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# Product datasheet for AM39012RP-N

## CD11a (ITGAL) Mouse Monoclonal Antibody [Clone ID: DF1524]

### Product data:

| | |
|---|---|
| **Product Type:** | Primary Antibodies |
| **Clone Name:** | DF1524 |
| **Applications:** | FC, IF |
| **Recommended Dilution:** | - Flow cytometry: for analysis of blood and bone marrow samples.<br>The reagent is effectively formulated for direct immunofluorescent staining (see "Protocols" below).<br>- Immunofluorescence: using cytospots or frozen tissue sections. |
| **Reactivity:** | Human |
| **Host:** | Mouse |
| **Isotype:** | IgG2b |
| **Clonality:** | Monoclonal |
| **Specificity:** | This antibody specifically detects CD11a positive leucocytes. CD11a antigens are expressed on lymphocytes, granulocytes, monocytes and macrophages with increased levels on memory T cells (1,2).<br>Clone DF1524 was clustered at the Leucovyte Typing Workshop IV (5). |
| **Formulation:** | 0.01 M sodium phosphate, 0.15 M NaCl, pH 7.3, 0.2% BSA, 0.09% sodium azide<br>Label: PE<br>State: Liquid purified Ig fraction<br>Label: (R-Phycoerythrin) |
| **Purification:** | Affinity chromatography |
| **Conjugation:** | PE |
| **Storage:** | Store the antibody undiluted at 2-8°C.<br>This product is photosensitive and should be protected from light. |
| **Stability:** | Shelf life: one year from despatch. |
| **Gene Name:** | integrin subunit alpha L |
| **Database Link:** | Entrez Gene 3683 Human<br>P20701 |

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**Background:** CD11a/CD18 was first described as an accessory molecule in cytotoxic lymphocyte killing. CD11a (Integrin alpha-L) combines with CD18 (Integrin beta-2) to form the integrin LFA-1. LFA-1 mediates adhesion of lymphoid cells to the vascular endothelium in association with its ligands. The avidity of CD11a to its ligands is transiently upregulated on T cells upon activation (3).
CD11a has also been shown to bind bacterial lipopolysaccarides (4).

**Synonyms:** Integrin alpha-L, LFA1, LFA-1

**Note:** 1. Conjugates with brighter fluorochromes, like PE and APC, will have a greater separation than those with dyes like FITC. When populations overlap, the percentage of positive cells using a selected marker can be affected by the choice of fluorescent label.
2. Use of monoclonal antibodies in patient treatment can interfere with antigen target recognition by this reagent. This should be taken into account when samples are analyzed from patients treated in this fashion.
3. Reagent data performance is based on EDTA-treated blood. Reagent performance can be affected by the use of other anticoagulants.

Protocol: Flow cytometry method for use with labeled (FITC, R-PE, APC, PerCP or PerCP-Cy5.5) monoclonal antibodies
1. Add 100 µl of EDTA-treated blood (i.e. approx. 10e6 leukocytes) to a 5 ml reagent tube. The content of one tube is sufficient to perform one test.
2. Add to each tube 10 µl of labeled monoclonal antibody. (Appropriate mouse Ig isotype control samples should always be included in any labeling study).
Vortex the tube to ensure thorough mixing of antibody and cells.
3. Incubate the tube for 15 minutes at room temperature in the dark.
4. Add 100 µl of a lyse reagent.
5. Incubate for 10 minutes at room temperature in the dark.
6. Add 2 ml of demineralized water and incubate for 10 minutes in the dark.
7. Centrifuge the labeled cell suspension for 2 minutes at 1000 x g.
8. Remove the supernatant and resuspend the cells in 200 µl of PBS.
9. Analyze by flow cytometry within four hours (alternatively, the cells may be fixed by 0.05% of formaline in buffered saline for analysis the next day. Some antigens are readily destroyed upon fixation and this should be taken into account when using this alternative).

Flow cytometry method for use with dual and triple combinations
1. Add 100 µl of EDTA-treated blood (i.e. approx. 10e6 leukocytes) to a 5 ml reagent tube. The content of one tube is sufficient to perform one test.
**For combinations** with anti-kappa and/or anti-lambda Ig see **Application note** below.
2. Add to each tube 20 µl of labeled monoclonal antibody combination.
(Appropriate mouse Ig isotype control samples should always be included in any labeling study).
3. Vortex the tube to ensure thorough mixing of antibody and cells.
4. Incubate the tube for 15 minutes at room temperature in the dark.
5. Add 100 µl of a lyse reagent and mix immediately.

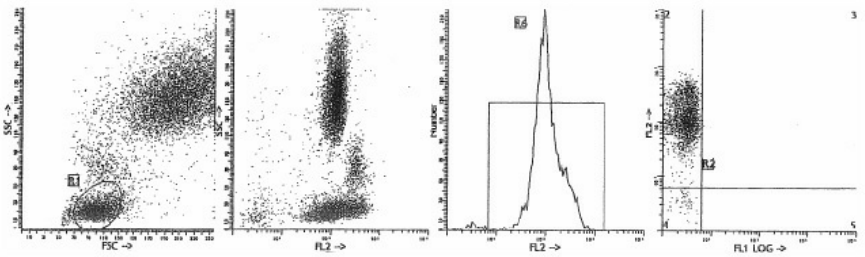
6. Incubate for 10 minutes at room temperature in the dark.
7. Add 2 ml of demineralized water and incubate for 10 minutes in the dark.
8. Centrifuge the labeled cell suspension for 2 minutes at 1000 x g.
9. Remove the supernatant and resuspend the cells in 200 µl of PBS.
10. Analyze by flow cytometry within four hours (alternatively, the cells may be fixed by 0.05% of formaline in buffered saline for analysis the next day. Some antigens are readily destroyed upon fixation and this should be taken into account when using this alternative).

**Application note for anti-kappa and/or anti-lambda Ig combinations**
Add 2 ml of PBS containing 0.001% (v/v) Heparin (prewarmed to 37°C) to the cell suspension
Vortex, centrifuge (2 min at 300x g) and discard the supernatant.
Repeat this step twice.
Resuspend the pelleted blood cells in 100 µl PBS, pH 7.2, containing 0.001% (v/v) Heparin.

**Protein Families:** Druggable Genome, ES Cell Differentiation/IPS, Transmembrane

**Protein Pathways:** Cell adhesion molecules (CAMs), Leukocyte transendothelial migration, Natural killer cell mediated cytotoxicity, Regulation of actin cytoskeleton, Viral myocarditis

## Product images:



Clone DF1524 (CD11a) was analyzed by flow cytometry using normal blood leucocytes. Direct stainig was performed using 10 µl of PE-conjugatd antibody and 100 µl blood sample.