

Anti-Mouse CD45R Antibody, Clone RA3-6B2, FITC



Scientists Helping Scientists™ | WWW.STEMCELL.COM

TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM

FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Antibodies

Rat monoclonal IgG2a antibody
against human, mouse, cat CD45R
(B220), FITC-conjugated

Catalog #60019FI
#60019FI.1

500 µg 0.5 mg/mL
50 µg 0.5 mg/mL

FOR RESEARCH USE ONLY. NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES.

Product Description

The RA3-6B2 antibody reacts with an epitope on the extracellular domain of the exon A-restricted isoform of mouse CD45 (B220), an ~220 kDa type I transmembrane glycoprotein expressed on the surface of most hematopoietic cells except mature erythrocytes, platelets and plasma cells; expression of CD45 is lost during differentiation of these cell types. CD45R is also expressed on NK cells. CD45 is a member of the protein tyrosine phosphatase family and functions in a number of immunoregulatory processes, including cell activation, growth, differentiation and oncogenic transformation. The large cytoplasmic portion of CD45 contains two tyrosine phosphatase domains (one which is enzymatically active) that are involved in modulating the function of Src kinases such as Lck and Fyn. Several isoforms of CD45 have been identified, the expression of which differs according to cell type and functional status. Alternative splicing of three exons encoding the extracellular RA, RB and RC polypeptide sequences gives rise to up to 8 isoforms with molecular masses in the range of 200 - 220 kDa. The exon A-restricted isoform of mouse CD45 contains the RA, RB and RC regions and is the largest of the isoforms.

Target Antigen Name:	CD45R (B220)
Alternative Names:	B220, Protein tyrosine phosphatase receptor type C, PTPRC
Gene ID:	19264/5788
Species Reactivity:	Human, Mouse, Cat
Host Species:	Rat
Clonality:	Monoclonal
Clone:	RA3-6B2
Isotype:	IgG2a, kappa
Immunogen:	Abelson murine leukemia virus-induced pre-B tumor cells
Conjugate:	FITC

Applications

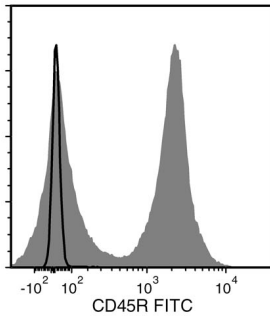
Verified:	FC
Reported:	FACS, FC, IF, IHC
Special Applications:	This antibody clone has been verified for purity assessments of cells isolated with EasySep™ kits, including EasySep™ Mouse B Cell Isolation Kit (Catalog #19854).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; WB: Western blotting

Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Purification:	The antibody was purified by affinity chromatography and conjugated with FITC under optimal conditions. The solution is free of unconjugated FITC.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com .
Directions for Use:	For flow cytometry the suggested use of this antibody is $\leq 1 \mu\text{g}$ per 1×10^6 cells in 100 µL volume. It is recommended that the antibody be titrated for optimal performance for each application.

Data



Flow cytometry analysis of C57BL/6 mouse splenocytes labeled with Anti-Mouse CD45R Antibody, Clone RA3-6B2, FITC (filled histogram) or a rat IgG2a, kappa isotype control antibody, FITC (solid line histogram).

Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

1. Coffman RL, Weissman IL. B220: a B cell-specific member of the T200 glycoprotein family. *Nature* 289(5799): 681-83, 1981 (FACS, FC, IP)
2. Coffman RL. Surface antigen expression and immunoglobulin gene rearrangement during mouse pre- B cell development. *Immunol Rev* 69: 5-23, 1982 (FC, IP)
3. Morse H, et al. Abnormalities induced by the mutant gene *Ipr*: expansion of a unique lymphocyte subset. *J Immunol* 129(6): 2612-15, 1982 (FC)
4. Johnson P, et al. Identification of the alternatively spliced exons of murine CD45 (T200) required for reactivity with B220 and other T200-restricted antibodies. *J Exp Med* 169(3): 1179-84, 1989 (FC)
5. Watanabe Y, Akaike T. Activation signal induces the expression of B cell-specific CD45R epitope (6B2) on murine T cells. *Scand J Immunol.* 39(5): 419-25, 1994 (FC, IP)
6. Whiteland JL, et al. Immunohistochemical detection of T Cell subsets and other leucocytes in paraffin-embedded rat and mouse tissues with monoclonal antibodies. *J Histochem Cytochem* 43(3): 313-20, 1995 (IHC)
7. Monteith CE, et al. Identification of monoclonal antibodies for immunohistochemical staining of feline B lymphocytes in frozen and formalin-fixed paraffin-embedded tissues. *Can J Vet Res* 60(3): 193-98, 1996 (FC, IHC)
8. Rolink A, et al. A subpopulation of B220+ cells in murine bone marrow does not express CD19 and contains natural killer cell progenitors. *J Exp Med* 183(1): 187-94, 1996 (FACS, FC)
9. Rosmalen JG, et al. Subsets of macrophages and dendritic cells in nonobese diabetic mouse pancreatic inflammatory infiltrates: correlation with the development of diabetes. *Lab Invest* 80(1): 23-30, 2000 (IHC)
10. Schuhmann B, et al. A role for brain-derived neurotrophic factor in B cell development. *J Neuroimmunol* 163(1-2): 15-23, 2005 (FC, IHC)
11. Nishino T, et al. Involvement of lymphocyte infiltration in the progression of mouse peritoneal fibrosis model. *Ren Fail* 34(6): 760-766, 2012 (IHC)
12. Masahata K, et al. Generation of colonic IgA-secreting cells in the caecal patch. *Nat Commun* 5: 3704, 2014 (FC, IF, IHC)

STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485 MEDICAL DEVICE STANDARDS.

Copyright © 2014 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, Scientists Helping Scientists and EasySep are trademarks of STEMCELL Technologies Inc. All other trademarks are the property of their respective holders. Alexa Fluor® is a registered trademark of Life Technologies Corporation. This product is licensed for internal research use only and its sale is expressly conditioned on the buyer not using it for manufacturing, performing a service, or medical test, or otherwise generating revenue. For use other than research, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, CA 92008 USA or outlicensing@lifetech.com. While STEMCELL has made all reasonable efforts to ensure that the information provided by STEMCELL and its suppliers is correct, it makes no warranties or representations as to the accuracy or completeness of such information.