

Vimentin (E-5): sc-373717

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. 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.

CHROMOSOMAL LOCATION

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

SOURCE

Vimentin (E-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 411-447 near the C-terminus of 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 (E-5) is available conjugated to agarose (sc-373717 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373717 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373717 PE), fluorescein (sc-373717 FITC), Alexa Fluor[®] 488 (sc-373717 AF488), Alexa Fluor[®] 546 (sc-373717 AF546), Alexa Fluor[®] 594 (sc-373717 AF594) or Alexa Fluor[®] 647 (sc-373717 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-373717 AF680) or Alexa Fluor[®] 790 (sc-373717 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-373717 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

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

APPLICATIONS

Vimentin (E-5) is recommended for detection of Vimentin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

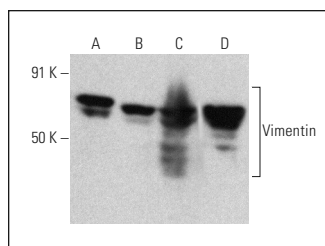
Vimentin (E-5) is also recommended for detection of Vimentin in additional species, including canine and bovine.

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.

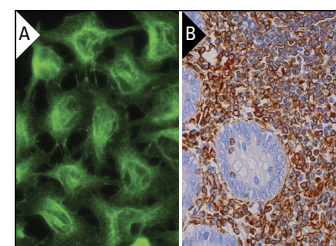
Molecular Weight of Vimentin: 57 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, 3T3-L1 cell lysate: sc-2243 or C3H/10T1/2 cell lysate: sc-3801.

DATA



Vimentin (E-5): sc-373717. Western blot analysis of Vimentin expression in KNRK (A), 3T3-L1 (B), C3H/10T1/2 (C) and RAT2 (D) whole cell lysates.



Vimentin (E-5): sc-373717. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic and membrane staining of lymphoid cells (B).

SELECT PRODUCT CITATIONS

1. Alexander Brobeil., et al. 2010. Interaction of PTPIP51 with Tubulin, CGI-99 and Nuf2 during cell cycle progression. *Biomolecules* 2: 122-142.
2. Wang, W., et al. 2017. Glutathione S-transferase A1 mediates nicotine-induced lung cancer cell metastasis by promoting epithelial-mesenchymal transition. *Exp. Ther. Med.* 14: 1783-1788.
3. Cai, L., et al. 2017. The lncRNA HNF1A-AS1 is a negative prognostic factor and promotes tumorigenesis in osteosarcoma. *J. Cell. Mol. Med.* 21: 2654-2662.

RESEARCH USE

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