

Spark YG™ 570 anti-mouse CD8a Antibody

Catalog# / Size	100787 / 25 µg 100788 / 100 µg
Clone	53-6.7
Regulatory Status	RUO
Other Names	T8, Lyt2, Ly-2
Isotype	Rat IgG2a, κ
Description	CD8, also known as Lyt-2, Ly-2, or T8, consists of disulfide-linked α and β chains that form the α(CD8a)/β(CD8b) heterodimer and α/α homodimer. CD8a is a 34 kD protein that belongs to the immunoglobulin family. The CD8 α/β heterodimer is expressed on the surface of most thymocytes and a subset of mature TCR α/β T cells. CD8 expression on mature T cells is non-overlapping with CD4. The CD8 α/α homodimer is expressed on a subset of γ/δ TCR-bearing T cells, NK cells, intestinal intraepithelial lymphocytes, and lymphoid dendritic cells. CD8 is an antigen co-receptor on T cells that interacts with MHC class I on antigen-presenting cells or epithelial cells. CD8 promotes T cell activation through its association with the TCR complex and protein tyrosine kinase lck.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Mouse thymus or spleen
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Preparation	The antibody was purified by affinity chromatography and conjugated with Spark YG™ 570 under optimal conditions.
Concentration	0.5 mg/mL
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	IHC-F - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by immunohistochemical staining on frozen tissue sections. For immunohistochemistry, a concentration range of 5 - 10 µg/mL is suggested. It is recommended that the reagent be titrated for optimal performance for each application.
Excitation Laser	Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	Clone 53-6.7 antibody competes with clone 5H10-1 antibody for binding to thymocytes ³ . The 53-6.7 antibody has been reported to block antigen presentation via MHC class I and inhibit T cell responses to IL-2. This antibody has also been used for depletion of CD8a ⁺ cells. Additional reported applications (for the relevant formats) include: immunoprecipitation ^{1,3} , <i>in vivo</i> and <i>in vitro</i> cell depletion ^{2,10,15} , inhibition of CD8 T cell proliferation ³ , blocking of cytotoxicity ^{3,4} , immunohistochemical staining ^{5,6} of acetone-fixed frozen sections and zinc-fixed paraffin-embedded sections, and spatial biology (IBEX) ^{29,30} . Clone 53-6.7 is not recommended for immunohistochemistry of formalin-fixed paraffin sections. The Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays or <i>in vivo</i> studies (Cat No. 100746).
Application References	<ol style="list-style-type: none"> 1. Ledbetter JA, <i>et al.</i> 1979. <i>Immunol. Rev.</i> 47:63. (IHC, IP) 2. Hathcock KS. 1991. <i>Current Protocols in Immunology</i>. 3.4.1. (Deplete) 3. Takahashi K, <i>et al.</i> 1992. <i>P. Natl. Acad. Sci. USA</i> 89:5557. (Block, IP) 4. Ledbetter JA, <i>et al.</i> 1981. <i>J. Exp. Med.</i> 153:1503. (Block) 5. Hata H, <i>et al.</i> 2004. <i>J. Clin. Invest.</i> 114:582. (IHC)
(PubMed link indicates BioLegend citation)	

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RRID AB_2860588 (BioLegend Cat. No. 100787)
 AB_2860589 (BioLegend Cat. No. 100788)

Antigen Details

Structure	Ig superfamily, CD8 α chain, 34 kD
Distribution	Most thymocytes, T cell subset, some NK cells, lymphoid dendritic cells
Function	Co-receptor for TCR
Ligand/Receptor	MHC class I molecule
Antigen References	<ol style="list-style-type: none"> 1. Barclay A, <i>et al.</i> 1997. <i>The Leukocyte Antigen FactsBook</i> Academic Press. 2. Zamoyska R. 1994. <i>Immunity</i> 1:243. 3. Ellmeier W, <i>et al.</i> 1999. <i>Annu. Rev. Immunol.</i> 17:523.
Gene ID	12525

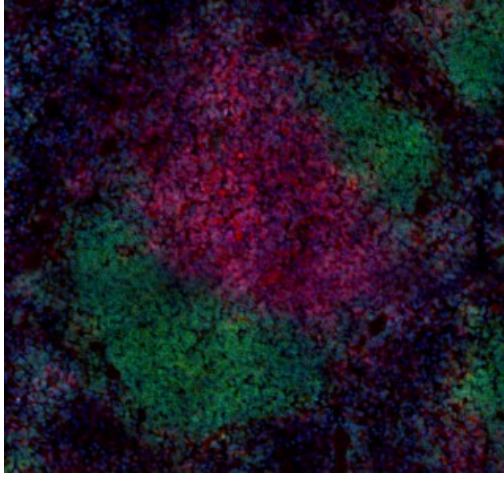
Related Protocols

[Immunohistochemistry Protocol for Frozen Sections](#)

Other Formats

APC anti-mouse CD8a, Biotin anti-mouse CD8a, FITC anti-mouse CD8a, PE anti-mouse CD8a, PE/Cyanine5 anti-mouse CD8a, Purified anti-mouse CD8a, PE/Cyanine7 anti-mouse CD8a, APC/Cyanine7 anti-mouse CD8a, Alexa Fluor® 488 anti-mouse CD8a, Alexa Fluor® 647 anti-mouse CD8a, Pacific Blue™ anti-mouse CD8a, Alexa Fluor® 700 anti-mouse CD8a, PerCP/Cyanine5.5 anti-mouse CD8a, PerCP anti-mouse CD8a, Brilliant Violet 421™ anti-mouse CD8a, Brilliant Violet 570™ anti-mouse CD8a, Brilliant Violet 650™ anti-mouse CD8a, Brilliant Violet 605™ anti-mouse CD8a, Ultra-LEAF™ Purified anti-mouse CD8a, Brilliant Violet 711™ anti-mouse CD8a, Brilliant Violet 785™ anti-mouse CD8a, Brilliant Violet 510™ anti-mouse CD8a, Purified anti-mouse CD8a (Maxpar® Ready), Alexa Fluor® 594 anti-mouse CD8a, PE/Dazzle™ 594 anti-mouse CD8a, APC/Fire™ 750 anti-mouse CD8a, GolnVivo™ Purified anti-mouse CD8a, TotalSeq™-A0002 anti-mouse CD8a, Spark Blue™ 550 anti-mouse CD8a, Spark NIR™ 685 anti-mouse CD8a, TotalSeq™-C0002 anti-mouse CD8a, TotalSeq™-B0002 anti-mouse CD8a, Spark YG™ 570 anti-mouse CD8a, PE/Fire™ 640 anti-mouse CD8a, PE/Fire™ 700 anti-mouse CD8a, Spark Blue™ 574 anti-mouse CD8a Antibody, Spark Violet™ 423 anti-mouse CD8a Antibody, Spark UV™ 387 anti-mouse CD8a

Product Data



C57BL/6 mouse frozen spleen section was fixed with 4% paraformaldehyde (PFA) for 10 minutes at room temperature and blocked with 5% FBS for 1 hour at room temperature. Then the section was stained with 5 µg/mL of CD8a (clone 53-6.7) Spark YG™ 570 (red) and 5 µg/mL of B220 (clone RA3-6B2) Alexa Fluor® 647 (green) overnight at 4°C. The nuclei were counter-stained with DAPI (blue). The image was scanned with a 10X objective and stitched with MetaMorph software.

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