

Product Datasheet

Collagen IV Antibody - Azide and BSA Free NBP1-26549

Unit Size: 0.1 mg

Store at 4C. Do not freeze.

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NBP1-26549

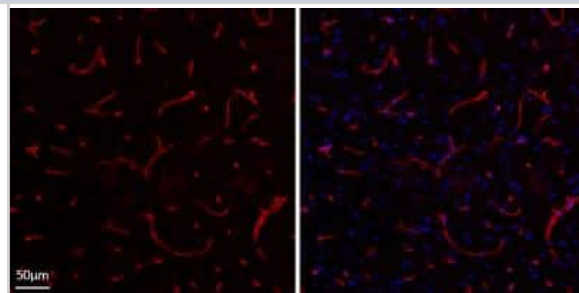
Collagen IV Antibody - Azide and BSA Free

Product Information	
Unit Size	0.1 mg
Concentration	0.4 mg/ml
Storage	Store at 4C. Do not freeze.
Clonality	Polyclonal
Preservative	No Preservative
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	0.1M BBS (pH 8.2)
Product Description	
Description	Novus Biologicals Goat Collagen IV Antibody - Azide and BSA Free (NBP1-26549) is a polyclonal antibody validated for use in IHC, WB, ELISA and ICC/IF. Anti-Collagen IV Antibody: Cited in 20 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Goat
Gene ID	1282
Gene Symbol	COL4A1
Species	Human, Mouse, Rat, Monkey
Reactivity Notes	Monkey reactivity reported in scientific literature (PMID: 27417518), Mouse reactivity reported in scientific literature (PMID: 32479919), Rat reactivity reported in scientific literature (PMID: 30362896).
Specificity/Sensitivity	Reacts with conformational determinants on human type IV collagen as demonstrated by ELISA. May react with type IV collagen from other species. Exhibits <10% cross reactivity with collagen type I, II, III, V and VI. The antibody has not been tested for reactivity with other ECM proteins (e.g., laminin, fibronectin).
Immunogen	Goats were hyperimmunized with human type IV collagen.
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, ELISA, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen
Recommended Dilutions	Western Blot 1:100-1:2000, ELISA 1:1000-1:4000, Immunohistochemistry, Immunocytochemistry/Immunofluorescence, Immunohistochemistry-Paraffin 1:10-1:500, Immunohistochemistry-Frozen
Application Notes	IHC, IHC-FR reported in (PMID: 32029859), ICC/IF reported in (PMID: 32479919), IHC-P reported in (PMID: 27417518).

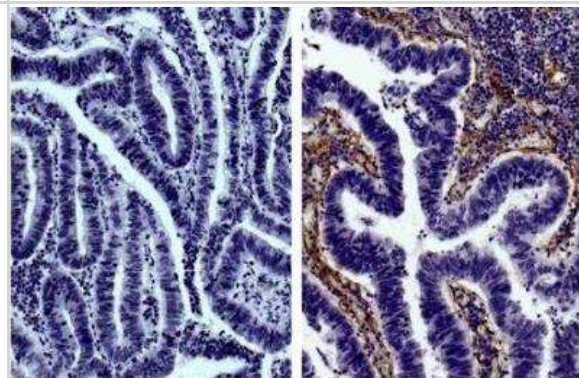


Images

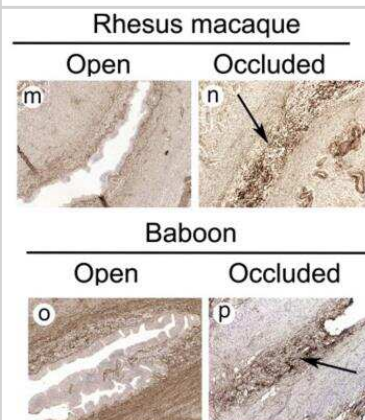
Immunohistochemistry-Frozen: Collagen IV Antibody [NBP1-26549] - Left panel: NBP1-26549 signal, identifying Collagen IV in extracellular basement membrane of brain endothelial cells. Right panel: counterstained image with DAPI. Mouse brain tissue (12um thickness) was incubated overnight with NBP1-26549 (1:400) in PBS 1x at 4C. The day after, the slide was washed 3 x PBS 1x and then incubated with secondary anti-goat antibody (Alex Fluor 568-conjugated), 1:1000 for 2 hours at r.t. After counterstaining with DAPI, image was acquired with confocal microscopy. Left panel: NBP1-26549 signal, identifying Collagen IV in extracellular basement membrane of brain endothelial cells. Right panel: counterstained image with DAPI. Image from verified customer review.



