Technical Data Sheet

Purified Rat Anti-Mouse CD11a

Product Information

Material Number: 550528
Alternate Name: Integrin αL Chain, LFA-1α
Size: 1.0 ml
Concentration: 31.25 µg/ml
Clone: M17/4
Immunogen: C57BL/6 Mouse Splenic Secondary Cytotoxic T Lymphocytes
Isotype: Rat (WF) IgG2a, κ
Reactivity: QC Testing: Mouse
Storage Buffer: Aqueous buffered solution containing BSA, goat serum, and ≤0.09% sodium azide.

Description

The M17/4 antibody reacts with the 180 kDa αL chain of LFA-1 (CD11a/CD18, αLβ2 integrin), a heterodimeric surface glycoprotein expressed on almost all leukocytes. CD8α+CD8β- intestinal intraepithelial T lymphocytes, which are believed to be thymus independent, do not express CD11a. LFA-1 mediates a variety of heterotypic and homotypic intercellular adhesions through interaction with ICAM-1 (CD54) and ICAM-2 (CD102), including participation in the immunological synapses between CD8+ T lymphocytes and antigen-presenting cells. mAb M17/4 blocks a variety of LFA-1-mediated cells interactions in vitro, and costimulatory effects have also been described. In vivo treatment with M17/4 mAb reduces the severity of graft-versus-host reactions, prolongs allograft survival, inhibits the development of autoimmunity, and blocks substance P-induced leukocyte migration. The M17/4 and 2D7 (Cat. No. 553120) antibodies are reported to recognize different epitopes of the CD11a molecule.

Immunohistochemical staining of CD11a positive cells.

Frozen sections of mouse spleen were reacted with the anti-CD11a antibody. Leukocytes can be identified by the brown labeling of their cell membranes. Amplification 20X.

Preparation and Storage

Store undiluted at 4°C.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Flow cytometry Routinely Tested
Immunohistochemistry-frozen Tested During Development
Immunohistochemistry-paraffin Not Recommended

Recommended Assay Procedure:

Immunohistochemistry: The M17/4 antibody specific for mouse CD11a is recommended to test for immunohistochemical staining of acetone-fixed frozen sections. Tissues tested were mouse spleen and thymus. The antibody stains all leukocytes. The isotype control recommended for use with this antibody is purified rat IgG2a (Cat. No. 559073). For optimal indirect immunohistochemical staining, the M17/4 antibody should be titrated (1:10 to 1:50 dilution) and visualized via a three-step staining procedure in combination with polyclonal, biotin conjugated anti-rat Igs (multiple adsorbed) (Cat. No. 559286) as the secondary antibody and Streptavidin-HRP (Cat. No. 550946) together with the DAB detection system (Cat. No. 550880). A detailed protocol of the immunohistochemical procedure can be found on our website www.bdbiosciences.com/support/resources. The clone M17/4 is not recommended for formalin-fixed paraffin embedded sections.

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Suggested Companion Products

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<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
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<tr>
<td>559148</td>
<td>Antibody Diluent for IHC</td>
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<tr>
<td>559073</td>
<td>Purified Rat IgG2a x Isotype Control</td>
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<td>R35-95</td>
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<td>Biotin Goat Anti-Rat Ig</td>
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<tr>
<td>550946</td>
<td>Streptavidin HRP</td>
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<td>550880</td>
<td>DAB Substrate Kit</td>
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<tr>
<td>551013</td>
<td>Anti-Rat Ig HRP Detection Kit</td>
<td>200 tests</td>
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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. An isotype control should be used at the same concentration as the antibody of interest.
5. This antibody has been developed for the immunohistochemistry application. However, a routine immunohistochemistry test is not performed on every lot. Researchers are encouraged to titrate the reagent for optimal performance.

References


Zhao Y, Iwata M. Cross-linking of the TCR-CD3 complex with CD4, CD8 or LFA-1 induces an anti-apoptotic signal in thymocytes: the signal is canceled by FK506. Int Immunol. 1996; 7(9):1387-1396. (Clone-specific: (Co)-stimulation)