

Product datasheet for **AM39010PU-N**

CD7 Mouse Monoclonal Antibody [Clone ID: B-B7]

Product data:

Product Type:	Primary Antibodies
Clone Name:	B-B7
Applications:	FC, IF, IHC
Recommended Dilution:	- Flow cytometry: for analysis of blood and bone marrow samples. Used in flow cytometry to analyze T and NK cell subsets and for the characterization of T-ALL and other T cell lymphoblastic leukemias (see "Protocols" below). - Immunofluorescence / Immunohistochemistry: using cytopots or frozen tissue sections. Suitable for the identification of T cells in tissues and diagnosis of T cell neoplasms.
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Specificity:	Clone B-B7 recognizes a 40 kD T cell and NK cell antigen.
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 protein
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:	CD7 molecule
Database Link:	Entrez Gene 924 Human P09564



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Background: CD7 is the earliest antigen marker expressed in the T lineage, being found on T cell precursors in fetal liver and thorax prior to thymic colonization and in thymus and bone marrow. The function of CD7 antigen is unknown and the natural ligand for CD7 has not yet been identified. CD7 monoclonal antibodies co-stimulate T cell proliferation and induce second messengers, while soluble recombinant CD7 has been reported to inhibit antigen-specific proliferation and a mixed lymphocyte reaction. CD7 is a marker for pluripotential stem cell leukemias and T cell acute lymphocytic leukemia (T-ALL). The antigen is frequently lost on large cell T cell lymphomas. The CD7 antigen may also be expressed on myeloblastic leukemias.

Synonyms: GP40, TP41, Leu-9

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 μ l 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 μ 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 x g) and discard the supernatant.
5. Add 50 μ l of appropriate dilution of F(ab)₂ 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 μ 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 x g.
11. Remove the supernatant and resuspend the cells in 200 μ 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, Transmembrane

Protein Pathways: Hematopoietic cell lineage