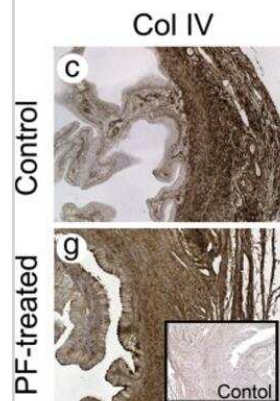
Immunohistochemistry-Paraffin: Collagen IV Antibody [NBP1-26549] - Human gastric cancer tissue was stained with Goat IgG-UNLB isotype control (left) and Goat Anti-Type IV Collagen-UNLB; (right) followed by Swine Anti-Goat IgG(H+L), Human/Rat/Mouse SP ads-HRP DAB, and hematoxylin.



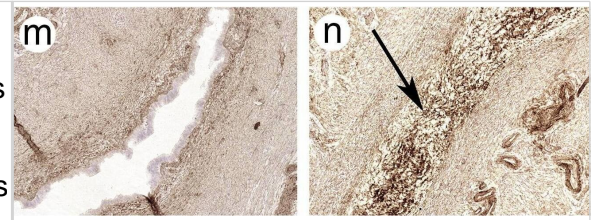
Immunohistochemistry: Collagen IV Antibody [NBP1-26549] - Col-IV in the rhesus macaque and baboon intramural tube. Images of open fallopian tube (m, o) were obtained from control animals. Occluded tube (n, p) were from animals treated with 5% PF. Arrows indicate fibrotic response. All images were captured at original magnification 200x. Image collected and cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/27417518>) licensed under a CC-BY license.



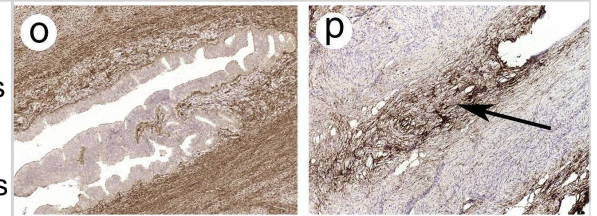
Immunohistochemistry: Collagen IV Antibody [NBP1-26549] - Photographs showing Col-IV staining in rhesus macaque ampulla. Staining for Col-IV was undetectable from the epithelium. No increase in collagen was detected in the PF-treated animals. Control inset shows staining with an irrelevant antibody. Image collected and cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/27417518>) licensed under a CC-BY license.



