

Anti-Mouse CD45.1 Antibody, Clone A20, Biotin



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Antibodies

Mouse monoclonal IgG2a antibody
against mouse CD45.1, biotin-
conjugated

Catalog #60117BT
#60117BT.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 A20 monoclonal antibody reacts with mouse alloantigen CD45.1 (Ly5.1) expressed by all hematopoietic cells except mature erythrocytes and platelets in mouse strains RIII, SJL/J, STS/A, and DA. Clone A20 does not react with leukocytes that express CD45.2 alloantigen. CD45.1 is an allelic form of CD45 (Leukocyte Common Antigen), a 180 - 240 kD type I transmembrane glycoprotein. CD45 is a member of the protein tyrosine phosphatase (PTP) family and contains two catalytic domains in the intracellular (COOH) domain, which regulate cellular signaling. The extracellular domains are highly variable, due to alternative splicing among exons 4, 5, and 6, and differential glycosylation. These CD45 isoforms correlate to specific cell types, as well specific activation and maturation states of immune cells. The A20 monoclonal antibody has been used extensively in adoptive cell transfer and bone marrow transplantation studies in mice, allowing for the differentiation of CD45.2- and CD45.1- expressing cells.

Target Antigen Name:	CD45.1
Alternative Names:	B220, CD45 antigen, CD45R, GP180, Leukocyte common antigen (LCA), Ly5.1, Lyt4, Protein tyrosine phosphatase receptor type C (Ptpcr), RT7.1, T200
Gene ID:	19264
Species Reactivity:	Mouse, does not react with mouse CD45.2
Host Species:	Mouse (A.SW)
Clonality:	Monoclonal
Clone:	A20
Isotype:	IgG2a, kappa
Immunogen:	SJL mouse thymocytes and splenocytes
Conjugate:	Biotin

Applications

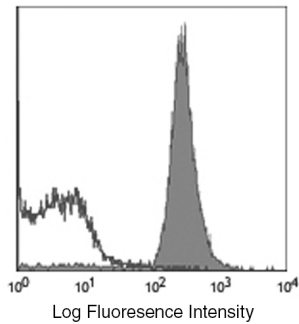
Verified:	FC
Reported:	FC, IHC, IF

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; 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 biotin under optimal conditions. The solution is free of unconjugated biotin.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. For product expiry date, please contact techsupport@stemcell.com .
Directions for Use:	For flow cytometry the suggested use of this antibody is ≤ 0.25 µg 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 SLJ mouse splenocytes labeled with Anti-Mouse CD45.1 Antibody, Clone A20, Biotin followed by streptavidin (SAV) PE (filled 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. Rabenhorst U et al. (2015) Single-stranded DNA-binding transcriptional regulator FUBP1 is essential for fetal and adult hematopoietic stem cell self-renewal. *Cell Rep* 11(12): 1847–55. (FACS, FC)
2. Van Blijswijk J et al. (2015) Altered lymph node composition in diphtheria toxin receptor-based mouse models to ablate dendritic cells. *J Immunol* 194(1): 307–15. (FC)
3. Gebhardt T et al. (2009) Memory T cells in nonlymphoid tissue that provide enhanced local immunity during infection with herpes simplex virus. *Nat Immunol* 10(5): 524–30. (FC)
4. Trowbridge JJ et al. (2009) DNA methyltransferase 1 is essential for and uniquely regulates hematopoietic stem and progenitor cells. *Cell Stem Cell* 5(4): 442–9. (FC)
5. Mende I et al. (2006) Flk2+ myeloid progenitors are the main source of Langerhans cells. *Blood* 107(4): 1383–90. (FC, IF)
6. Duncan AW et al. (2005) Integration of Notch and Wnt signaling in hematopoietic stem cell maintenance. *Nat Immunol* 6(3): 314–22. (FC)
7. Hock H et al. (2004) Gfi-1 restricts proliferation and preserves functional integrity of haematopoietic stem cells. *Nature* 431(7011): 1002–7. (FC)
8. Lessner SM et al. (2002) Atherosclerotic lesions grow through recruitment and proliferation of circulating monocytes in a murine model. *Am J Pathol* 160(6): 2145–55. (FC, IF, IHC)
9. Werner N et al. (2002) Bone marrow-derived progenitor cells modulate vascular reendothelialization and neointimal formation: effect of 3-hydroxy-3-methylglutaryl coenzyme A reductase inhibition. *Arterioscler Thromb Vasc Biol* 22(10): 1567–72. (IHC)
10. Wilson A et al. (2001) Notch 1-deficient common lymphoid precursors adopt a B cell fate in the thymus. *J Exp Med* 194(7): 1003–12. (FC)
11. Shen FW et al. (1986) Further definition of the Ly-5 system. *Immunogenetics* 24(3): 146–9.
12. Yakura H et al. (1983) On the function of Ly-5 in the regulation of antigen-driven B cell differentiation. Comparison and contrast with Lyb-2. *J Exp Med* 157(4): 1077–88.

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