

Product Datasheet

Vimentin Antibody (2D1) NBP1-92687

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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NBP1-92687

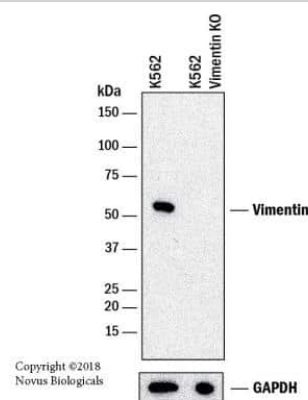
Vimentin Antibody (2D1)

Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	2D1
Preservative	5mM Sodium Azide
Isotype	IgG2a
Purity	Protein G purified
Buffer	50% PBS, 50% glycerol
Target Molecular Weight	53.6 kDa
Product Description	
Host	Mouse
Gene Symbol	VIM
Species	Human, Rat, Mouse (Negative)
Reactivity Notes	Clones 2D1 (NBP1-92687) and 2A52 (NBP1-92688) both failed to detect the target in mouse tissues although they work well on human and rat samples. This allowed us to firmly map the epitope for both antibodies to the peptide SRISLPLPNFSSLNREL, amino acids 409-425 of the human sequence. This peptide is located at the beginning of the non-helical "tail" region of the molecule and the peptide is totally conserved between human and rat and in most mammalian species, including cow, pig, horse, camel, and many monkeys. Interestingly mouse has the peptide SRISLPLPTFSSLNREL divergent by one amino acid, and neither clones bind this peptide. As a result these antibodies can be used to identify human or rat cells in mouse cultures or tissues and may work with other species that also contain this peptide.
Marker	Mesenchymal Cells Marker
Immunogen	Full length recombinant human Vimentin Antibody expressed in and purified from E. coli. [UniProt# P08670]
Product Application Details	
Applications	Western Blot, Simple Western, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Knockout Validated
Recommended Dilutions	Western Blot 1:10000, Simple Western 1:100, Immunohistochemistry 1:1000, Immunocytochemistry/ Immunofluorescence 1:1000, Immunohistochemistry-Paraffin, Knockout Validated
Application Notes	<p>This Vimentin (2D1) antibody is useful for Immunocytochemistry/Immunofluorescence, Immunohistochemistry, and Western blot, where a band can be seen at approximately 50 kDa. Use in IHC-P was reported in scientific literature (PMID: 30327566).</p> <p>In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. Separated by Size-Wes, Sally Sue/Peggy Sue.</p>

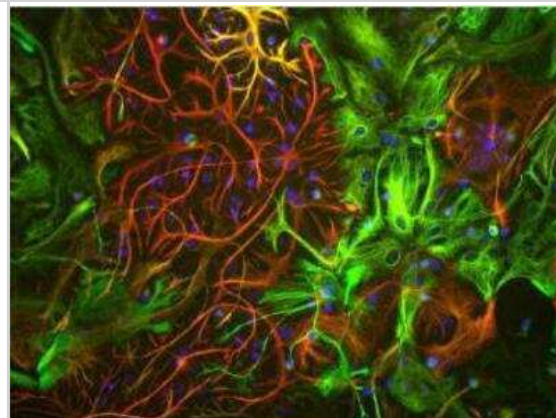


Images

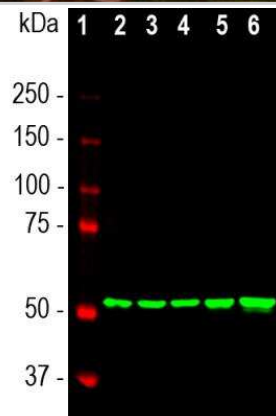
Knockout Validated: Vimentin Antibody (2D1) [NBP1-92687] - Western blot shows lysates of K562 human Chronic Myelogenous Leukemia parental cell line and Vimentin knockout (KO) K562 cell line. PVDF membrane was probed with 1:10,000 of Mouse Anti-Human Vimentin Monoclonal Antibody (Catalog # NBP1-92687) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog #HAF018). Specific band was detected for Vimentin at approximately 55 kDa (as indicated) in the parental K562 cell line, but is not detectable in the knockout K562 cell line. This experiment was conducted under reducing conditions.



