

CD4 (SP35)

For Research Use Only. Not For Use in Diagnostic Procedures. (RUO)

Instructions for use

Presentation

Anti-CD4 is a rabbit monoclonal antibody from tissue culture supernatant diluted in phosphate buffered saline, pH 7.4, with protein base, and preserved with sodium azide.

Applications

CD4 is a 55kD glycoprotein expressed on the surface of T helper cells, regulatory T cells, monocytes, macrophages, and dendritic cells. It was originally known as leu-3 and T4 before being renamed in 1984. Anti-CD4 is used in the immunophenotyping of reactive lymphocytes and lymphoproliferative disorders. The majority of peripheral T cell lymphomas are derived from the helper T cell subset so that most post-thymic T cell neoplasms are CD4+ CD8-. As with other T cell antigens, CD4 may be aberrantly deleted in neoplastic T cells so that the evaluation of such tumors requires the application of a panel of markers in order to identify tumors with such anomalous antigenic expression.

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|----------------------|---------------------------------|
| Reactivity | Paraffin, Frozen |
| Control | Tonsil, lymph node |
| Visualization | Cytoplasmic, membranous |
| Stability | Up to 36 months; store at 2-8°C |
| Isotype | IgG |

| Description | Catalog No. | Dilution/Comments |
|-------------------------|--------------------|--------------------------|
| 0.1 ml, concentrate | 104R-14 | 1:25 - 1:100* |
| 0.5 ml, concentrate | 104R-15 | 1:25 - 1:100* |
| 1 ml, concentrate | 104R-16 | 1:25 - 1:100* |
| 1 ml, prediluted | 104R-17 | Ready to use |
| 7 ml, prediluted | 104R-18 | Ready to use |
| Positive control slides | 104S | 5 slides per pack |

* The dilutions set forth above are estimates; actual results may differ because of variability in methods and protocols. Validation of antibody performance protocol is the responsibility of the end user.

Preparation and Pretreatment

1. Cut 3-4 µm section of formalin-fixed paraffin-embedded tissue and place on positively charged slides; dry overnight at 58°C.
2. Deparaffinize, rehydrate, and epitope retrieve; the preferred method is the use of Heat Induced Epitope Retrieval (HIER) techniques using Cell Marque's Trilogy™ in conjunction with a pressure cooker. The preferred method allows for simultaneous deparaffinization, rehydration, and epitope retrieval. Upon completion, rinse with 5 changes of distilled or deionized water.
3. If using HRP detection system, place slides in peroxide block for 10 minutes; rinse. If using AP detection system, omit this step.

Recommended Protocol for Staining at Room Temperature Using CytoScan™ BSA Detection System

1. Apply the antibody and incubate for 30 - 60 minutes; rinse.
2. Apply the link and incubate for 10 minutes; rinse.
3. Apply the label and incubate for 10 minutes; rinse.
4. Apply ample amount of chromogen and incubate for 1 to 10 minutes; rinse.
5. Dehydrate and coverslip.

Recommended Protocol for Staining at Room Temperature Using PolyScan™ Polymer Detection System

1. Apply the antibody and incubate for 30 - 60 minutes; rinse.
2. Apply the PolyScan™ Polymer Rabbit / Mouse Detection System for 30 min; rinse.
3. Apply ample amount of chromogen and incubate for 1 to 10 minutes; rinse.
4. Dehydrate and coverslip.

References

1. Leong AS-Y, Cooper K, Leong FJW-M. Manual of diagnostic antibodies for immunohistochemistry, 2nd edition 2003; Greenwich Medical Media Ltd.
2. Akiyama T, Okino T, Konishi H, Wani Y, Notohara K, Tsukayama C, Tsunoda T, Tasaka T, Masaki Y, Sugihara T, Sadahira Y. CD8+, CD56+ (natural killer-like) T-cell lymphoma involving the small intestine with no evidence of enteropathy: clinicopathology and molecular study of five Japanese patients. *Pathol Int.* 2008 Oct;58(10):626-34.
3. Lehe C, Ghebeh H, Al-Sulaiman A, Al Qudaihi G, Al-Hussein K, Almohareb F, Chaudhri N, Alsharif F, Al-Zahrani H, Tbakhi A, Aljurf M, Dermime S. The Wilms' tumor antigen is a novel target for human CD4+ regulatory T cells: implications for immunotherapy. *Cancer Res.* 2008 Aug 1;68(15):6350-9.
4. Garcia-Herrera A, Colomo L, Camós M, Carreras J, Balague O, Martinez A, López-Guillermo A, Estrach T, Campo E. Primary cutaneous small/medium CD4+ T-cell lymphomas: a heterogeneous group of tumors with different clinicopathologic features and outcome. *J Clin Oncol.* 2008 Jul 10;26(20):3364-71. Epub 2008 Jun 9.

Material Safety Data Sheet available upon request.