Product Datasheet

Collagen I alpha 1 Antibody - Azide and BSA Free
NBP1-30054

Unit Size: 0.1 ml

Store at -20C. Avoid freeze-thaw cycles.

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Reviews: 2 Publications: 81

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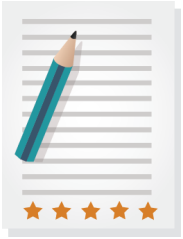
Updated 2/17/2025 v.20.1



NBP1-30054

Collagen I alpha 1 Antibody - Azide and BSA Free

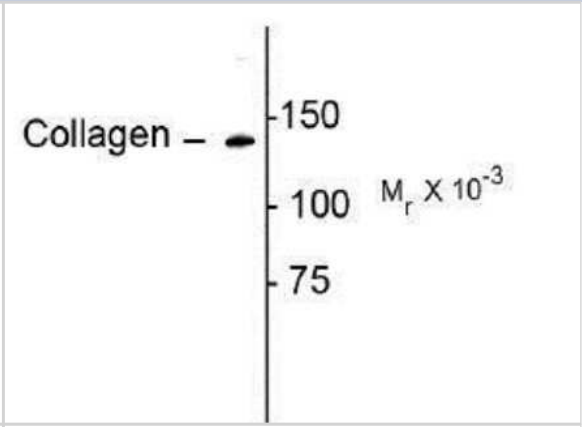
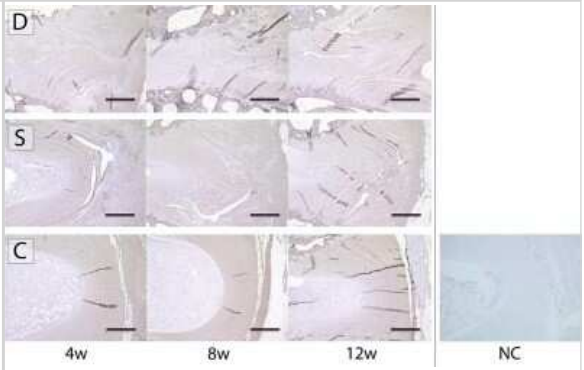
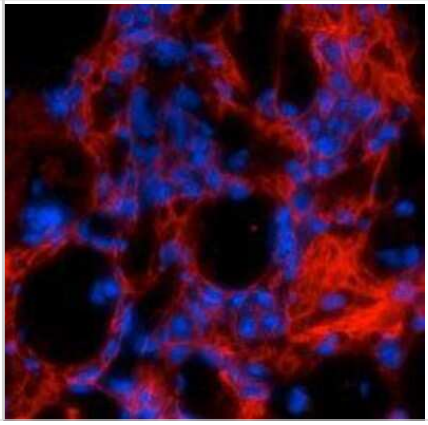
Product Information	
Unit Size	0.1 ml
Concentration	Please see the vial label for concentration. If unlisted please contact technical services.
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	No Preservative
Isotype	IgG
Purity	Antigen Affinity-purified
Buffer	PBS
Target Molecular Weight	140 kDa

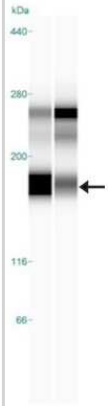
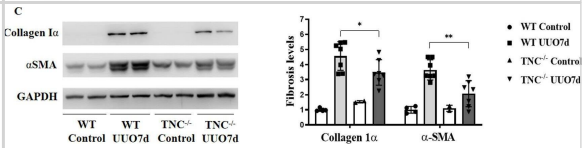
Product Description	
Description	Recommended that the undiluted antibody be aliquoted into smaller working volumes (10-30 uL/vial depending on usage).
Host	Rabbit
Gene ID	1277
Gene Symbol	COL1A1
Species	Human, Mouse, Rat, Amphibian, Avian, Mammal, Sheep
Reactivity Notes	Based on the homology of the immunogen, this antibody is expected to recognize the collagen I alpha1 polypeptide in all mammals, birds, and amphibians.
Specificity/Sensitivity	This Collagen I alpha 1 antibody is specific for the ~ 140 kDa telopeptide portion of the collagen I alpha 1 polypeptide. The antibody works well for immunohistochemistry on paraformaldehyde-fixed sections with a simple antigen-retrieval protocol (incubate slides for 20 minutes at 90 degrees C in 10 mM sodium citrate (pH 6.0)/ 0.1 % Tween-20). Note that in paraffin sections of formaldehydefixed fibrotic mouse lung tissue, the antibody recognizes mature collagen I that has formed fibrils in the extracellular matrix.
Immunogen	This Collagen I alpha 1 antibody was raised against synthetic peptide corresponding to amino acid residues within the C-terminal telo peptide portion (aa1193-1218) of the human COL1A1, conjugated to KLH. Accession # P02452

