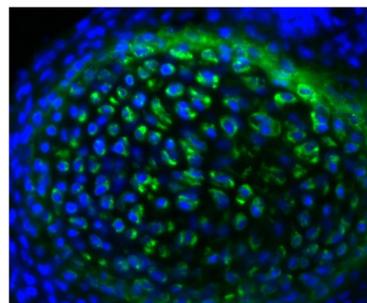




Goat Anti-Type II Collagen

Cat. No.	Format	Size
1320-01	Purified (UNLB)	0.2 mg
1320-08	Biotin (BIOT)	0.2 mg
1320-30	Alexa Fluor [®] 488 (AF488)	0.2 mg



Frozen newborn mouse rib section was stained with Goat Anti-Type II Collagen-UNLB (SB Cat. No. 1320-01) followed by Rabbit Anti-Goat IgG(H+L), Human SP ads-FITC (SB Cat. No. 6164-02) and DAPI.

Description

Specificity	Reacts with conformational determinants on type II collagen Referenced species reactivities include – Human ^{4,5,10,12,14,18-20,22,24,27,29,31,33,34} Chicken ^{16,26} Mouse ^{6,7,15} Porcine ²¹ Rat ^{13,17,25} Rabbit ^{2,9,11,30,32} Bovine ^{2,3,19,23} Sheep ^{8,28}
Source	Pooled antisera from goats hyperimmunized with type II collagen
Cross Adsorption	Collagen types I, III, IV, V, and VI
Purification	Affinity chromatography on type II collagen covalently linked to agarose

Applications

Quality tested applications include –

ELISA ¹
FLISA

Other referenced applications include –

IHC-PS ²⁻¹⁵
IHC-FS ¹⁶⁻²³
ICC ^{20,24-29}
EM ^{6,30,31}
WB ^{2,32-34}
IP ³³

Working Dilutions

ELISA	BIOT conjugate	1:1,000 – 1:4,000
FLISA	AF488 conjugate	1:200 – 1:400

Other Applications Since applications vary, you should determine the optimum working dilution for the product that is appropriate for your specific need.

For Research Use Only. Not for Diagnostic or Therapeutic Use.

Handling and Storage

- The purified (UNLB) antibody is supplied as 0.2 mg of purified immunoglobulin in 0.5 mL of borate buffered saline, pH 8.2. *No preservatives or amine-containing buffer salts added.* Store at 2-8°C.
- The biotin (BIOT) and Alexa Fluor® 488 (AF488) conjugates are supplied as 0.2 mg in 0.5 mL of PBS/Na₃. Store at 2-8°C.
- Protect fluorochrome-conjugated forms from light. Reagents are stable for the period shown on the label if stored as directed.

Warning

Some reagents contain sodium azide. Please refer to product specific SDS.

