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Product datasheet for AM39006RP-N

CD1 (CD1A) Mouse Monoclonal Antibody [Clone ID: MCD1a]

Product data:

Product Type:	Primary Antibodies
Clone Name:	MCD1a
Applications:	FC, IF
Recommended Dilution:	- Flow cytometry: for analysis of blood and bone marrow samples. Used in flow cytometry for the identification and quantification of early T cells in blood and for the classification of T cell leukemias (e.g. T-ALL) and lymphomas which have originated from stage II thymocytes. The reagent is effectively formulated for direct immunofluorescent staining (see also "Protocols" below). - Immunofluorescence: using cytospots or frozen tissue sections. MCD1a is used as a marker of Langerhans' cells in normal, dysplastic and neoplastic tissue.
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Specificity:	This antibody recognizes the largest (49 kDa) of the three variants of the CD1 heavy chain, designated as CD1a. The 49 kD polypeptide is associated with b2-microglobulin on human cortical thymocytes, dendritic cells and Langerhans' cells. It may also be expressed on some T cell leukemias and lymphoma. Testing by flow cytometry using a 'lyse-wash' method on Molt4 cells showed the following values expressed in terms of the total count: Product code: AM39006RP-N Mean % positive: 98,32 S.D.: 0.72 % CV: 0.73 The antibody does not react with peripheral blood T and B lymphocytes, monocytes, normal bone marrow mononuclear cells or normal tonsillar T and B lymphocytes.
Formulation:	0.01 M sodium phosphate, 0.15 M NaCl, pH 7.3, 0.2% BSA, 0.09% sodium azide Label: PE State: Liquid Label: (R-Phycoerythrin)

Conjugation: PE

Storage: Store the antibody undiluted at 2-8°C.
This product is photosensitive and should be protected from light.

Stability: Shelf life: one year from despatch.

Gene Name: CD1a molecule

Database Link: Entrez Gene 909 Human
P06126

Background: CD1a antigen is expressed on human cortical thymocytes, dendritic cells in peripheral lymph nodes and Langerhans' cells in normal, dysplastic and neoplastic tissue.
CD1 has a domain organisation similar to that of MHC Class I and its expression is inversely correlated with that of TCR and MHC Class I.

Synonyms: T6/Leu-6, hTa1

Note: 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, Transmembrane

Protein Pathways: Hematopoietic cell lineage