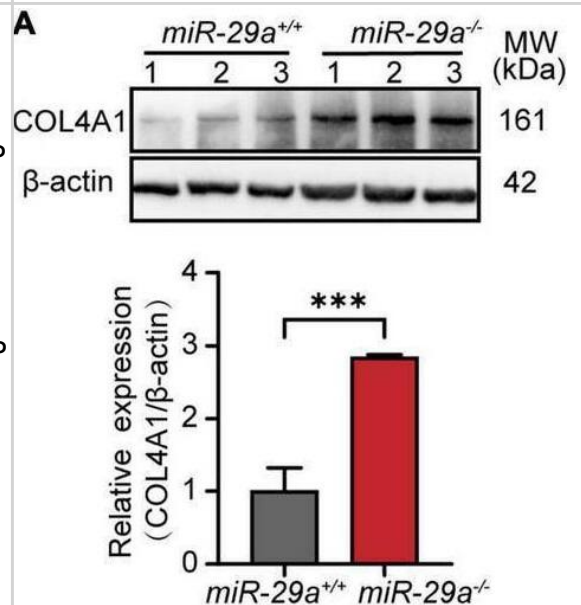
Immunohistochemistry: Collagen IV Antibody [NBP1-26549] - Photographs showing H&E staining & immunostaining for Col-I, Col-III, Col-IV & Col-V in the rhesus macaque & baboon intramural tube. Images of open fallopian tube (a, c, e, g, i, k, m, o, q & s) were obtained from control animals. Occluded tube (b, d, f, h, j, l, n, p, r & t) were from animals treated with 5% PF. Arrows indicate fibrotic response. All images were captured at original magnification $\times 200$. Insets (frame r & s) show negative control with an irrelevant antibody. Treatment with PF increased collagen immunoreactivity in the lamina propria of the intramural tube. Image collected & cropped by CiteAb from the following publication (<https://linkinghub.elsevier.com/retrieve/pii/S0010782416301445>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



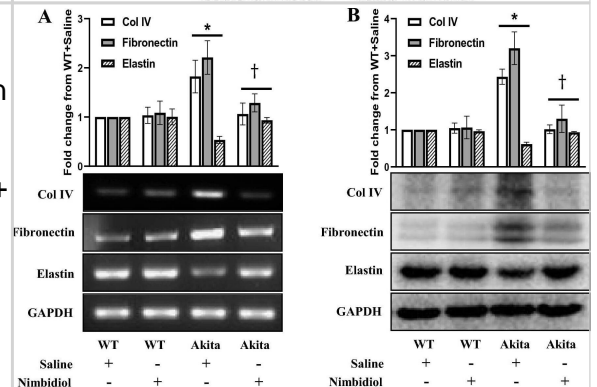
Immunohistochemistry: Collagen IV Antibody [NBP1-26549] - Photographs showing H&E staining & immunostaining for Col-I, Col-III, Col-IV & Col-V in the rhesus macaque & baboon intramural tube. Images of open fallopian tube (a, c, e, g, i, k, m, o, q & s) were obtained from control animals. Occluded tube (b, d, f, h, j, l, n, p, r & t) were from animals treated with 5% PF. Arrows indicate fibrotic response. All images were captured at original magnification $\times 200$. Insets (frame r & s) show negative control with an irrelevant antibody. Treatment with PF increased collagen immunoreactivity in the lamina propria of the intramural tube. Image collected & cropped by CiteAb from the following publication (<https://linkinghub.elsevier.com/retrieve/pii/S0010782416301445>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



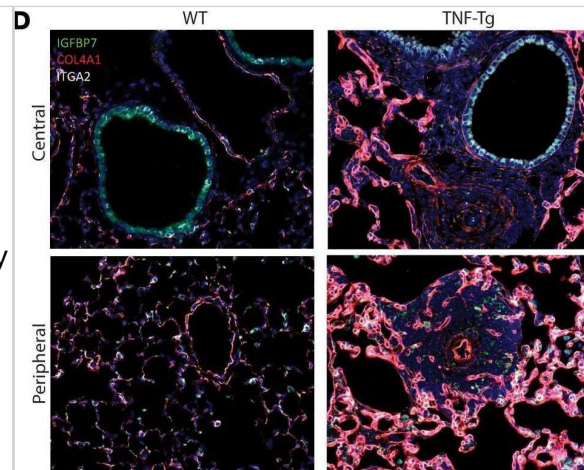
MiR-29a regulation of target gene expression in cochlea from miR-29a^{+/+} and miR-29a^{-/-} mice. (A–G) With β -actin as a control, COL4A1, COL4A2, COL4A3, COL4A4, COL4A5, LAMB2, and LAMC1 protein levels in cochlea were analyzed by Western blot. The independent t-test was used to compare data between two groups [COL4A1, $t(4) = 9.920$, $P < 0.001$; COL4A2, $t(4) = 3.847$, $P = 0.018$; COL4A3, $t(4) = 3.389$, $P = 0.028$; COL4A4, $t(4) = 2.842$, $P = 0.047$; COL4A5, $t(4) = 3.782$, $P = 0.019$; LAMB2, $t(4) = 3.915$, $P = 0.017$; LAMC1, $t(4) = 3.088$, $P = 0.037$]. (H) The mRNA expression levels of target genes as measured by qRT-PCR [independent t-test, Col4a1, $t(4) = 6.050$, $P = 0.004$; Col4a2, $t(4) = 13.145$, $P < 0.001$; Col4a3, $t(4) = 3.735$, $P = 0.02$; Col4a4, $t(4) = 7.238$, $P = 0.002$; Col4a5, $t(4) = 13.141$, $P < 0.001$; Lamb2, $t(4) = 8.529$, $P = 0.001$; Lamc1, $t(4) = 3.126$, $P = 0.035$]. All data are shown as the mean \pm SD, $n = 3$ biological replicates, * $P < 0.05$, ** $P < 0.01$, and *** $P < 0.001$ between two groups. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/37275774>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



