



CELL LAB Mouse Anti-Mouse CD45.1/Ly-5.1

<u>Cat. No.</u>	<u>Form</u>	<u>Quantity</u>
732260	Purified (UNLB) Antibody	0.5 mg
732261	Fluorescein (FITC) Conjugate	0.5 mg
732262	Biotin (BIOT) Conjugate	0.5 mg
732263	Phycoerythrin (PE) Conjugate	0.1 mg
732168	Phycoerythrin (PE) Conjugate	0.2 mg
732169	Allophycocyanin (APC) Conjugate	0.1 mg
732701	Spectral Red™ (SPRD) Conjugate	0.1 mg
732264	Cyanine 5 (Cy™5) Conjugate	0.1 mg
733163	Phycoerythrin-Cyanine 5.5 (PE-Cy™5.5) Conjugate	0.1 mg
734161	Phycoerythrin-Cyanine 7 (PE-Cy™7) Conjugate	0.1 mg

For Laboratory Use Only

DESCRIPTION

Clone: A20
Isotype: Mouse IgG2aκ
Specificity: Mouse CD 45.1 (Leukocyte Common Antigen)

The CD45 antigen is an essential regulator of leukocyte activation and development, and is now known to be a protein tyrosine phosphatase^{1,2}, for example, CD45 is able to dephosphorylate the Src family of protein kinases. This activity is now known to be required for signal transduction induced by T and B cell antigen receptor engagement, cytokine signaling and Fc receptor stimulation.^{1,2} The functional state of CD45 also has a pronounced effect on lymphocyte development. CD45 exists in multiple forms, such as the restricted variants (CD45R) and as allelic forms CD45.1/Ly-5.1 and CD45.2/Ly-5.2. The former arises as a result of alternative splicing of different exons. The specificity of antibodies to CD45.1 and CD45.2 has been exploited in studies where resolution of donor and recipient cells is essential, such as in gene therapy³ or bone marrow transplantation⁴. Monoclonal antibody A20 recognizes all mouse leukocytes expressing the CD 45.1 allotype.

APPLICATIONS

- Flow cytometry and fluorescence microscopy^{3, 4}
- Markers for origin of donor and host cells^{3, 4}
- Immunoprecipitation

CHARACTERIZATION

To ensure lot-to-lot consistency, each batch of product is tested to conform with characteristics of a standard reference reagent using flow cytometry.

WORKING DILUTIONS

Flow Cytometry:

FITC conjugate	≤1 µg/10 ⁶ cells
BIOT conjugate	≤1 µg/10 ⁶ cells
PE conjugate	≤0.2 µg/10 ⁶ cells
APC conjugate	≤0.2 µg/10 ⁶ cells

SPRD conjugate	≤0.2 µg/10 ⁶ cells
Cy5 conjugate	≤0.2 µg/10 ⁶ cells
PE-Cy5.5 conjugate	≤0.2 µg/10 ⁶ cells
PE-Cy7 conjugate	≤0.2 µg/10 ⁶ cells

Other Applications: Since applications vary, determine the optimum working dilution of the product that is appropriate for your specific needs.

HANDLING AND STORAGE

- The purified (UNLB) antibody is supplied as 0.5 mg of purified immunoglobulin in 1.0 mL of 100 mM borate buffered saline, pH 8.0. No preservatives or amine-containing buffer salts added.
- The fluorescein (FITC) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN₃.
- The biotin (BIOT) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN₃.
- The phycoerythrin (PE) conjugates are supplied as 0.1 mg in 1.0 mL or 0.2 mg in 2.0 mL of PBS/NaN₃ and a stabilizing agent.
- The allophycocyanin (APC) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN₃ and a stabilizing agent.
- The Spectral Red (SPRD), phycoerythrin-Cyanine 5.5 (PE-Cy5.5), and phycoerythrin-Cyanine 7 (PE-Cy7) conjugates are supplied as 0.1 mg in 1.0 mL of PBS/NaN₃ and a stabilizing agent.
- The Cyanine 5 (Cy5) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN₃.
- Protect fluorochrome-conjugated forms from light. Do not freeze.
- Reagent is stable until the expiration date on the vial when stored at 2-8°C.

STATEMENT OF WARNINGS

1. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
2. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
3. Do not use reagent beyond the expiration date on the vial label.
4. Minimize exposure of reagent to light during storage or incubation.
5. Avoid microbial contamination of reagent or erroneous results may occur.
6. Use Good Laboratory Practice (GLP) when handling this reagent.
7. Harmful if swallowed.
8. After contact with skin, wash immediately with plenty of water.
9. Contains sodium azide. Sodium azide under acidic conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, immediately wash excessively with water.

TRADEMARKS

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REFERENCES

1. Okumura M and Thomas ML. 1995. Regulation of immune function by protein tyrosine phosphatases. *Curr Opin Immunol*, 7:312-319.
2. Thomas ML. 1995. Positive and negative regulation of leukocyte activation by protein tyrosine phosphatases. *Semin Immunol*, 7:279-288.
3. Mardiney M, III and Malech HL. 1996. Enhanced engraftment of hematopoietic progenitor cells in mice treated with granulocyte colony-stimulating factor before low-dose irradiation: implications for gene therapy. *Blood*, 87:4049-4056.
4. Vallera DA, Taylor PA, Sprent J and Blazar BR. 1994. The role of host T cell subsets in bone marrow rejection directed to isolated major histocompatibility complex class I versus class II differences of bm1 and bm12 mutant mice. *Transplantation*, 57:249-256.



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