

Monoclonal Antibody to CD19 - Azide Free

Alternate names:	B-cell marker, B-lymphocyte surface antigen B4, Differentiation antigen CD19, Leu-12
Catalog No.:	BM2368
Quantity:	0.2 mg
Concentration:	0.2 mg/ml (prior to lyophilization)
Background:	CD19 is a member of the immunoglobulin superfamily and has two Ig like domains. The CD19 molecule is expressed on 100% of the peripheral B cells as defined by expression of kappa or lamda light chains. It is expressed on approximately 10% of normal human peripheral blood cells and approximately 60% of splenic lymphocytes. It is not expressed on granulocytes, monocytes or T cells as defined by CD3 expression. CD19 defines a pan B antigen which is expressed from the earliest stages of B progenitor development, but is lost on terminal differentiation to plasma cells. It may also be present on some early myeloid progenitors, particularly those of the monoblastic type. The CD19 antigen is expressed on approximately 12% of peripheral blood lymphocytes. It appears to be expressed on myeloid leukemia cells, particularly those of monocytic lineage. Leukemia phenotype studies have demonstrated that the earliest and broadest B cell restricted antigen is the CD19 antigen.
Uniprot ID:	P15391
NCBI:	NP_001171569.1
GeneID:	930
Host / Isotype:	Mouse / IgG1
Clone:	J4.119
Immunogen:	SKLY 18 Lymphoma Cells. Remarks: Source: Ascites.
Format:	State: Lyophilized purified Ig fraction. Purification: Protein A Sepharose Chromatography. Buffer System: PBS with 1 mg/ml BSA and no preservatives. Reconstitution: Restore with 1 ml distilled water.
Applications:	Study of CD19 expressing Lymphocytes. Flow Cytometry: 2 µg/test (5x10 ⁵ cell/test) or 100 µl blood sample. Immunohistochemistry: Working dilution 1/25-1/50. This antibody is suitable on cryostat sections. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	J4.119 cross-reacts with B cells from Macaca fascicularis, Macaca mulatta and Papio cynocephalus . It reacts weakly with B cells from Rhesus monkey. The J4.119 MAb was assigned to the CD19 cluster for differentiation at the 4th International Workshop on

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Human Leucocyte Differentiation Antigens (HLA) in Vienna, Austria (1989).
Expression of the CD19 molecule is found on all B Lymphocytes, including pro-B cells, but is lost during maturation to plasma cells. The CD19 antigen is also expressed on the membrane of follicular dendritic cells and on most stabilized B cell lines. CD19 expression is not observed in normal T Lymphocytes, NK cells, Monocytes and Granulocytes. CD19 appears important in regulating B-cell activation and proliferation.
In vitro studies show that the CD19 antibody has an inhibitory effect on the activation and proliferation of B Lymphocytes.

Storage:

Store the reconstituted antibody at 2-8°C for one month (add 0.09% Sodium Azide) or at -20°C for longer.

Avoid repeated freezing and thawing.

Shelf life: one year from despatch.

General References:

1. Nadler, L.M., (1983), *Journal of Immunology*, 131, 244-247.
2. Melson, H., (1984), *Scand. J. Haematol.*, 33, 27-34.
3. Campana, D. et al., (1986), *Blood*, 68, 1264-1271.
4. Zola, H., (1987), *Immunology Today*, 10, 308-315.
5. Freedman, A.S., et al., (1987), *Seminars in Oncology*, 14, 193-212.
6. Pezzuto, A. et al., (1987), in *Leucocyte Typing III, White Cell Differentiation Antigens*, 358-360.
7. This antibody was studied at the human leucocyte workshop in Oxford (1986).

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