SANTA CRUZ BIOTECHNOLOGY, INC.

# CD8-β (C-16): sc-1143

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*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 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. T helper cells express CD4 proteins and T cytotoxic cells display CD8. CD8, also designated Leu 2 or T8, is a 32 kDa cell surface glycoprotein. It is a two chain complex (α-α or α-β) receptor that binds class I MHC molecules presented by the antigen-presenting cell (APC). A primary function of CD8 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.

## REFERENCES


1. Nakayama, K., et al. 1989. Structure and expression of the gene encoding CD8-α chain (Leu-2/T8). Immunogenetics 30: 393-397.
2. Allison, J.P., et al. 1991. The immunobiology of T cells with invariant gamma delta antigen regions. Ann. Rev. Immunol. 9: 679-705.
3. Zuniga-Pflucker, J.C., et al. 1991. CD4 and CD8 act as co-receptors during thymic selection of the T cell repertoire. Sem. Immunol. 3: 167-175.
4. Fleury, S.G., et al. 1991. CD4 and CD8 recognition of class II and class I molecules of the major histocompatibility complex. Sem. Immunol. 3: 177-185.
5. Janeway, C.A. Jr. 1992. The T cell receptor as a multicomponent signalling machine: CD4/CD8 corecep-tors and CD45 in T cell activation. Ann. Rev. Immunol. 10: 645-674.
6. Julius, M., et al. 1993. Distinct roles for CD4 and CD8 as co-receptors in antigen receptor signalling. Immunol. Today 14: 177-183.
7. Ehrich, E.W., et al. 1993. T cell receptor interaction with peptide/major histocompatibility complex (MHC) and superantigen MHC ligands is dominated by antigen. J. Exp. Med. 178: 713-722.
8. Buseyne, F., et al. 1993. HIV-specific $CD8^+$ T cell immune responses and viral replication. AIDS 2 Suppl.: S81-S85.
9. Luescher, I.F., et al. 1995. CD8 modulation of T cell antigen receptor-ligand interactions on living cytotoxic T lymphocytes. Nature 373: 353-356.


## CHROMOSOMAL LOCATION

Genetic locus: CD8B (human) mapping to 2p11.2.

## SOURCE

CD8-β (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of CD8-β of human origin.

## STORAGE

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

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1143 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CD8-β (C-16) is recommended for detection of CD8-β chain of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD8-β siRNA (h): sc-35029, CD8-β shRNA Plasmid (h): sc-35029-SH and CD8-β shRNA (h) Lentiviral Particles: sc-35029-V.

Molecular Weight of CD8-β: 32 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208, CCRF-CEM cell lysate: sc-2225 or CCRF-HSB-2 cell lysate: sc-2265.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS


1. Zhang, Q., et al. 1994. Bcl3 encodes a nuclear protein which can alter the subcellular location of NFκB proteins. Mol. Cell. Biol. 14: 3915-3926.


## RESEARCH USE

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

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.