**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 IgG2a 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. CD8-\( \alpha \) is recombinant protein purified by protein A affinity chromatography, stored at 4°C, DO NOT FREEZE. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**APPLICATIONS**

CD8-\( \alpha \) (53-6.7) is recomended 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 10^6 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.

**STORAGE**

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

**DATA**

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

CD3 (1742) sc-18843-APC. 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**


**RESEARCH USE**

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