Antibodies

Anti-Mouse CD8a Antibody, Clone 53-6.7, Alexa Fluor® 488

Rat monoclonal IgG2a antibody against mouse, toad CD8a, Alexa Fluor® 488-conjugated

Catalog	#60023AD.1	25 µg	0.5 mg/mL
	#60023AD	100 µg	0.5 mg/mL

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Product Description

The 53-6.7 antibody reacts with murine CD8a, a 32 - 34 kDa type I transmembrane glycoprotein which is a subunit of CD8. CD8 is a disulfide-bonded dimer, found either as a heterodimer of CD8a (α) and CD8b (β) subunits (i.e., αβ) or a homodimer (αα). CD8 acts as a co-receptor to the T cell receptor (TCR) during T cell activation by binding MHC Class I molecules presented by an antigen-presenting cell. It functions to strengthen the association between the TCR and MHC I-antigen complex and to amplify signals from the TCR to the cytoplasm through the interaction of its intracellular domain with cytoplasmic tyrosine kinases such as Lck. The CD8a chain binds to the alpha-3 domain of class I MHC molecules. CD8 is expressed in the αβ form by a majority of thymocytes and a subset of mature peripheral blood T cells (T cytotoxic cells), and in the ββ form by γδ T cells, a subset of intestinal intraepithelial lymphocytes and dendritic cells. The 53-6.7 antibody reportedly blocks antigen presentation via MHC class I and inhibits IL-2-dependent T cell responses.

Target Antigen Name:	CD8a
Alternative Names:	T8, Lyt2, Ly-2
Gene ID:	12525
Species Reactivity:	Mouse, Toad
Host Species:	Rat (LOU)
Clonality:	Monoclonal
Clone:	53-6.7
Isotype:	IgG2a, kappa
Immunogen:	Mouse thymus or spleen
Conjugate:	Alexa Fluor® 488

Applications

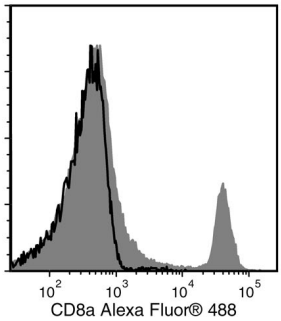
Verified:	FC
Reported:	FC
Special Applications:	This antibody clone has been verified for purity assessments of cells isolated with EasySep™ kits, including EasySep™ Mouse CD8+ T Cell Enrichment Kit (Catalog #19753) and EasySep™ Mouse CD8+ T Cell Isolation Kit (Catalog #19853).

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 Alexa Fluor® 488 under optimal conditions. The solution is free of unconjugated Alexa Fluor® 488.
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 request a lot-specific Certificate of Analysis from techsupport@stemcell.com.
Directions for Use:	For flow cytometry the suggested use of this antibody is ≤0.25 µg per 1 x 10e6 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 CD8a Antibody, Clone 53-6.7, Alexa Fluor® 488 (filled histogram) or a rat IgG2a, kappa Alexa Fluor® 488 isotype control antibody (solid line histogram).

Related Products

PRODUCT NAME	CATALOG #	SIZE
Anti-Mouse CD8a Antibody, Clone 53-6.7	60023	Coming soon
Anti-Mouse CD8a Antibody, Clone 53-6.7, PE	60023PE.1	50 µg
Anti-Mouse CD8a Antibody, Clone 53-6.7, PE	60023PE	200 µg
Anti-Mouse CD8a Antibody, Clone 53-6.7, Alexa Fluor® 488	60023AD.1	25 µg
Anti-Mouse CD8a Antibody, Clone 53-6.7, Alexa Fluor® 488	60023AD	100 µg

References

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3. Hathcock KS. T cell depletion by cytotoxic elimination. Current Protocols in Immunology. 3.4.1, 1991 (Depletion)
4. Takahashi K, et al. CD4 and CD8 regulate interleukin 2 responses of T cells. Proc Natl Acad Sci USA 89(12): 5557-61, 1992 (FA, IP)
5. Grabbe S, et al. Beta2 integrins are required for skin homing of primed T cells but not for priming naïve T cells. J Clin Invest 109(2): 183-92, 2002 (IHC)
6. Bouwer HGA, et al. Directed antigen delivery as a vaccine strategy for an intracellular bacterial pathogen. Proc Natl Acad Sci USA 103(13): 5102-07, 2006 (Depletion, FC)
7. Shih FF, et al. Differential MHC class II presentation of a pathogenic autoantigen during health and disease. J Immunol 176(6): 3438-48, 2006 (FC)
8. Geiben-Lynn R, et al. CD4+ T lymphocytes mediate in vivo clearance of plasmid DNA vaccine antigen expression and potentiate CD8+ T-cell immune responses. Blood 112(12): 4585-90, 2008 (Depletion)
9. Bankoti J, et al. Effects of TCDD on the fate of naive dendritic cells. Toxicol Sci 115(2): 422-34, 2010 (FC)
10. McDole, JR, et al. Rapid formation of extended processes and engagement of Theiler's virus-enfected neurons by CNS-infiltrating CD8 T cells. Am J Pathol 177(4): 1823-33, 2010