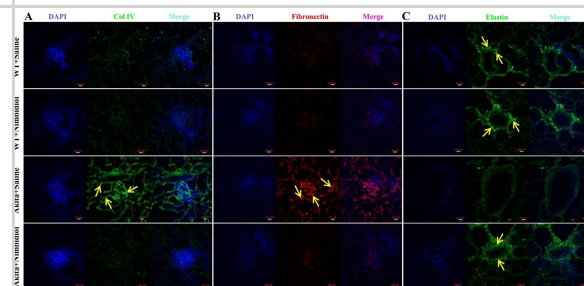
Nimbidol treatment normalized the expression of collagen IV, fibronectin and elastin in the diabetic kidney. Representative images from (A) Semi-quantitative RT-PCR analyses showing gene expression and (B) western blot analyses showing protein expression of Col IV, fibronectin and elastin in the kidney. The bar diagrams represent the fold change from WT + Saline. Data are mean \pm SD ($n = 6$ /group). * $p < 0.05$ versus WT + Saline, WT + Nimbidol and Akita + Nimbidol, † $p < 0.05$ versus Akita + Saline. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/36522378>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Decreased angiogenesis and increased integrin/basement membrane signaling in TNF lungs. (A) Loss of angiogenesis signaling in TNF-Tg mice. MultiNicheNet was used to identify ligand-receptor pairs that were specific to either WT or TNF conditions. WT lungs demonstrated strong Tek, Flt1, Kdr, and Ednrb interactions with Angt1, Vegfa, Gpc3, and Edn3, which were absent TNF-Tg conditions. (B) Increased TGF- β /integrin/basement membrane signaling in TNF-Tg lungs. TNF-Tg lungs demonstrated the presence of interactions between Itga2 (primarily in gCAP2 cells) and multiple collagen genes, Hspg2, and Tgfb1. (C) Decreased expression of Flt1 and Tek and increased expression of Col4a2 and Itga2 in TNF-Tg gCAP cells. Violin plots demonstrate expression across cell types. (D) Immunostaining confirms increased expression of Col4a1, Itga2, and Igfbp7 in TNF-Tg lungs. Original magnification $\times 200$. (E) Circos plots indicating most differentially regulated ligand-receptor pairs ascertained by MultiNicheNet in WT lungs (left) and TNF-Tg (right) lungs; sender cells are listed on the bottom, while arrows point to receiver cells on the top. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/40569693>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Nimbidiol inhibited upregulation of collagen IV and fibronectin, and downregulation of elastin expression in the diabetic kidney. Representative immunofluorescence images of the renal cortex showing expression of (A) Col IV, (B) fibronectin and (C) elastin. The nuclear counterstaining was performed using DAPI (blue). The bar diagrams represent the fold change in the fluorescence intensity from WT + Saline for (D) Col IV (E) fibronectin and (F) elastin. Data are mean \pm SD ($n = 6$ /group). * $p < 0.05$ versus WT + Saline, WT + Nimbidiol and Akita + Nimbidiol, † $p < 0.05$ versus Akita + Saline. Scale bar: 20 μ m; magnification $\times 60$. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/36522378>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Garcia-Hernandez M, Rangel-Moreno J, Xu Q et al. TNF drives aberrant BMP signaling to induce endothelial and mesenchymal dysregulation in pulmonary hypertension JCI Insight 2025-06-26 [PMID: 40569693]

