SANTA CRUZ BIOTECHNOLOGY, INC.

CD8-α (53-6.7): sc-18913

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The T cell receptor (TCR) is a heterodimer composed of either α and β or γ and δ chains. CD3 chains and the CD4 or CD8 (CD8-α and CD8-β) 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 (αα or αβ) 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-α (53-6.7) is a rat monoclonal antibody raised against spleen cells of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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 µg/0.1 ml.

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

In addition, CD8-α (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-α (53-6.7) is recommended for detection of CD8-α chain of mouse origin by immunoprecipitation [1-2 µg per 100-500 µg 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 µg per 1 x 10^6 cells).

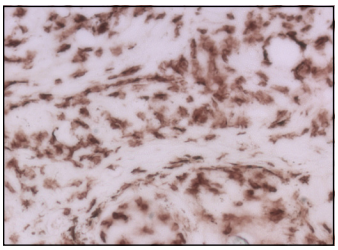
Suitable for use as control antibody for CD8-α siRNA (m): sc-43677, CD8-α shRNA Plasmid (m): sc-43677-SH and CD8-α shRNA (m) Lentiviral Particles: sc-43677-V.

Molecular Weight of CD8-α: 39 kDa.

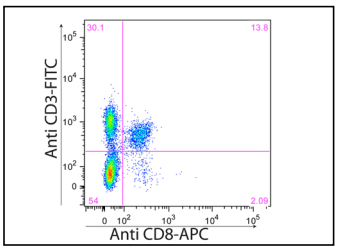
STORAGE

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

DATA



CD8-α (53-6.7): sc-18913. Immunoperoxidase staining of paraformaldehyde-fixed, frozen tissue sections. Infiltrating $CD8^+$ 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-α (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

1. Deng, G.M., et al. 2010. Lupus serum IgG induces skin inflammation through the TNFR1 signaling pathway. J. Immunol. 184: 7154-7161.
2. 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.
3. 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.
4. 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.
5. Lee, S.Y., et al. 2018. *Mycoleptodonoides aitchisonii* suppresses asthma via Th2 and Th1 cell regulation in an ovalbumin-induced asthma mouse model. Mol. Med. Rep. 17: 11-20.
6. Rojas-Quintero, J., et al. 2018. Matrix metalloproteinase-9 deficiency protects mice from severe influenza A viral infection. JCI Insight 3: e99022.
7. Mainetti, L.E., et al. 2020. Losartan improves the therapeutic effect of metronomic cyclophosphamide in triple negative mammary cancer models. Oncotarget 11: 3048-3060.
8. Nishri, Y., et al. 2021. Modeling compartmentalized chronic immune-mediated demyelinating CNS disease in the Biozzi ABH mouse. J. Neuroimmunol. 356: 577582.
9. Li, X., et al. 2022. CXCL10-armed oncolytic adenovirus promotes tumor-infiltrating T-cell chemotaxis to enhance anti-PD-1 therapy. Oncoimmunology 11: 2118210.

RESEARCH USE

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