuclear ribonucleoproteins and dengue nonstructural protein 1 and is important for viral replication and release. *Mol. Biol. Syst.* 6: 795-806.
6. Hader, C., et al. 2010. Mesenchymal-epithelial transition in epithelial response to injury: the role of Foxc2. *Oncogene* 29: 1031-1040.
7. Yang, J., et al. 2010. Down regulation of the PEDF gene in human lens epithelium cells changed the expression of proteins vimentin and  $\alpha$ B-crystallin. *Mol. Vis.* 16: 105-112.
8. Akkiche, N., et al. 2010. Differentiation and neural integration of hippocampal neuronal progenitors: signaling pathways sequentially involved. *Hippocampus* 20: 949-961.
9. Sin, S., et al. 2011. Role of the focal adhesion protein kindlin-1 in breast cancer growth and lung metastasis. *J. Natl. Cancer Inst.* 103: 1323-1337.



Try **Vimentin (V9): sc-6260** or **Vimentin (E-5): sc-373717**, our highly recommended monoclonal alternatives to Vimentin (S-20). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Vimentin (V9): sc-6260**.