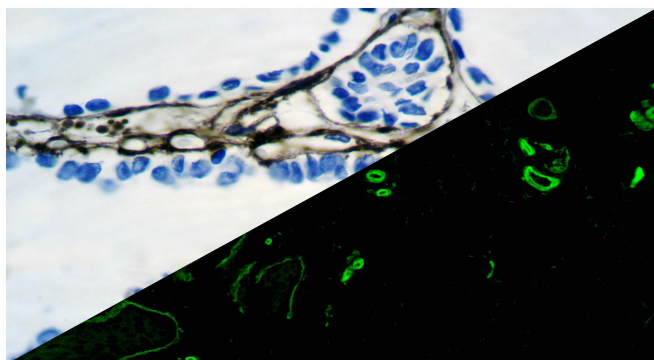


Collagen Type IV

Clone: CIV22
Mouse Monoclonal



Inset: IHC and IF of Collagen Type IV on a FFPE Skin Tissue

Intended Use

For In Vitro Diagnostic Use.

This antibody is intended for use in Immunohistochemical and Immunofluorescence applications on formalin-fixed paraffin-embedded tissues (FFPE), frozen tissue sections and cell preparations. Interpretation of results should be performed by a qualified medical professional.

Immunogen

Purified human glomeruli.

Summary and Explanation

Collagen is the main protein of connective tissue in animals and the most abundant protein in mammals, making up about 25% of the total protein content. Collagen IV is a major constituent of the basement membranes, along with laminins and enactins. It is composed of the alpha 1 IV chain and alpha 2 IV chain in a 2:1 ratio. It can form insoluble fibers with high tensile strength.

Normal tissue stains with this antibody in a manner consistent with the sites of mesenchymal elements and epithelial basal laminae. Antibody to collagen IV is useful in detecting the loss of parts of the basement membrane in carcinomas. Collagen IV can also be useful in the classification of soft tissue tumors; Schwannomas, Leiomyomas, and their well-differentiated malignant counterparts usually immunoreact to this antibody. The vascular nature of neoplasms, Hemangiopericytoma, Angiosarcoma and Epithelioid Hemangioendothelioma can be observed with this antibody.

| Antibody Type | Mouse Monoclonal | Clone | CIV22 |
|---------------|---|--------------------|---------------------------|
| Isotype | IgG1/K | Reactivity | Paraffin, Frozen |
| Localization | Cytoplasmic | Species Reactivity | Human, Rat, Canine, Horse |
| Control | Muscle, Lung | | |
| Application | Breast Cancer, Gall Bladder & Pancreatic Cancer | | |

Presentation

Anti-Collagen Type IV is a mouse monoclonal antibody derived from cell culture supernatant that is concentrated, dialyzed, filter sterilized and diluted in buffer pH 7.5, containing BSA and sodium azide as a preservative.

Collagen Type IV antibody requires the use of ImmunoDNA Digestor (Cat.#'s BSB 0108, BSB 0109, BSB 0110, BSB 0111, BSB 0112) or similar Proteinase K based product as antigen retriever.

| Catalog No. | Presentation | Dilution | Volume |
|-------------|--------------|--------------|---------|
| BSB 5351 | Predilute | Ready-to-Use | 3.0 mL |
| BSB 5352 | Predilute | Ready-to-Use | 7.0 mL |
| BSB 5353 | Predilute | Ready-to-Use | 15.0 mL |
| BSB 5354 | Concentrate | 1:50-1:200 | 0.1 mL |
| BSB 5355 | Concentrate | 1:50-1:200 | 0.5 mL |
| BSB 5356 | Concentrate | 1:50-1:200 | 1.0 mL |

Control Slides Available

| Catalog No. | Quantity |
|-------------|----------|
| BSB-9123-CS | 5 slides |

Storage Store at 2-8°C (Control Slides: Store at 20-25°C)

Precautions

1. For professional users only. Results should be interpreted by a qualified medical professional.
2. This product contains <0.1% sodium azide (NaN₃) as a preservative. Ensure proper handling procedures are used with this reagent.
3. Always wear personal protective equipment such as a laboratory coat, goggles, and gloves when handling reagents.
4. Dispose of unused solution with copious amounts of water.
5. Do not ingest reagent. If reagent is ingested, seek medical advice immediately.
6. Avoid contact with eyes. If contact occurs, flush with large quantities of water.
7. Follow safety precautions of the heating device used for epitope retrieval (TintoRetriever Pressure Cooker or similar).
8. For additional safety information refer to the Safety Data Sheet for this product.
9. For complete recommendations for handling biological specimens, please refer to the CDC document, "Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories" (see References in this document).

Stability

This product is stable up to the expiration date on the product label. Do not use after expiration date listed on the package label. Temperature fluctuations should be avoided. Store appropriately when not in use and avoid prolonged exposure to room temperature conditions.

Specimen Preparation

Paraffin sections: The antibody can be used on formalin-fixed paraffin-embedded (FFPE) tissue sections. Ensure tissue undergoes appropriate fixation for best results. Pre-treatment of tissues with heat-induced epitope retrieval (HIER) is recommended using Bio SB ImmunoDNA Retriever with Citrate (BSB 0020-BSB 0023), ImmunoDNA Retriever with EDTA (BSB 0030-BSB 0033), and/or ImmunoDNA Digestor (BSB 0108-0112). See reverse side for complete protocol. Tissue should remain hydrated via use of Bio SB Immuno/DNA Washer solutions (BSB 0029 & BSB 0042).

Frozen sections and cell preparations: The antibody can be used on acetone-fixed frozen sections and acetone-fixed cell preparations.

