

Product datasheet for **SM034A**

CD45 / LCA (CD45R) Rat Monoclonal Antibody [Clone ID: RA3-6B2]

Product data:

| | |
|-----------------------|--|
| Product Type: | Primary Antibodies |
| Clone Name: | RA3-6B2 |
| Applications: | FC, IHC, IP |
| Recommended Dilution: | Flow Cytometry (for details please see Protocols). Immunoprecipitation. Reported to work in Immunohistochemical applications. |
| Reactivity: | Mouse |
| Host: | Rat |
| Isotype: | IgG2a |
| Clonality: | Monoclonal |
| Immunogen: | Mouse pre-B tumour cells (RAW112). |
| Specificity: | This antibody reacts with a form of the CD45 antigen found on B cells and lytically active subsets of NK cells and non - MHC restricted CTL's (1,2,3,4). It immunoprecipitates the high molecular weight (220,000 Da) surface molecule of the leukocyte common antigen B220 (1) on B cells. |
| Formulation: | PBS, no preservative, 0.2 µm filtered State: Azide Free State: Liquid purified Ig fraction |
| Concentration: | lot specific |
| Purification: | Protein G Chromatography |
| Conjugation: | Unconjugated |
| Storage: | Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing. |
| Stability: | Shelf life: one year from despatch. |
| Gene Name: | protein tyrosine phosphatase, receptor type, C |
| Database Link: | Entrez Gene 19264 Mouse P06800 |



[View online »](#)

Background:

CD45R is a member of the protein tyrosine phosphatase (PTP) family and a major cell surface glycoprotein. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. CD45R represents a restricted form of the CD45 family which primarily recognizes only cells of B lineage from proB cell through mature B lymphocytes and, prior to the availability of anti CD19 MAbs, was commonly used as a pan B cell marker. It also reacts with certain activated T cells, as well as non MHC restricted lytically active lymphokine activated killer (LAK) cells. CD45R contains an extracellular domain, a single transmembrane segment and two tandem intracytoplasmic catalytic domains. It is specifically expressed in hematopoietic cells and has been shown to be an essential regulator of T and B cell antigen receptor signaling. It functions through either direct interaction with components of the antigen receptor complexes, or by activating various Src family kinases required for the antigen receptor signaling. CD45R also suppresses JAK kinases, and thus functions as a regulator of cytokine receptor signaling. Four alternatively spliced transcripts variants of this gene, which encode distinct isoforms, have been reported.

Synonyms:

PTPRC, Leukocyte common antigen, L-CA, T200

Note:

Protocol: **FLOW CYTOMETRY ANALYSIS:**

Method:

1. Prepare a cell suspension in media A. For cell preparations, deplete the red blood cell population.
2. Wash 2 times.
3. Resuspend the cells to a concentration of 2×10^7 cells/ml in media A. Add 50 μ l of this suspension to each tube (each tube will then contain 1×10^6 cells, representing 1 test).
4. To each tube, add 0.2-0.5 μ g of antibody.
5. Vortex the tubes to ensure thorough mixing of antibody and cells.
6. Incubate the tubes for 30 minutes at 4°C.
7. Wash 2 times at 4°C.
8. Add 100 μ l of secondary antibody FITC Goat anti-rat IgG (H+L) at 1:500 dilution.
9. Incubate the tubes at 4°C for 30-60 minutes. (It is recommended that the tubes are protected from light since most fluorochromes are light sensitive).
10. Wash 2 times at 4°C in media B.
11. Resuspend the cell pellet in 50 μ l ice cold media B.
12. Transfer to suitable tubes for flow cytometric analysis containing 15 μ l of propidium iodide at 0.5 mg/ml in PBS. This stains dead cells by intercalating in DNA.

Media:

A. Phosphate buffered saline (pH 7.2) + 5% normal serum of host species + sodium azide (100 μ l of 2M sodium azide in 100 mls).

B. Phosphate buffered saline (pH 7.2) + 0.5% Bovine serum albumin + sodium azide (100 μ l of 2M sodium azide in 100 mls).

Results:

Tissue Distribution by Flow Cytometry Analysis:

Mouse Strain: CBA/J

Cell Concentration : 1×10^6 cells per test

Antibody Concentration Used: 0.2 μ g/ 10^6 cells

Isotypic Control: Purified Rat IgG2a

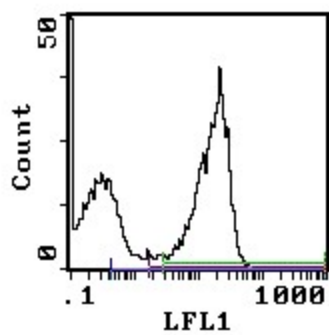
Cell Source: Percentage of cells stained above control:

Thymus: 0.6%

Spleen: 52.7%

Lymph Node: 14.3%

Product images:



Cell Source: Spleen

Percentage of cells stained above control: 52.7%