Product Application Details	
Applications	Western Blot, Simple Western, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin
Recommended Dilutions	Western Blot 1:1000, Simple Western 1:100, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry-Paraffin 1:100, Immunohistochemistry-Frozen 1:10-1:500

Application Notes	Use in Immunohistochemistry-Frozen sections was reported in the scientific literature (PMID: 21939397), IHC reactivity reported in scientific literature (PMID: 26045736). Use in Immunocytochemistry/immunofluorescence reported in scientific literature (PMID: 26651081). In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. See Simple Western Antibody Database for Simple Western validation: Tested in Human Lung and Human Kidney lysate 0.5 mg/mL, separated by Size, antibody dilution of 1:100. Separated by Size-Wes, Sally Sue/Peggy Sue.

Images

Western Blot: Collagen I alpha 1 Antibody - Azide and BSA Free [NBP1-30054] - Collagen I Antibody [NBP1-30054] - Rat lung lysate showing specific immunolabeling of the collagen protein with an observed molecular weight ~140.	
Immunohistochemistry: Collagen I alpha 1 Antibody - Azide and BSA Free [NBP1-30054] - Immunohistochemical staining targeting Collagen I alpha 1 revealed severe disorganization of the annulus fibrosus (AF), and a decrease in staining intensity for group D. On the contrary, the arcshaped and layered AF structure with immunoreactivity for type I collagen staining were mostly maintained in group S when compared to group C. Presented images show the AF at site of surgery, defect, and transplant. Abbreviations: D: AF defect only group, S: AF defect treated with sheet transplantation group, C: sham group, NC: negative control of sample stained without primary antibody (scale bar=300um). Image collected and cropped by CiteAb from the following publication (//pubmed.ncbi.nlm.nih.gov/31463464/) licensed under a CC-BY license.	
Immunohistochemistry: Collagen I alpha 1 Antibody - Azide and BSA Free [NBP1-30054] - Collagen I Antibody [NBP1-30054] - Formaldehyde-fixed fibrotic mouse lung tissue. The antibody recognizes mature collagen I (red) that has formed fibrils in the extracellular matrix.	

Simple Western: Collagen I alpha 1 Antibody - Azide and BSA Free [NBP1-30054] - Simple Western lane view shows a specific band for Collagen I Alpha 1 in 0.5 mg/ml of Human Lung (left) and Human Kidney (right) lysate. This experiment was performed under reducing conditions using the 66-440 kDa separation system. * Non-specific interaction with the 230 kDa Simple Western standard may be seen with this antibody	
Western Blot: Collagen I alpha 1 Antibody - Azide and BSA Free [NBP1-30054] - TNC deficiency reduced kidney fibrosis in animal models.Deletion of TNC (TNC−/−) significantly attenuated the induction of collagen I assessed by IF following UUO by approximate 30% at day 7 & 10 compared with their wild-type littermates (A, n = 4 for each time point, two-way ANOVA p < 0.05). Consistently, the expression of fibrosis markers, such as collagen Iα, fibronectin & plasminogen activator inhibitor-1 (PAI-1), were significantly lower in TNC−/− mice at UUO day 7 & 10 (B, n = 4 for each time point, two-way ANOVA, p < 0.05). Western blot showed that the proteins of collagen Iα & α-SMA were also significantly reduced in TNC−/− mice at UUO day 7 (C, n = 7, p < 0.05). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/36522320), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Publications