References

1. Young HE, Sippel J, Putnam LS, Lucas PA, Morrison DC. Enzyme-linked immuno-culture assay. *J Tissue Cult Methods*. 1992;14:31-6. (ELISA)
2. Dunkelkman NS, Zimmer MP, LeBaron RG, Pavelec R, Kwan M, Purchio AF. Cartilage production by rabbit articular chondrocytes on polyglycolic acid scaffolds in a closed bioreactor system. *Biotechnol Bioeng*. 1995;46:299-305. (IHC-PS, WB, Bovine & Rabbit Reactivity)
3. Moses MA, Wiederschain D, Wu I, Fernandez CA, Ghazizadeh V, Lane WS, et al. Troponin I is present in human cartilage and inhibits angiogenesis. *Proc Natl Acad Sci USA*. 1999;96:2645-50. (IHC-PS, Bovine Reactivity)
4. Bouwmeester P, Kuijjer R, Terwindt-Rouwenhorst E, van der Linden T, Bulstra S. Histological and biochemical evaluation of perichondrial transplants in human articular cartilage defects. *J Orthop Res*. 1999;17:843-9. (IHC-PS, Human Reactivity)
5. Saika S, Miyamoto T, Tanaka T, Ohnishi Y, Ooshima A, Kimura W. Histopathology of anterior lens capsules in vitrectomized eyes with tamponade by silicone oil. *J Cataract Refract Surg*. 2002;28:376-8. (IHC-PS, Human Reactivity)
6. Gaiser KG, Maddox BK, Bann JG, Boswell BA, Keene DR, Garofalo S, et al. Y-position collagen II mutation disrupts cartilage formation and skeletal development in a transgenic mouse model of spondyloepiphyseal dysplasia. *J Bone Miner Res*. 2002;17:39-47. (IHC-PS, EM, Mouse Reactivity)
7. Miao D, He B, Lanske B, Bai X, Tong X, Hendy GN, et al. Skeletal abnormalities in Pth-null mice are influenced by dietary calcium. *Endocrinology*. 2004;145:2046-53. (IHC-PS, Mouse Reactivity)
8. Dorotka R, Bindreiter U, Macfelda K, Windberger U, Nehrer S. Marrow stimulation and chondrocyte transplantation using a collagen matrix for cartilage repair. *Osteoarthritis Cartilage*. 2005;13:655-64. (IHC-PS, Sheep Reactivity)
9. Nagura I, Fujioka H, Kokubu T, Makino T, Sumi Y, Kurosaka M. Repair of osteochondral defects with a new porous synthetic polymer scaffold. *J Bone Joint Surg Br*. 2007;89:258-64. (IHC-PS, Rabbit Reactivity)
10. Ponsioen TL, van Luyn MJ, van der Worp RJ, van Meurs JC, Hooymans JM, Los LI. Collagen distribution in the human vitreoretinal interface. *Invest Ophthalmol Vis Sci*. 2008;49:4089-95. (IHC-PS, Human Reactivity)
11. De Philippo RE, Bishop CE, Filho LF, Yoo JJ, Atala A. Tissue engineering a complete vaginal replacement from a small biopsy of autologous tissue. *Transplantation*. 2008;86:208-14. (IHC-PS, Rabbit Reactivity)
12. Choi JS, Williams JK, Greven M, Walter KA, Laber PW, Khang G, et al. Bioengineering endothelialized neo-corneas using donor-derived corneal endothelial cells and decellularized corneal stroma. *Biomaterials*. 2010;31:6738-45. (IHC-PS, Human Reactivity)
13. Aissa JT, Hultcrantz M. Healing of laser-induced tympanic membrane perforations in rats: no contribution of granulocyte colony-stimulating factor or Gelfoam®. *Int J Pediatr Otorhinolaryngol*. 2012;76:963-8. (IHC-PS, Rat Reactivity)
14. Yamashita A, Morioka M, Yahara Y, Okada M, Kobayashi T, Kuriyama S, et al. Generation of scaffoldless hyaline cartilaginous tissue from human iPSCs. *Stem Cell Reports*. 2015;4:404-18. (IHC-PS, Human Reactivity)
15. Nakao K, Osawa K, Yasoda A, Yamanaka S, Fujii T, Kondo E, et al. The Local CNP/GC-B system in growth plate is responsible for physiological endochondral bone growth. *Sci Rep*. 2015;5:10554. (IHC-PS, Mouse Reactivity)
16. Miyaishi O, Sakata K, Matsuyama M, Saga S. Distribution of the collagen binding heat-shock protein in chicken tissues. *J Histochem Cytochem*. 1992;40:1021-9. (IHC-FS, Chicken Reactivity)
17. Mackie EJ, Ramsey S. Expression of tenascin in joint-associated tissues during development and postnatal growth. *J Anat*. 1996;188:157-65. (IHC-FS, Rat, Reactivity)
18. Hageman GS, Mullins RF, Russell SR, Johnson LV, Anderson DH. Vitronectin is a constituent of ocular drusen and the vitronectin gene is expressed in human retinal pigmented epithelial cells. *FASEB J*. 1999;13:477-84. (IHC-FS, Human Reactivity)
19. Fraser SA, Crawford A, Frazer A, Dickinson S, Hollander AP, Brook IM, et al. Localization of type VI collagen in tissue-engineered cartilage on polymer scaffolds. *Tissue Eng*. 2006;12:569-77. (IHC-FS, Bovine & Human Reactivity)
20. Kafienah W, Mistry S, Dickinson SC, Sims TJ, Learmonth I, Hollander AP. Three-dimensional cartilage tissue engineering using adult stem cells from osteoarthritis patients. *Arthritis Rheum*. 2007;56:177-87. (IHC-FS, ICC, Human Reactivity)
