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Product datasheet for AM39007PU-N

CD2 Mouse Monoclonal Antibody [Clone ID: B-E2]

Product data:

Product Type:	Primary Antibodies
Clone Name:	B-E2
Applications:	FC, FN, IF, IHC
Recommended Dilution:	- Flow cytometry: for analysis of blood and bone marrow samples. CD2 antibody is applied in flow cytometry for the quantification of the total T-cell population in blood and for the identification of CD2 positive cells in tissue sections. It has also been applied in the analysis of NK cell populations (see also "Protocols" below). CD2 antibodies may also be used for the elimination or quantitative isolation of T cells by flow cytometry or magnetic particles. - Immunofluorescence / Immunohistochemistry: using cytospots or frozen tissue sections. - In functional assays, such as the mixed lymphocyte reaction, CD2 antibody inhibits T cell activation. Clone B-E2 is also suitable for depletion of CD2+ cells by complement mediated cytotoxicity.
Reactivity:	Human
Host:	Mouse
Isotype:	IgG2b
Clonality:	Monoclonal
Specificity:	Clone B-E2 reacts specifically with a 45-50 kD single chain transmembrane glycoprotein, also known as the LFA-2, the sheep erythrocyte receptor or CD2 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 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:	CD2 molecule

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Database Link: Entrez Gene 914 Human
P06729

Background: The CD2 antigen plays a role in T cell signaling and in lymphocyte adhesion. The major ligand for the extracellular portion of human CD2 is CD58 (LFA3). CD2 is present on all human peripheral T-lymphocytes and a fraction of the NK cell (large granular lymphocyte) population.

Synonyms: SRBC, Erythrocyte receptor, LFA-2, LFA-3 receptor, Rosette receptor

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 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 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 µl 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 µl 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 µl 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: Cell adhesion molecules (CAMs), Hematopoietic cell lineage