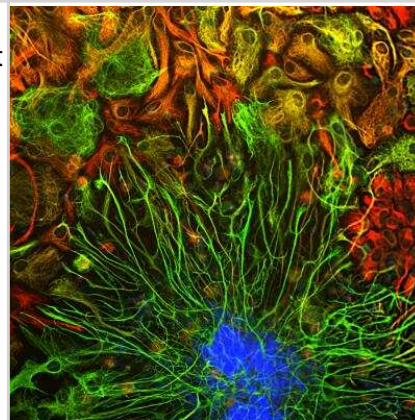
Immunocytochemistry/Immunofluorescence: Vimentin Antibody (2D1) [NBP1-92687] - View of mixed neuron/glia cultures stained with NBP1-92687 (green) and the GFAP rabbit polyclonal (NB300-141, red). Vimentin is expressed alone in fibroblastic and endothelial cells, which are the flattened cells in the middle of the image which appear green. Astrocytes may express primarily GFAP, or GFAP and Vimentin, and so appear red (GFAP only) or golden yellow (GFAP and Vimentin). In cells which express both GFAP and Vimentin, the two proteins assemble to produce heteropolymer filaments.



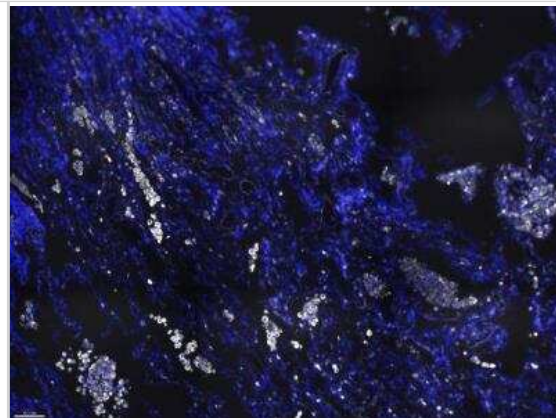
Western Blot: Vimentin Antibody (2D1) [NBP1-92687] - Analysis of different cell lysates using mouse mAb to vimentin, NBP1-92687, dilution 1:10,000 in green: [1] protein standard (red), [2] HEK293, [3] HeLa, [4] SH-SY5Y, [5] COS-1, and [6] C6 cells. The band at about 50kDa mark corresponds to the vimentin protein.



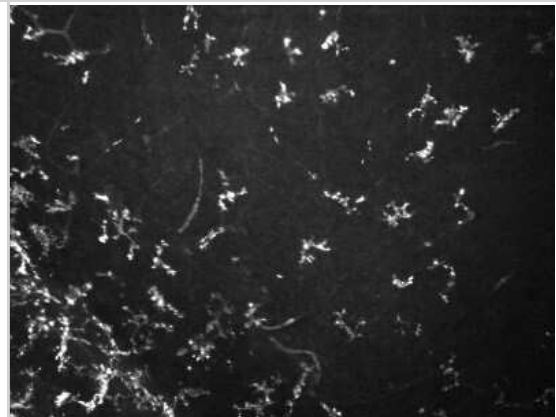
Immunocytochemistry/Immunofluorescence: Vimentin Antibody (2D1) [NBP1-92687] - Analysis of cortical neuron-glia cell cultures from E20 rat stained with mouse mAb to vimentin, NBP1-92687, dilution 1:2,000 in red, and costained with chicken pAb to glial fibrillary acidic protein (GFAP), dilution 1:5,000, in green. The blue is DAPI staining of nuclear DNA. Fibroblastic and other developing cells express only vimentin and appear red. Astrocytes that express GFAP only are green while those that express both GFAP and vimentin appear golden yellow.



Immunohistochemistry-Paraffin: Vimentin Antibody (2D1) [NBP1-92687] - Human breast cancer tissue stained for Vimentin (white) and countersatined with DAPI (blue). Alexa Fluor 750 version of antibody used (NBP1-92687AF750). Image from verified customer review.



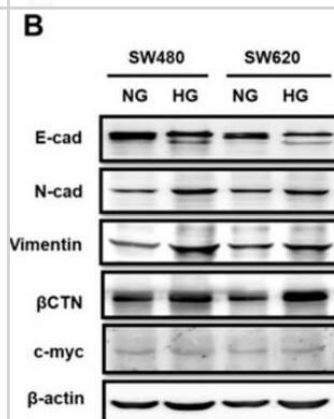
Immunohistochemistry: Vimentin Antibody (2D1) [NBP1-92687] - Mouse cortex microslice section (from postnatal day 3) was immunostained with (1:500 dil.). This image was submitted via customer Review.



