Technical Data Sheet

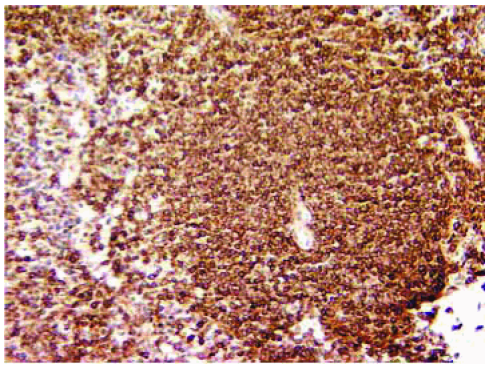
Purified Rat Anti-Mouse CD45

Product Information

Material Number:	**550539**
Alternate Name:	Ptprc; LCA; Leukocyte common antigen; T200; Ly-5; Lyt-4
Size:	1 mL
Concentration:	62.5 µg/ml
Clone:	30-F11
Immunogen:	Mouse Thymus / Spleen
Isotype:	Rat (LOU) IgG2b, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA, goat serum, and ≤0.09% sodium azide.

Description

The 30-F11 clone has been reported to react with all isoforms and both alloantigens of CD45, which is found on hematopoietic stem cells and all cells of hematopoietic origin, except erythrocytes. CD45 is a transmembrane glycoprotein which is expressed at high levels on the cell surface, and its presence distinguishes leukocytes from non-hematopoietic cells. CD45 is a member of the Protein Tyrosine Phosphatase (PTP) family, where the intracellular carboxy-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 as A, B, and C, respectively). CD45 isoforms play complex roles in T-cell and B-cell antigen receptor signal transduction and the CD45 isoforms detected in the mouse are cell type-, maturation-, and activation state-specific.



Immunohistochemical staining of CD45. *Zinc-fixed paraffin-embedded sections of normal mouse spleen were stained with Purified Rat Anti-Mouse CD45 (Cat. No. 550539). CD45 positive cells can be identified by the brown labeling of the cell membranes.*

Preparation and Storage

Store undiluted at 4°C.

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

Application Notes

Application

Flow cytometry	Routinely Tested
Immunohistochemistry-frozen	Tested During Development
Immunohistochemistry-formalin (antigen retrieval required)	Tested During Development
Immunohistochemistry-zinc-fixed	Tested During Development

Recommended Assay Procedure:

Immunohistochemistry: Clone 30-F11 is recommended to test for immunohistochemical staining of acetone-fixed frozen sections of mouse spleen or thymus. **Formalin-fixed paraffin-embedded sections require antigen retrieval treatment with BD Retrievagen A (Cat. No. 550524)**. The isotype control recommended for use with this antibody is purified rat IgG2b (Cat. No. 559478). For optimal indirect immunohistochemical staining, the 30-F11 antibody should be titrated (1:10 to 1:50 dilution) and visualized via a three-step staining procedure in combination with biotin conjugated anti-rat IgG2b (Cat. No. 550327) as the secondary antibody and Streptavidin-HRP (Cat. No. 550946) together with the DAB detection system (Cat. No. 550880).

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Suggested Companion Products

Catalog Number	Name	Size	Clone
559478	Purified Rat IgG2b, κ Isotype Control	0.25 mg	A95-1
550327	Biotin Mouse Anti-Rat IgG2b	1 mL	G15-337
550946	Streptavidin HRP	50 mL	(none)
550880	DAB Substrate Kit	500 Tests	(none)
559148	Antibody Diluent for IHC	125 mL	(none)
550524	Retrievagen A (pH 6.0)	1000 mL	(none)
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. 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.
5. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.
6. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Johnson P, Maiti A, Ng DHW. CD45: A family of leukocyte-specific cell surface glycoproteins. In: Herzenberg LA, Weir DM, Herzenberg LA, Blackwell C , ed. *Weir's Handbook of Experimental Immunology, Vol 2.* Cambridge: Blackwell Science; 1997:62.1-62.16. (Biology)

Ledbetter JA, Herzenberg LA. Xenogeneic monoclonal antibodies to mouse lymphoid differentiation antigens. *Immunol Rev.* 1979; 47:63-90. (Immunogen)

van Ewijk W, van Soest PL, van den Engh GJ. Fluorescence analysis and anatomic distribution of mouse T lymphocyte subsets defined by monoclonal antibodies to the antigens Thy-1, Lyt-1, Lyt-2, and T-200. *J Immunol.* 1981; 127(6):2594-2604. (Biology)