

# CD8- $\alpha$ (53-6.7): sc-18913

## BACKGROUND

The T cell receptor (TCR) is a heterodimer composed of either  $\alpha$  and  $\beta$  or  $\gamma$  and  $\delta$  chains. CD3 chains and the CD4 or CD8 (CD8- $\alpha$  and CD8- $\beta$ ) co-receptors are also required for efficient signal transduction through the TCR. The TCR is expressed on T helper and T cytotoxic cells that can be distinguished by their expression of CD4 and CD8 proteins; T helper cells express CD4 proteins and T cytotoxic cells display CD8 proteins. CD8s are cell surface glycoproteins that exist as two chain complex ( $\alpha\alpha$  or  $\alpha\beta$ ) receptors that bind class I MHC molecules presented by the antigen-presenting cell (APC). A primary function of CD8 proteins is to facilitate antigen recognition by the TCR and to strengthen the avidity of the TCR-antigen interactions. An additional role for CD8-expressing T cells may be to maintain low levels of HIV expression.

## CHROMOSOMAL LOCATION

Genetic locus: Cd8a (mouse) mapping to 6 C1.

## SOURCE

CD8- $\alpha$  (53-6.7) is a rat monoclonal antibody raised against spleen cells of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for *in vitro* and *in vivo* depletion, inhibition of T-cell responses to IL-2, and blocking of cytotoxicity, sc-18913 L, 200  $\mu$ g/0.1 ml.

CD8- $\alpha$  (53-6.7) is available conjugated to either phycoerythrin (sc-18913 PE), fluorescein (sc-18913 FITC), Alexa Fluor<sup>®</sup> 488 (sc-18913 AF488), Alexa Fluor<sup>®</sup> 546 (sc-18913 AF546), Alexa Fluor<sup>®</sup> 594 (sc-18913 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-18913 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-18913 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-18913 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, CD8- $\alpha$  (53-6.7) is available conjugated to either APC (sc-18913 APC) or APC-Cy7 (sc-18913 APCC7), 100 tests in 2 ml, for IF, IHC(P) and FCM.

## APPLICATIONS

CD8- $\alpha$  (53-6.7) is recommended for detection of CD8- $\alpha$  chain of mouse origin by immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for CD8- $\alpha$  siRNA (m): sc-43677, CD8- $\alpha$  shRNA Plasmid (m): sc-43677-SH and CD8- $\alpha$  shRNA (m) Lentiviral Particles: sc-43677-V.

Molecular Weight of CD8- $\alpha$ : 39 kDa.

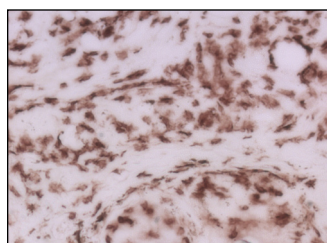
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

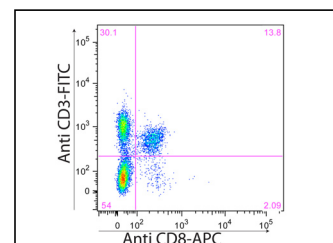
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



CD8- $\alpha$  (53-6.7): sc-18913. Immunoperoxidase staining of paraformaldehyde-fixed, frozen tissue sections. Infiltrating CD8<sup>+</sup> T cells in allogeneic skin engrafted onto mouse. Kindly provided by The M.C. Zúñiga Lab, University of California Santa Cruz.



CD3 (17A2) sc-18843-FITC. CD8- $\alpha$  (53-6.7) sc-18913-APC. Mouse lymph nodes. Kindly provided by The M.C. Zúñiga Lab, University of California Santa Cruz.

## SELECT PRODUCT CITATIONS

- Deng, G.M., et al. 2010. Lupus serum IgG induces skin inflammation through the TNFR1 signaling pathway. *J. Immunol.* 184: 7154-7161.
- Bang, M.A., et al. 2015. *Bacillus subtilis* KCTC 11782BP-produced alginate oligosaccharide effectively suppresses asthma via T-helper cell type 2-related cytokines. *PLoS ONE* 10: e0117524.
- Seo, J.H., et al. 2016. *Erythronium japonicum* attenuates histopathological lung abnormalities in a mouse model of ovalbumin-induced asthma. *Int. J. Mol. Med.* 37: 1221-1228.
- Forsberg, M.H., et al. 2017. CD137 plays both pathogenic and protective roles in type 1 diabetes development in NOD mice. *J. Immunol.* 198: 3857-3868.
- Lee, S.Y., et al. 2018. *Mycocleptodonoides aitchisonii* suppresses asthma via Th2 and Th1 cell regulation in an ovalbumin-induced asthma mouse model. *Mol. Med. Rep.* 17: 11-20.
- Rojas-Quintero, J., et al. 2018. Matrix metalloproteinase-9 deficiency protects mice from severe influenza A viral infection. *JCI Insight* 3: e99022.
- Mainetti, L.E., et al. 2020. Losartan improves the therapeutic effect of metronomic cyclophosphamide in triple negative mammary cancer models. *Oncotarget* 11: 3048-3060.
- Nishri, Y., et al. 2021. Modeling compartmentalized chronic immune-mediated demyelinating CNS disease in the Biozzi ABH mouse. *J. Neuroimmunol.* 356: 577582.
- Li, X., et al. 2022. CXCL10-armed oncolytic adenovirus promotes tumor-infiltrating T-cell chemotaxis to enhance anti-PD-1 therapy. *Oncoimmunology* 11: 2118210.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

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