Zhang H, Thai PN, Shivnaraine RV, Ren L et Al. Multiscale drug screening for cardiac fibrosis identifies MD2 as a therapeutic target Cell 2024-10-16 [PMID: 39413786]

K Wang, S Fang, Q Liu, J Gao, X Wang, H Zhu, Z Zhu, F Ji, J Wu, Y Ma, L Hu, X Shen, D Gao, J Zhu, P Liu, H Zhou TGF-?1/p65/MAT2A pathway regulates liver fibrogenesis via intracellular SAM EBioMedicine, 2019-03-27;0(0):. 2019-03-27 [PMID: 30926424]

Yang P, Hong MS, Fu C et al. Preexisting smooth muscle cells contribute to neointimal cell repopulation at an incidence varying widely among individual lesions. Surgery 2016-02-01 [PMID: 26387788]

Ji S, Gumina D, McPeak K et al. Human placental villous stromal extracellular matrix regulates fetoplacental angiogenesis in severe fetal growth restriction Clinical science (London, England : 1979) 2021-04-27 [PMID: 33904582]

Zahra Shabani, Joana Schuerger, Xiaonan Zhu, Chaoliang Tang, Li Ma, Alka Yadav, Rich Liang, Kelly Press, Shantel Weinsheimer, Annika Schmidt, Calvin Wang, Abinav Sekhar, Jeffrey Nelson, Helen Kim, Hua Su Increased Collagen I/Collagen III Ratio Is Associated with Hemorrhage in Brain Arteriovenous Malformations in Human and Mouse. Cells 2024-01-12 [PMID: 38201296]

ZT Olmsted, JL Paluh Co-development of central and peripheral neurons with trunk mesendoderm in human elongating multi-lineage organized gastruloids Nature Communications, 2021-05-21;12(1):3020. 2021-05-21 [PMID: 34021144]

Jinsol Han, Chanbin Lee, Hayeong Jeong, Seunghee Jeon, Myunggyo Lee, Haeseung Lee, Yung Hyun Choi, Youngmi Jung Tumor necrosis factor-inducible gene 6 protein and its derived peptide ameliorate liver fibrosis by repressing CD44 activation in mice with alcohol-related liver disease Journal of Biomedical Science 2024-05-24 [PMID: 38790021]

Qixin Wang, Isaac K. Sundar, Joseph H. Lucas, Thivanka Muthumalage, Irfan Rahman Molecular clock REV-ERB α regulates cigarette smoke–induced pulmonary inflammation and epithelial-mesenchymal transition JCI Insight 2021-06-22 [PMID: 34014841]

Wang, Q;Lucas, JH;Pang, C;Zhao, R;Rahman, I; Tobacco and menthol flavored nicotine-free electronic cigarettes induced inflammation and dysregulated repair in lung fibroblast and epithelium Respiratory research 2024-01-10 [PMID: 38200492]

S Dey, LM Udari, P RiveraHern, JJ Kwon, B Willis, JJ Easler, EL Fogel, S Pandol, J Kota Loss of miR-29a/b1 promotes inflammation and fibrosis in acute pancreatitis JCI Insight, 2021-10-08;0(0):. 2021-10-08 [PMID: 34464354]

Abinaya Sundari Thooyamani, Asok Mukhopadhyay PDGFRα mediated survival of myofibroblasts inhibit satellite cell proliferation during aberrant regeneration of lacerated skeletal muscle Scientific Reports 2021-01-08 [PMID: 33420132]

Qixin Wang, Chiara Goracci, Isaac Kirubakaran Sundar, Irfan Rahman Environmental tobacco smoke exposure exaggerates bleomycin-induced collagen overexpression during pulmonary fibrogenesis Journal of Inflammation (London, England) 2024-03-20 [PMID: 38509574]

More publications at http://www.novusbio.com/NBP1-30054

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Products Related to NBP1-30054

HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control
NBP1-77457PEP	Collagen I alpha 1 Antibody Blocking Peptide

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