Simple Western: Vimentin Antibody (2D1) [NBP1-92687] - Simple Western lane view shows a specific band for Vimentin in 0.5 mg/ml of HeLa lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



High glucose (HG) concentrations induced epithelial-to-mesenchymal transition protein expression and enhanced migration activity in colorectal cancer (CRC) cells. SW480 (low metastatic potential) and SW620 (high metastatic potential) cells were cultured in different concentrations of glucose (normal: NG; HG; and osmotic control: NG + I-glucose). (B) HG concentration caused downregulation of E-cadherin and upregulation of N-cadherin, betaCTN, and vimentin, but c-myc was unchanged, as detected using Western blotting. beta-actin was evaluated as an internal control. Image collected and cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/30965609>), licensed under a CC-BY licence.



Publications

Manhas A, Tripathi D, Jagavelu K Involvement of HIF1 α /Reg protein in the regulation of HMGB3 in myocardial infarction *Vascular pharmacology* 2023-07-17 [PMID: 37467910] (ICC/IF, Rat)

Monleón-Guinot I, Milian L, Martínez-Vallejo P et al. Morphological Characterization of Human Lung Cancer Organoids Cultured in Type I Collagen Hydrogels: A Histological Approach *International journal of molecular sciences* 2023-06-14 [PMID: 37373279] (ICC/IF, Human)

Details:

1:500 dilution

Wang W, Lin Y, Zhang F et al. Single cell transcriptomic analysis of human amnion identifies cell-specific signatures associated with membrane rupture and parturition *Cell Biosci.* 2022-05-18 [PMID: 35585644] (ICC/IF, Human)

Duan X, Weng H, Shen G et al. Preliminary study on the expression of UHRF1 in early oral squamous cell carcinoma and its clinical prognostic value *Research Square* 2023-02-03 (IHC-P, Human)

Hamdan F, YIOsmAki E, Chiaro J et al. Novel oncolytic adenovirus expressing enhanced cross-hybrid IgGA Fc PD-L1 inhibitor activates multiple immune effector populations leading to enhanced tumor killing in vitro, in vivo and with patient-derived tumor organoids *J Immunother Cancer* 2021-11-01 [PMID: 34362830] (ICC/IF, Human)

Chandramohan Y, Jeganathan K, Sivanesan S et al. Assessment of human ovarian follicular fluid derived mesenchymal stem cells in chitosan/PCL/Zn scaffold for bone tissue regeneration *Life Sci* 2020-10-06 [PMID: 33031825] (WB, Human)

Park S, Song CS, Lin CL et al. Inhibitory Interplay of SULT2B1b Sulfotransferase with AKR1C3 Aldo-keto Reductase in Prostate Cancer *Endocrinology* 2020-01-02 [PMID: 31894239]

Chen, YC;Ou, MC;Fang, CW;Lee, TH;Tzeng, SL; High Glucose Concentrations Negatively Regulate the IGF1R/Src/ERK Axis through the MicroRNA-9 in Colorectal Cancer Cells 2019-04-08 [PMID: 30965609] (WB, Human)

Scimeca M, Urbano N, Bonfiglio R et al. Breast osteoblast-like cells: a new biomarker for the management of breast cancer. *Br. J. Cancer.* 2018-10-17 [PMID: 30327566] (IHC-P, Human)

Qi M, Zhou Y, Liu J et al. AngII induces HepG2 cells to activate epithelial-mesenchymal transition. *Exp Ther Med* 2018-10-01 [PMID: 30233697] (IF/IHC, Human)





Novus Biologicals USA

10730 E. Briarwood Avenue
Centennial, CO 80112
USA
Phone: 303.730.1950
Toll Free: 1.888.506.6887
Fax: 303.730.1966
nb-customerservice@bio-techne.com

Bio-Techne Canada

21 Canmotor Ave
Toronto, ON M8Z 4E6
Canada
Phone: 905.827.6400
Toll Free: 855.668.8722
Fax: 905.827.6402
canada.inquires@bio-techne.com

Bio-Techne Ltd

19 Barton Lane
Abingdon Science Park
Abingdon, OX14 3NB, United Kingdom
Phone: (44) (0) 1235 529449
Free Phone: 0800 37 34 15
Fax: (44) (0) 1235 533420
info.EMEA@bio-techne.com

General Contact Information

www.novusbio.com
Technical Support: nb-technical@bio-techne.com
Orders: nb-customerservice@bio-techne.com
General: novus@novusbio.com

Products Related to NBP1-92687

HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-96778	Mouse IgG2a Isotype Control (M2A)
NBP1-92687AF647	Vimentin Antibody (2D1) [Alexa Fluor® 647]

Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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