Rastovic U, Campinoti S, Wei L et al. Comprehensive analysis of extracellular matrix remodelling via cyclophilin inhibition in human models of alcohol-related liver fibrosis. British Journal of Pharmacology 2025-07-28 [PMID: 40721392]

Pham V, Tutunculer M, Al-Dulaimi H et al. Modulation of fenestrated vasculature in the median eminence and area postrema in response to neurotoxin exposure and its impairment in aging Frontiers in Aging Neuroscience 2025-08-19 [PMID: 40904345]

Napit PR, Ali MH, Shakya M et al. Hydrogen sulphide mitigates homocysteine-induced apoptosis and matrix remodelling in mesangial cells through Akt/FOXO1 signalling cascade Cell. Signal. 2019-05-11 [PMID: 31085234] (Immunohistochemistry, Primate - Macaca mulatta (Rhesus Macaque))

SK Juin, S Pushpakuma, SC Tyagi, U Sen Glucosidase inhibitor, Nimbidiol ameliorates renal fibrosis and dysfunction in type-1 diabetes Scientific Reports, 2022-12-15;12(1):21707. 2022-12-15 [PMID: 36522378] (Immunohistochemistry, Primate - Macaca mulatta (Rhesus Macaque))

Koundal S, Chen X, Gursky Z et Al. Divergent brain solute clearance in rat models of cerebral amyloid angiopathy and Alzheimer's disease iScience 2024-11-23 [PMID: 39720539]

Hein M, Qambari H, Yu P et Al. Interpericyte Tunneling Nanotubes Are Nonuniformly Distributed in the Human Macula Invest Ophthalmol Vis Sci 2024-11-14 [PMID: 39540858]

Xu M, Tan J, Zhu L et al. Palmitoyltransferase ZDHHC3 Aggravates Nonalcoholic Steatohepatitis by Targeting S-Palmitoylated IRHOM2 Advanced science (Weinheim, Baden-Wuerttemberg, Germany) 2023-08-06 [PMID: 37544908]

Chandrakumar S, Santiago Tierno I, Agarwal M et al. Mechanical regulation of retinal vascular inflammation and degeneration in diabetes Diabetes 2023-11-21 [PMID: 37986627] (IHC-Fr, Mouse)

Ma P, Wang S, Geng R et al. MiR-29a-deficiency causes thickening of the basilar membrane and age-related hearing loss by upregulating collagen IV and laminin Frontiers in Cellular Neuroscience 2023-05-18 [PMID: 37275774] (IHC-Fr, WB, Mouse)

Knoll Machado S, Peil H, Kraushaar T et al. Modulation of Extravascular Binding of Recombinant Factor IX Impacts duration of Efficacy in Mouse Models Thrombosis and haemostasis 2023-05-10 [PMID: 37164314] (Immunohistochemistry-Paraffin, Mouse)

Details:
20 µg/mL

BErenger-Currias NM, Mircea M, Adegeest E et al. A gastruloid model of the interaction between embryonic and extra-embryonic cell types Journal of tissue engineering 2022-06-11 [PMID: 35707767] (ICC/IF, Mouse)

More publications at <http://www.novusbio.com/NBP1-26549>



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Products Related to NBP1-26549

NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
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HAF109	Donkey anti-Goat IgG Secondary Antibody [HRP (Horseradish Peroxidase)]
NB410-28088-1mg	Goat IgG Isotype Control

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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