21. Chun SY, Lim GJ, Kwon TG, Kwak EK, Kim BW, Atala A, et al. Identification and characterization of bioactive factors in bladder submucosa matrix. *Biomaterials*. 2007;28:4251-6. (IHC-FS, Porcine Reactivity)
22. Jones EA, Crawford A, English A, Henshaw K, Mundy J, Corscadden D, et al. Synovial fluid mesenchymal stem cells in health and early osteoarthritis: detection and functional evaluation at the single-cell level. *Arthritis Rheum*. 2008;58:1731-40. (IHC-FS, Human Reactivity)
23. Jansen ID, Hollander AP, Buttle DJ, Everts V. Type II and VI collagen in nasal and articular cartilage and the effect of IL-1 α on the distribution of these collagens. *J Mol Hist*. 2010;41:9-17. (IHC-FS, Bovine Reactivity)
24. Goji J, Sano K, Nakamura H, Ito H. Chondrocytic differentiation of peripheral neuroectodermal tumor cell line in nude mouse xenograft. *Cancer Res*. 1992;52:4214-20. (ICC, Human Reactivity)
25. Loty S, Forest N, Boulekbache H, Sautier J. Cytochalasin D induces changes in cell shape and promotes in vitro chondrogenesis: a morphological study. *Biol Cell*. 1995;83:149-61. (ICC, Rat Reactivity)
26. Chen P, Vukicevic S, Sampath TK, Luyten FP. Osteogenic protein-1 promotes growth and maturation of chick sternal chondrocytes in serum-free cultures. *J Cell Sci*. 1995;108:105-114. (ICC, Chicken Reactivity)
27. Oyajobi BO, Frazer A, Hollander AP, Graveley RM, Xu C, Houghton A, et al. Expression of type X collagen and matrix calcification in three-dimensional cultures of immortalized temperature-sensitive chondrocytes derived from adult human articular cartilage. *J Bone Miner Res*. 1998;13:432-42. (ICC, Human Reactivity)
28. Thissen H, Chang K, Tebb TA, Tsai W, Glattauver V, Ramshaw JA, et al. Synthetic biodegradable microparticles for articular cartilage tissue engineering. *J Biomed Mater Res A*. 2006;77:590-8. (ICC, Sheep Reactivity)
29. Ponsioen TL, van Luyn MJ, van der Worp RJ, Pas HH, Hooymans JM, Los LI. Human retinal Müller cells synthesize collagens of the vitreous and vitreoretinal interface in vitro. *Mol Vis*. 2008;14:652-60. (ICC, Human Reactivity)
30. Sharawy M, Ali AM, Choi W. Experimental induction of anterior disk displacement of the rabbit craniomandibular joint: an immuno-electron microscopic study of collagen and proteoglycan occurrence in the condylar cartilage. *J Oral Pathol Med*. 2003;32:176-84. (EM, Rabbit Reactivity)
31. Ponsioen TL, van der Worp RJ, van Luyn MJ, Hooymans JM, Los LI. Packages of vitreous collagen (type II) in the human retina: an indication of postnatal collagen turnover?. *Exp Eye Res*. 2005;80:643-50. (EM, Human Reactivity)
32. Jasonowski M, Krzyminski K, Chrisler W, Markille LM, Morris J, Gutowska A. Thermally-reversible gel for 3-D cell culture of chondrocytes. *J Mater Sci Mater Med*. 2004;15:575-82. (WB, IP, Rabbit Reactivity)
33. Whiteman M, Spencer JP, Zhu YZ, Armstrong JS, Schantz J. Peroxynitrite-modified collagen-II induces p38/ERK and NF- κ B-dependent synthesis of prostaglandin E₂ and nitric oxide in chondrogenically differentiated mesenchymal progenitor cells. *Osteoarthritis Cartilage*. 2006;14:460-70. (WB, Human Reactivity)
34. van der Windt AE, Haak E, Das RH, Kops N, Welting TJ, Caron MM, et al. Physiological tonicity improves human chondrogenic marker expression through nuclear factor of activated T-cells 5 in vitro. *Arthritis Res Ther*. 2010;12:R100. (WB, Human Reactivity)

Alexa Fluor® 488, 647, 700 and Pacific Blue™ are provided under an agreement between Molecular Probes, Inc. (a wholly owned subsidiary of Invitrogen Corporation), and Southern Biotechnology Associates, Inc., and the manufacture, use, sale or import of this product may be subject to one or more U.S. patents, pending applications, and corresponding non-U.S. equivalents, owned by Molecular Probes, Inc. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes. Commercial Purposes means any activity by a party for consideration and may include, but is not limited to: (1) use of the product or its components in manufacturing; (2) use of the product or its components to provide a service, information, or data; (3) use of the product or its components for therapeutic, diagnostic or prophylactic purposes; or (4) resale of the product or its components, whether or not such product or its components are resold for use in research. For information on purchasing a license to this product for any other use, contact Molecular Probes, Inc., Business Development, 29851 Willow Creek Road, Eugene, OR 97402, USA, Tel: (541) 465-8300. Fax: (541) 335-0504.