

TotalSeq™-B0157 anti-mouse CD45.2 Antibody

Catalog# / Size	109859 / 10 µg
Clone	104
Regulatory Status	RUO
Other Names	Ly-5.2, LCA
Isotype	Mouse (SJL) IgG2a, κ
Barcode Sequence	CACCGTCATTCAACC
Description	CD45.2 is an alloantigen of CD45, expressed by Ly5.2 bearing mouse strains (e.g., A, AKR, BALB/c, CBA/Ca, CBA/J, C3H/He, C57BL, C57BR, C57L, C58, DBA/1, DBA/2, NZB, SWR, 129). CD45, a member of the protein tyrosine phosphatase (PTP) family, is a 180-240 kD glycoprotein expressed on all hematopoietic cells except mature erythrocytes and platelets. There are multiple isoforms in the mouse that play key roles in TCR and BCR signal transduction. These isoforms are very specific to the activation and maturation states of the cell as well as specific cell type. The primary ligands for CD45 are galectin-1, CD2, CD3, CD4, TCR, CD22, and Thy-1.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	B10.S mouse thymocytes and splenocytes
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 1 mM EDTA.
Preparation	The antibody was purified by chromatography and conjugated with TotalSeq™-B oligomer under optimal conditions.
Concentration	0.5 mg/mL
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. Do not freeze.
Application	PG - Quality tested
Recommended Usage	<p>Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis and the oligomer sequence is confirmed by sequencing. TotalSeq™-B antibodies are compatible with 10x Genomics Single Cell Gene Expression Solutions.</p> <p>To maximize performance, it is strongly recommended that the reagent be titrated for each application, and that you centrifuge the antibody dilution before adding to the cells at 14,000xg at 2 - 8°C for 10 minutes. Carefully pipette out the liquid avoiding the bottom of the tube and add to the cell suspension. For Proteogenomics analysis, the suggested starting amount of this reagent for titration is ≤ 1.0 µg per million cells in 100 µL volume. Refer to the corresponding TotalSeq™ protocol for specific staining instructions.</p> <p>Buyer is solely responsible for determining whether Buyer has all intellectual property rights that are necessary for Buyer's intended uses of the BioLegend TotalSeq™ products. For example, for any technology platform Buyer uses with TotalSeq™, it is Buyer's sole responsibility to determine whether it has all necessary third party intellectual property rights to use that platform and TotalSeq™ with that platform.</p>
Application Notes	The 104 antibody does not react with mouse cells expressing the CD45.1 alloantigen. Additional reported applications (for the relevant formats) include: immunoprecipitation ⁴ , <i>in vivo</i> and <i>in vitro</i> blocking of B cell responses ^{1,2} , and immunohistochemical staining of acetone-fixed frozen sections ³ .
Additional Product Notes	TotalSeq™ reagents are designed to profile protein levels at a single cell level following an optimized protocol similar to the CITE-seq workflow. A compatible single cell device (e.g. 10x

[Genomics Chromium System and Reagents](#)) and sequencer (e.g. Illumina analyzers) are required. Please contact [technical support](#) for more information, or visit biolegend.com/totalseq.

The barcode flanking sequences are GTGACTGGAGTTCAGACGTGTGCTCTTCCGATCTNNNNNNNNNN (PCR handle), and NNNNNNNNGCTTTAAGGCCGGTCCTAGC*A*A (capture sequence). N represents either randomly selected A, C, G, or T, and * indicates a phosphorothioated bond, to prevent nuclease degradation.

View more applications data for this product in our [Scientific Poster Library](#).

Application References

(PubMed link indicates BioLegend citation)

1. Yakura H, *et al.* 1983. *J. Exp. Med.* 157:1077. (Block)
2. Yakura H, *et al.* 1986. *J. Immunol.* 136:2729. (Block)
3. Suzuki K, *et al.* 2000. *Immunity* 13:691. (IHC)
4. Shen FW, *et al.* 1986. *Immunogenetics* 24:146. (IP)
5. Baldwin TA and Hogquist KA. 2007. *J. Immunol.* 179:837.
6. Pascal V, *et al.* 2007. *J. Immunol.* 179:1751.
7. Burman AC, *et al.* 2007. *Blood* 110:1064.
8. Kincaid EZ, *et al.* 2007. *J. Immunol.* 179:3187.
9. Phan TG, *et al.* 2007. *Nature Immunol.* 8:992.
10. Nakano-Yokomizo T, *et al.* 2011. *J. Exp Med.* 208:1661. [PubMed](#)
11. Wen T, *et al.* 2013. *PNAS.* 110:6067. [PubMed](#)
12. Kohlmeier JE, *et al.* 2008. *Immunity.* 29:101. (FC) [PubMed](#)

RRID AB_2819822 (BioLegend Cat. No. 109859)

Antigen Details

Structure	Protein tyrosine phosphatase (PTP) family, 180-240 kD
Distribution	All hematopoietic cells except mature erythrocytes and platelets of the CD45.2 strain of mice
Function	Phosphatase, T and B cell activation
Ligand/Receptor	Galectin-1, CD2, CD3, CD4
Biology Area	Cell Biology, Immunology, Inhibitory Molecules, Innate Immunity, Neuroscience, Neuroscience Cell Markers
Molecular Family	CD Molecules
Antigen References	1. Suzuki K, <i>et al.</i> 2000. <i>Immunity</i> 13:691.
Gene ID	19264

Related Protocols

[TotalSeq™-B or -C with 10x Feature Barcoding Technology](#)

Other Formats

Biotin anti-mouse CD45.2, FITC anti-mouse CD45.2, PE anti-mouse CD45.2, Purified anti-mouse CD45.2, APC anti-mouse CD45.2, Alexa Fluor® 488 anti-mouse CD45.2, Alexa Fluor® 647 anti-mouse CD45.2, Pacific Blue™ anti-mouse CD45.2, Alexa Fluor® 700 anti-mouse CD45.2, APC/Cyanine7 anti-mouse CD45.2, PerCP anti-mouse CD45.2, PerCP/Cyanine5.5 anti-mouse CD45.2, PE/Cyanine7 anti-mouse CD45.2, Brilliant Violet 421™ anti-mouse CD45.2, Brilliant Violet 570™ anti-mouse CD45.2, Brilliant Violet 650™ anti-mouse CD45.2, Brilliant Violet 510™ anti-mouse CD45.2, Brilliant Violet 785™ anti-mouse CD45.2, Brilliant Violet 605™ anti-mouse CD45.2, Purified anti-mouse CD45.2 (Maxpar® Ready), PE/Dazzle™ 594 anti-mouse CD45.2, Brilliant Violet 711™ anti-mouse CD45.2, Alexa Fluor® 594 anti-mouse CD45.2, APC/Fire™ 750 anti-mouse CD45.2, TotalSeq™-A0157 anti-mouse CD45.2, TotalSeq™-B0157 anti-mouse CD45.2, TotalSeq™-C0157 anti-mouse CD45.2, Brilliant Violet 750™ anti-mouse CD45.2, Spark Blue™ 550 anti-mouse CD45.2, Spark NIR™ 685 anti-mouse CD45.2

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