

Technical Data Sheet

FITC Mouse Anti-Rat CD45R

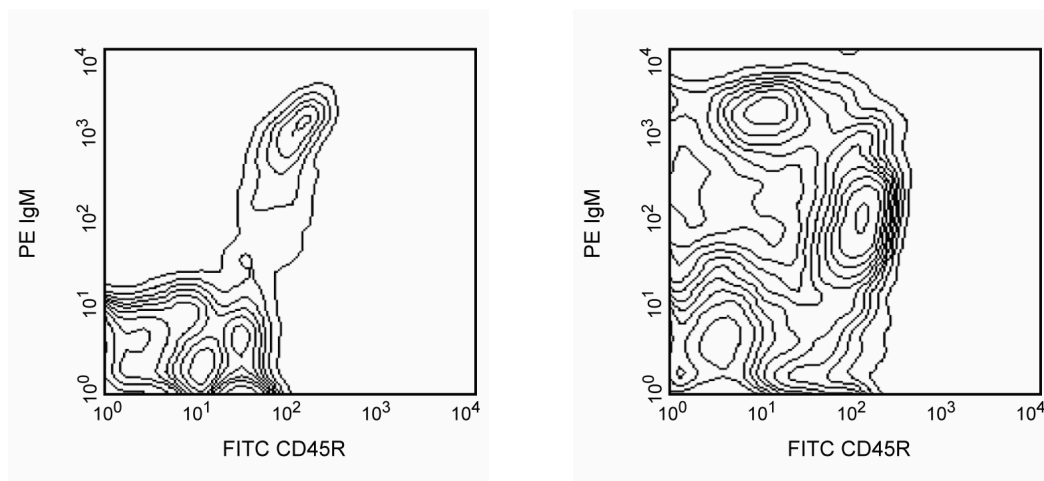
Product Information

Material Number:	554880
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	HIS24
Immunogen:	Low-Density Cells from AO/G Rat Peyer's Patches
Isotype:	Mouse (BALB/c) IgG2b κ
Reactivity:	QC Testing: Rat
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The HIS24 antibody reacts with a developmentally regulated form of CD45 found on most B lymphocytes, including developing B cells in the bone marrow and peripheral B cells, but not plasma cells. The level of expression of this CD45R antigen appears to be an indicator of both maturational stages in the B-cell lineage and of functionally distinct B-cell subsets. The HIS24 mAb, in combination with other markers such as TdT and Ig expression, is effective in the identification of B-cell progenitors. CD45 is a member of the Protein Tyrosine Phosphatase (PTP) family: Its intracellular (COOH-terminal) region contains two PTP catalytic domains, and the extracellular region is highly variable due to alternative splicing of exons 4, 5, and 6 (designated A, B, and C, respectively), plus differing levels of glycosylation. The CD45 isoforms detected in the rat are cell type-, maturation-, and activation state-specific. The CD45 isoforms play complex roles in T-cell and B-cell antigen receptor signal transduction.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



The expression of CD45R on rat B lymphocytes. Lewis bone marrow leukocytes (left panel) and splenocytes (right panel) were simultaneously stained with PE anti-rat IgM G53-238 (Cat. No. 553888) and FITC-conjugated HIS24 monoclonal antibodies. Flow cytometry was performed on a BD FACScan™ flow cytometry system.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with FITC under optimum conditions, and unreacted FITC was removed.

Store undiluted at 4° C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry

Routinely Tested

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country-specific contact information, visit bdbiosciences.com/how_to_order/

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2006 BD



BD Biosciences

Recommended Assay Procedure:

This antibody conjugate has been tested by immunofluorescent staining (≤ 1 $\mu\text{g}/\text{million}$ cells) in flow cytometric analysis.

Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
559532	FITC Mouse IgG2b κ Isotype Control	0.25 mg	MPC-11

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

- Deenen GJ, Hunt SV, Opstelten D. A stathmokinetic study of B lymphocytopoiesis in rat bone marrow: proliferation of cells containing cytoplasmic μ -chains, terminal deoxynucleotidyl transferase and carrying HIS24 antigen. *J Immunol.* 1987; 139(3):702-710.(Biology)
- Hermans MH, Deenen GJ, De Boer N, Bo W, Kroese FG, Opstelten D. Expression of HIS50 Ag: a rat homologue of mouse heat-stable antigen and human CD24 on B lymphoid cells in the rat. *Immunology.* 1997; 90(1):14-22.(Biology)
- Johnson P, Maiti A. CD45: A family of leukocyte-specific cell surface glycoproteins. In: Herzenberg LA, Weir DM, Blackwell C, ed. *Weir's Handbook of Experimental Immunology, Vol 2.* Cambridge: Blackwell Science; 1997:62.1-62.16.(Biology)
- Kroese FG, Butcher EC, Lalor PA, Stall AM, Herzenberg LA. The rat B cell system: the anatomical localization of flow cytometry-defined B cell subpopulations. *Eur J Immunol.* 1990; 20(7):1527-1534.(Biology)
- Kroese FG, Opstelten D, Wubbena AS, et al. Monoclonal antibodies to rat B lymphocyte (sub-)populations. *Adv Exp Med Biol.* 1985; 186:81-89.(Immunogen)
- Kroese FG, Wubbena AS, Opstelten D, et al. B lymphocyte differentiation in the rat: production and characterization of monoclonal antibodies to B lineage-associated antigens. *Eur J Immunol.* 1987; 17(7):921-928.(Immunogen)
- Opstelten D, Deenen GJ, Rozing J, Hunt SV. B lymphocyte-associated antigens on terminal deoxynucleotidyl transferase-positive cells and pre-B cells in bone marrow of the rat. *J Immunol.* 1986; 137(1):76-84.(Biology)