

Claudin-4

Prediluted Mouse Monoclonal Antibody
902-3121-031225

BIOCARE
M E D I C A L

Available Product Formats

Format	Catalog Number	Description	Dilution	Diluent
NeoPATH PRO	NPAR 3121 T40	40 tests	Ready-to-use	N/A
Q-Series	ALR 3121 G7	7.0 mL	Ready-to-use	N/A

Intended Use:

For Research Use Only. Not for use in diagnostic procedures.
This mouse antibody is intended to detect Claudin-4.

Background Information:

Claudin-4 (Clostridium perfringens enterotoxin receptor) is a tight junction protein encoded by the gene CLDN4. It is expressed in most epithelial cells but is absent in mesothelial cells.⁵

Known Applications:

Immunohistochemistry (Formalin-fixed paraffin-embedded tissues). Other applications have not been tested.

Supplied As:

Buffered saline solution, pH 5.9-6.0, contains a protein carrier and less than 0.1% sodium azide preservative. See Safety Data Sheet for additional details.

Materials and Methods:

Reagents Provided:

Host Source: Mouse monoclonal

Species Reactivity: Human; other species not tested.

Clone: 3E2C1

Isotype: IgG1

Protein Concentration: Contact Biocare's Technical Support for specific Ig concentration.

Specificity: Synthetic peptide corresponding to a 22 amino acid sequence derived from the C-terminal region of human Claudin-4.

Reconstitution, Mixing, Dilution, and Titration:

Prediluted antibody reagent is optimally diluted for use with the above listed staining systems. Further dilution may result in loss of antigen staining. The user must validate any such change. Differences in tissue processing and technical procedures in the user's laboratory may produce significant variability in results necessitating regular performance of in-house controls.

Storage and Stability:

Store at 2°C to 8°C. The product is stable to the expiration date printed on the vial label when stored under these conditions. Do not use after expiration date. Storage under any condition other than those specified must be verified. Diluted reagents should be used promptly; store any remaining reagent at 2°C to 8°C. The stability of user diluted reagent has not been established by Biocare.

Staining Protocol Recommendations (NeoPATH PRO):

NPAR3121 is compatible for use with the NeoPATH PRO. Below are programming and protocol recommendations to assist the user when staining using Biocare's NeoPATH PRO Automated Staining Platform for research applications. The user is responsible for further optimizations of the protocol.

Antibody Protocol: Claudin-4, 15 min at RT

Template: HRP_HIGH_110C_15MINAB_STD

Dewax: Dewax STD°C (20 min at 75°C)

Antigen Retrieval (HIER Option): HIGH_110C_30MIN °C

Enzyme: N/A

Block Option: N/A

Detection: HRP_15AB_STD (Amplifier; 10 min at RT; Polymer; 25 min at RT)

Chromogen: 7 min DAB + 2 min DAB Enhancer at RT

Hematoxylin: 7 min at RT

Staining Protocol Recommendations (Q Series):

ALR3121 is compatible with the Leica IHC staining platforms for research applications. Refer to the User Manual for specific instructions for use in optimizing protocols.

Limitations:

This product is provided for Research Use Only (RUO) and is not for use in diagnostic procedures. Suitability for specific applications may vary and it is the responsibility of the end user to determine the appropriate application for its use.

Precautions:

1. This antibody contains less than 0.1% sodium azide. Concentrations less than 0.1% are not reportable hazardous materials according to U.S. 29 CFR 1910.1200, OSHA Hazard communication and EC Directive 91/155/EC. Sodium azide (NaN₃) used as a preservative is toxic if ingested. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. (Center for Disease Control, 1976, National Institute of Occupational Safety and Health, 1976)¹
2. Handle materials of human or animal origin as potentially biohazardous and dispose of such materials with proper precautions. In the event of exposure, follow the health directives of the responsible authorities where used.^{2,3}
3. Specimens, before and after fixation, and all materials exposed to them should be handled as if capable of transmitting infection and disposed of with proper precautions. Never pipette reagents by mouth and avoid contacting the skin and mucous membranes with reagents and specimens. If reagents or specimens come into contact with sensitive areas, wash with copious amounts of water.⁴
4. Microbial contamination of reagents may result in an increase in nonspecific staining.
5. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change.
6. Do not use reagent after the expiration date printed on the vial.
7. To prevent evaporation and ensure maximum test capacity, promptly cap and remove reagents from automated instruments after each run. Leaving reagents exposed can reduce their effectiveness and the number of tests they can provide. Always store reagents as directed to maintain their integrity.
8. Follow local disposal regulations for your location along with recommendations in the Safety Data Sheet to determine the safe disposal of this product.
9. The SDS is available upon request and is located at <http://biocare.net>.

Technical Support:

Contact Biocare's Technical Support at 1-800-542-2002 for questions regarding this product.

References:

1. Center for Disease Control Manual. Guide: Safety Management, NO. CDC-22, Atlanta, GA. April 30, 1976 "Decontamination of Laboratory Sink Drains to Remove Azide Salts."
2. Occupational Safety and Health Standards: Occupational exposure to hazardous chemicals in laboratories. (29 CFR Part 1910.1450). Fed. Register.
3. Directive 2000/54/EC of the European Parliament and Council of 18 September 2000 on the protection of workers from risks related to exposure to biological agents at work.
4. Clinical and Laboratory Standards Institute (CLSI). Protection of Laboratory Workers from Occupationally Acquired Infections; Approved Guideline-Fourth Edition CLSI document M29-A4 Wayne, PA 2014.



60 Berry Drive
Pacheco, CA 94553
USA

TP v4 (12/27/2024)

Tel: 800-799-9499 | www.biocare.net | Fax: 925-603-8080

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References Cont'd:

5. Jo VY, Cibas ES, Pinkus GS. Claudin-4 immunohistochemistry is highly effective in distinguishing adenocarcinoma from malignant mesothelioma in effusion cytology. Cancer Cytopathol. 2014 Apr;122(4):299-306.

Q Series antibodies are developed solely by Biocare Medical LLC and do not imply approval or endorsement of Biocare antibodies by Leica Biosystems. Biocare and Leica Biosystems are not affiliated, associated, or related in any way.



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