

APC anti-mouse/human CD45R/B220 Antibody

Catalog# / Size	103211 / 25 µg 103212 / 100 µg
Clone	RA3-6B2
Regulatory Status	RUO
Other Names	B220
Isotype	Rat IgG2a, κ
Description	CD45R, also known as B220, is an isoform of CD45. It is a member of the protein tyrosine phosphatase (PTP) family with a molecular weight of approximately 180-240 kD. CD45R is expressed on B cells (at all developmental stages from pro-B cells through mature B cells), activated B cells, and subsets of T and NK cells. CD45R (B220) is also expressed on a subset of abnormal T cells involved in the pathogenesis of systemic autoimmunity in MRL- <i>Fas^{lpr}</i> and MRL- <i>Fas^{gld}</i> mice. It plays a critical role in TCR and BCR signaling. The primary ligands for CD45 are galectin-1, CD2, CD3, and CD4. CD45R is commonly used as a pan-B cell marker; however, CD19 may be more appropriate for B cell specificity.

Product Details

Verified Reactivity	Mouse, Human
Reported Reactivity	Cat
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Abelson murine leukemia virus-induced pre-B tumor cells
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography, and conjugated with APC under optimal conditions.
Concentration	0.2 mg/ml
Storage & Handling	The CD45R antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis . For flow cytometric staining, the suggested use of this reagent is ≤ 0.25 µg per 10 ⁶ cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
Excitation Laser	Red Laser (633 nm)
Application Notes	Clone RA3-6B2 has been described to react with an epitope on the extracellular domain of the transmembrane CD45 glycoprotein which is dependent upon the expression of exon A and specific carbohydrate residues. Additional reported applications (for the relevant formats) include: immunoprecipitation ¹ , <i>in vitro</i> and <i>in vivo</i> modulation of B cell responses ²⁻⁴ , immunohistochemistry of acetone-fixed frozen sections and formalin-fixed paraffin-embedded sections ^{5,6} , and spatial biology (IBEX) ^{14,15} .
Application References	<ol style="list-style-type: none"> 1. Coffman RL. 1982. <i>Immunol. Rev.</i> 69:5. (IP) 2. George A, <i>et al.</i> 1994. <i>J. Immunol.</i> 152:1014. (Activ) 3. Asensi V, <i>et al.</i> 1989. <i>Immunology</i> 68:204. (Activ) 4. Domiati-Saad R, <i>et al.</i> 1993. <i>J. Immunol.</i> 151:5936. (Activ) 5. Hata H, <i>et al.</i> 2004. <i>J. Clin. Invest.</i> 114:582. (IHC) 6. Monteith CE, <i>et al.</i> 1996. <i>Can. J. Vet. Res.</i> 60:193. (IHC) 7. Shih FF, <i>et al.</i> 2006. <i>J. Immunol.</i> 176:3438. (FC)
(PubMed link indicates BioLegend citation)	

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RRID AB_312996 (BioLegend Cat. No. 103211)
 AB_312997 (BioLegend Cat. No. 103212)

Antigen Details

Structure	Protein tyrosine phosphatase (PTP) family, 180-240 kD
Distribution	B cells, T cell subset, NK cell subset
Function	Phosphatase, T and B cell activation
Ligand/Receptor	Galectin-1, CD2, CD3, CD4
Cell Type	B cells, NK cells, T cells
Biology Area	Cell Biology, Immunology, Inhibitory Molecules, Neuroscience, Neuroscience Cell Markers
Molecular Family	CD Molecules
Antigen References	<ol style="list-style-type: none"> 1. Barclay A, <i>et al.</i> 1997. The Leukocyte Antigen FactsBook Academic Press. 2. Trowbridge IS, <i>et al.</i> 1993. <i>Annu. Rev. Immunol.</i> 12:85. 3. Kishihara K, <i>et al.</i> 1993. <i>Cell</i> 74:143. 4. Pulido R, <i>et al.</i> 1988. <i>J. Immunol.</i> 140:3851.
Gene ID	19264 5788

Related Protocols

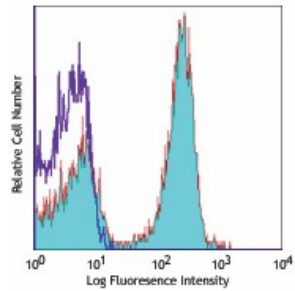
[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

Alexa Fluor® 594 anti-mouse/human CD45R/B220, APC anti-mouse/human CD45R/B220, Biotin anti-mouse/human CD45R/B220, FITC anti-mouse/human CD45R/B220, PE anti-mouse/human CD45R/B220, PE/Cyanine5 anti-mouse/human CD45R/B220, Purified anti-mouse/human CD45R/B220, PE/Cyanine7 anti-mouse/human CD45R/B220, APC/Cyanine7 anti-mouse/human CD45R/B220, Alexa Fluor® 488 anti-mouse/human CD45R/B220, Alexa Fluor® 647 anti-mouse/human CD45R/B220, Pacific Blue™ anti-mouse/human CD45R/B220, Alexa Fluor® 700 anti-mouse/human CD45R/B220, PerCP anti-mouse/human CD45R/B220, PerCP/Cyanine5.5 anti-mouse/human CD45R/B220, Brilliant Violet 421™ anti-mouse/human CD45R/B220, Brilliant Violet 570™ anti-mouse/human CD45R/B220, Brilliant Violet 650™ anti-mouse/human CD45R/B220, Brilliant Violet 605™ anti-mouse/human CD45R/B220, Brilliant Violet 785™ anti-mouse/human CD45R/B220, Brilliant Violet 510™ anti-mouse/human CD45R/B220, Purified anti-mouse/human CD45R/B220 (Maxpar® Ready), Brilliant Violet 711™ anti-mouse/human CD45R/B220, PE/Dazzle™ 594 anti-mouse/human CD45R/B220, APC/Fire™ 750 anti-mouse/human CD45R/B220, Brilliant Violet 750™ anti-mouse/human CD45R/B220, TotalSeq™-A0103 anti-mouse/human CD45R/B220, Spark Blue™ 550 anti-mouse/human CD45R/B220, Spark NIR™ 685 anti-mouse/human CD45R/B220, TotalSeq™-B0103 anti-mouse/human CD45R/B220, Ultra-LEAF™ Purified anti-mouse/human CD45R/B220, TotalSeq™-C0103 anti-mouse/human CD45R/B220, PE/Fire™ 640 anti-mouse/human CD45R/B220, APC/Fire™ 810 anti-mouse/human CD45R/B220, PE/Fire™ 700 anti-mouse/human CD45R/B220, Spark Violet™ 538 anti-mouse/human CD45R/B220, Spark YG™ 581 anti-mouse/human CD45R/B220, Spark YG™ 570 anti-mouse/human CD45R/B220, PE/Fire™ 810 anti-mouse/human CD45R/B220, Spark Blue™ 574 anti-mouse/human CD45R/B220 Antibody, Spark Violet™ 423 anti-mouse/human CD45R/B220 Antibody, Spark Red™ 718 anti-mouse/human CD45R/B220

Product Data

C57BL/6 mouse splenocytes stained
with RA3-6B2 APC



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