Preparation for Frozen Tissues Procedure

1. Embed the specimen in OCT inside the cryostat.
2. Cut sections at 5 microns.
3. Place the section on a positively charged glass slide.
4. Air dry for 30-60 minutes.
5. Fix in acetone 100% for 2-10 minutes.
6. Air dry for another 10 minutes.

Preparation for FFPE Tissues Procedure

1. Cut and mount 3-5 micron formalin-fixed paraffin-embedded tissues on positively charged slides such as Bio SB Hydrophilic Plus Slides (BSB 7028).
2. Air dry for 2 hours at 58° C.
3. Deparaffinize, dehydrate, and rehydrate tissues.

4. One of the Epitope Retrieval Methods can be used:

4a. Pre-warm the ImmunoDNA Digestor solution to room temperature. Incubate tissue sections with the ImmunoDNA Digestor solution for 10 minutes at room temperature or for 5 minutes at 37 °C.

4b. Place tissues/slides in a staining dish or coplin jar containing the ImmunoDNA Retriever with Citrate or EDTA and place on the trivet in the pressure cooker. Add 1-2 inches of distilled water to the pressure cooker and turn heat to high. Incubate for 10 minutes. Open and immediately transfer slides to room temperature. Let it cool down for 10 min. **Incubate in enzymatic pretreatment with ImmunoDNA Digestor (BSB 0108-0112) or similar Proteinase K enzyme for 1-2 minutes.**

IHC/IF protocol.

For manual IF/IHC, perform antibody incubation at ambient temperature. For automated IF/IHC methods, perform antibody incubation according to instrument manufacturer's instructions. Wash slides with ImmunoDNA washer or DI water. Continue IF/IHC protocol. Wash slides between each step with ImmunoDNA washer solution.

Abbreviated Immunohistochemical Protocol

| Step | ImmunoDetector AP/HRP | PolyDetector AP/HRP | PolyDetector Plus HRP |
|-----------------------------------|-----------------------|---------------------|-----------------------|
| ImmunoDNA Digestor (Proteinase K) | Varies | Varies | Varies |
| Peroxidase/AP Blocker | 5 min. | 5 min. | 5 min. |
| Primary Antibody | 30-60 min. | 30-60 min. | 30-60 min. |
| 1st Step Detection | 10 min. | 30-45 min. | 15 min. |
| 2nd Step Detection | 10 min. | Not Applicable | 15 min. |
| Substrate- Chromogen | 5-10 min. | 5-10 min. | 5-10 min. |
| Counterstain / Coverslip | Varies | Varies | Varies |

Abbreviated AmpliDetector Plus FITC IF Protocol

| Step | Incubation Time |
|---|-----------------|
| Rinse slides in wash buffer | |
| ImmunoDNA Digestor (Proteinase K) | varies |
| Peroxidase Blocker | 5 min. |
| Apply Antibody | 5 min. |
| Apply Mouse/Rabbit Link | 5 min. |
| Apply HRP Label | 5 min. |
| *Keep FITC reagents and slides in the dark* | |
| Apply AmpliDetector FITC solution | 5 min. |
| Coverslip with IF mounting medium | |

Mounting Protocol IHC:

For detailed instructions using biodegradable permanent mounting media such as XyGreen PermaMounter (BSB 0169-0174) or organic solvent-based resin such as PermaMounter (BSB 0094-0097), refer to PI0174 or PI0097.

Mounting Protocol IF:

1. Bring FluoroMounter or FluoroMounter with DAPI to room temperature.
2. Rinse slides with distilled or deionized water.
3. Remove excess water from slides before laying them flat in the dark.
4. Turn the media bottle upside down before opening the dropper bottle.
5. Apply 1-3 drops of FluoroMounter to each slide making sure the specimen is covered.
6. Incubate 3-5 minutes at room temperature in the dark.
7. Coverslip.
8. Observe under a fluorescent microscope using the appropriate filters.
9. The slides are recommended to be stored at 2-8 °C in the dark.









Product Limitations

Due to inherent variability present in immunohistochemical procedures (including fixation time of tissues, dilution factor of antibody, retrieval method utilized, and incubation time), optimal performance should be established through the use of positive and negative controls. Results should be interpreted by a qualified medical professional.

References

1. Gould VE, et al. Pathol Annual. 1976;11:353-386
2. McArdle JP, et al. Int J Cancer. 1984;34:633-638
3. Sakr WA, et al. Hum Path. 1987;18:1043-1050
4. Barsky SH, et al. Am J Surg Pathol. 1983;7:667-677
5. U.S. Department of Health and Human Services: Centers for Disease Control and Prevention. Guidelines for Safe Work Practices in Human and Animal Medical Diagnostic Laboratories. Supplement / Vol. 61, January 6, 2012. <https://www.cdc.gov/mmwr/pdf/other/su6101.pdf>

Symbol Key / Légende des symboles/Erläuterung der Symbole

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|---|--|---|--|
|  QAdvis EAR AB Ideon Science Park Scheelevägen 17 SE-223 70 Lund, Sweden |  Storage Temperature Limites de température Zulässiger Temperaturbereich |  Manufacturer Fabricant Hersteller |  Catalog Number Référence du catalogue Bestellnummer |
|  In Vitro Diagnostic Medical Device Dispositif médical de diagnostic in vitro In-Vitro-Diagnostikum |  Read Instructions for Use Consulter les instructions d'utilisation Gebrauchsanweisung beachten |  Expiration Date Utiliser jusque Verwendbar bis |  Lot Number Code du lot Chargenbezeichnung |