



## Anti-Collagen Type II (RABBIT) Antibody - 600-401-104S

**Code:** 600-401-104S

**Size:** 25 µL

**Product Description:** Anti-Collagen Type II (RABBIT) Antibody - 600-401-104S

**Concentration:** 1.0 mg/mL by UV absorbance at 280 nm

**Physical State:** Liquid (sterile filtered)

<b>Label</b>	Unconjugated
<b>Host</b>	Rabbit
<b>Gene Name</b>	COL2A1
<b>Species Reactivity</b>	human, mouse, rat, bovine, sheep
<b>Buffer</b>	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
<b>Stabilizer</b>	None
<b>Preservative</b>	0.01% (w/v) Sodium Azide
<b>Storage Condition</b>	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
<b>Synonyms</b>	rabbit anti-Collagen Type II antibody, Collagen alpha-1 (II) chain, Alpha-1 type II collagen, Cartilage collagen antibody, Chondrocalcin antibody, COL2A1 antibody
<b>Application Note</b>	Anti-Collagen antibodies have been used for indirect trapping ELISA for quantitation of antigen in serum using a standard curve, immunoprecipitation, native (non-denaturing, non-dissociating) PAGE, immunohistochemistry, and western blotting for highly sensitive qualitative analysis.
<b>Background</b>	Rockland produces highly active antibodies and conjugates to collagens. Collagens are highly conserved throughout evolution and are characterized by an uninterrupted "Glycine-X-Y" triplet repeat that is a necessary part of the triple helical structure. For these reasons, it is often extremely difficult to generate antibodies with specificities to collagens. The development of 'type' specific antibodies is dependent on NON-DENATURED three-dimensional epitopes. Rockland extensively purifies collagens for immunization from human and bovine placenta and cartilage by limited pepsin digestion and selective salt precipitation. This preparation results in a native conformation of the protein. Antibodies are isolated from rabbit antiserum and are extensively cross-adsorbed by immunoaffinity purification to produce 'type' specific antibodies. Greatly diminished reactivity and selectivity of these antibodies will result if denaturing and reducing conditions are used for SDS-PAGE and immunoblotting. Ideal for investigators involved in Cell Biology, Signal Transduction and Stem Cell research.
<b>Purity And Specificity</b>	Collagen II Antibody has been prepared by immunoaffinity chromatography using immobilized antigens followed by extensive cross-adsorption against other collagens, human serum proteins and non-collagen extracellular matrix proteins to remove any unwanted specificities. Typically negligible cross reactivity against other types of collagens was detected by ELISA against purified standards. Some class specific anti-collagens may be specific for three-dimensional epitopes which may result in diminished reactivity with denatured collagen or formalin-fixed, paraffin embedded tissues. This antibody reacts with most mammalian Type II collagens and has negligible cross-reactivity with Type I, III, IV, V or VI collagens. Non-specific cross reaction of anti-collagen antibodies with other human serum proteins or non-collagen extracellular matrix proteins is negligible.
<b>Assay Dilutions</b>	User Optimized
<b>ELISA</b>	1:5,000 - 1:50,000
<b>Western Blot</b>	1:1,000 - 1:10,000
<b>Immunohistochemistry</b>	1:50 - 1:400
<b>Other Assays</b>	User Optimized
<b>Expiration</b>	Expiration date is one (1) year from date of opening.
<b>Immunogen</b>	Collagen Type II from human knee cartilage and bovine nasal cartilage.
<b>General Reference</b>	Winterpacht A., Superti-Furga A., Schwarze U., Stoess H., Steinmann B., Spranger J., Zabel B. (1996) The deletion of six amino acids at the C-terminus of the alpha 1 (II) chain causes overmodification of type II and type XI collagen: further evidence for the association between small deletions in COL2A1 and Kniest dysplasia. J. Med. Genet. 33:649-654 [PubMed: 8863156]

**Specific Reference**

Shunya Kondo, Chisa Shukunami, Yoko Morioka, Naoya Matsumoto, Rei Takahashi, Junseo Oh, Tadao Atsumi, Akihiro Umezawa, Akira Kudo, Hitoshi Kitayama, Yuji Hiraki, Makoto Noda. (2007) Dual effects of the membrane-anchored MMP regulator RECK on chondrogenic differentiation of ATDC5 cells. *Journal of Cell Science* 120, 849-857. doi:10.1242/jcs.03388.

**Related Products**

001-001-104	Bovine COLLAGEN Type II (NASAL CARTILAGE) - 001-001-104
009-001-104	Human COLLAGEN Type II (ADULT KNEE CARTILAGE) - 009-001-104
600-401-104-0.1	Anti-Collagen Type II (RABBIT) Antibody - 600-401-104-0.1
600-401-104-0.5	Anti-Collagen Type II (RABBIT) Antibody - 600-401-104-0.5

**Related Links**

GeneID - 1280

[http://www.ncbi.nlm.nih.gov/sites/entrez?db=gene&cmd=Retrieve&dopt=full\\_report&list\\_uids=1280](http://www.ncbi.nlm.nih.gov/sites/entrez?db=gene&cmd=Retrieve&dopt=full_report&list_uids=1280)

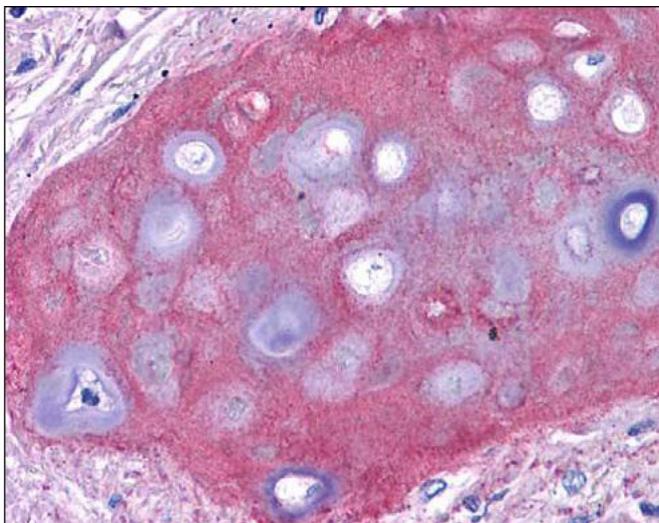
NCBI - P02458.3 <http://www.ncbi.nlm.nih.gov/protein/P02458.3>

UniProtKB - P02458

**Images**

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Rockland anti collagen II antibody (600-401-104 Lot 26014, 1:400, 45 min RT) showed moderate staining of in FFPE human bronchiolar cartilage (shown in image). Though not shown, faint to moderate staining of tonsillar squamous epithelium, prostatic stroma, breast, colon, placenta, and dermal connective tissues was also observed. All other tissues, including brain, breast epithelium, colon epithelium, heart, intestine, kidney, liver, lung, skeletal muscle, pancreas, spleen, testis, thymus, thyroid, and uterus were negative for staining. Slides were steamed in 0.01 M sodium citrate buffer, pH 6.0 at 99-100°C - 20 minutes for antigen retrieval. Image provided courtesy of LifeSpan Biosciences, Seattle, WA

**Disclaimer**

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.