

## Product datasheet for **AM39012PU-N**

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

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	DF1524
Applications:	FC, IF, IHC
Recommended Dilution:	- Flow cytometry: for analysis of blood and bone marrow samples (see "Protocols" below). - Immunofluorescence / Immunohistochemistry: using cytopspots 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). Clone DF1524 was clustered at the Leucocyte Typing Workshop IV (5).
Formulation:	0.01 M sodium phosphate, 0.15 M NaCl, pH 7.3, 0.2% BSA, 0.09% sodium azide State: Aff - Purified State: Liquid purified Ig fraction
Concentration:	lot specific
Purification:	Affinity chromatography
Conjugation:	Unconjugated
Storage:	Store the antibody undiluted at 2-8°C.
Stability:	Shelf life: one year from despatch.
Gene Name:	integrin subunit alpha L
Database Link:	<a href="#">Entrez Gene 3683 Human P20701</a>



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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 lipopolysaccharides (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 purified monoclonal antibodies

1. Add 100  $\mu$ l of EDTA-treated blood (i.e. approx.  $10 \times 10^6$  leukocytes) to a 5 ml reagent tube. The content of one tube is sufficient to perform one test.
2. Add to each tube 10  $\mu$ l of purified 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. Wash the labeled cells by adding 2 ml of PBS containing 0.001% (v/v) Heparin, vortexing and centrifuging (2 min  $1000 \times g$ ) and discard the supernatant.
5. Add 50  $\mu$ l of appropriate dilution of F(ab)<sub>2</sub> Rabbit Anti Mouse IgG fluorescent conjugate (e.g. FITC or R-PE) in PBS containing 0.001% (v/v) Heparin to the tube. It is recommended that the tube is protected from light.
6. Mix by vortexing and incubate for 15 minutes at room temperature in the dark.
7. Add 100  $\mu$ l of a lyse reagent and mix immediately.
8. Incubate for 10 minutes at room temperature in the dark.
9. Add 2 ml of demineralized water and incubate for 10 minutes in the dark.
10. Centrifuge the labeled cell suspension for 2 minutes at  $1000 \times g$ .
11. Remove the supernatant and resuspend the cells in 200  $\mu$ l of PBS.
12. 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).

**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