SANTA CRUZ BIOTECHNOLOGY, INC.

CD8-β (M-20): sc-1144

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 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), a cell surface glycoprotein, is a two chain complex (αα or αβ) 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 γδ antigen regions. Annu. Rev. Immunol. 9: 679-705.

CHROMOSOMAL LOCATION

Genetic locus: CD8B (human) mapping to 2p11.2; Cd8b1 (mouse) mapping to 6 C1.

SOURCE

CD8-β (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CD8-β of mouse origin.

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-1144 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CD8-β (M-20) is recommended for detection of CD8-β chain of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 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 siRNA (m): sc-42757, CD8-β shRNA Plasmid (h): sc-35029-SH, CD8-β shRNA Plasmid (m): sc-42757-SH, CD8-β shRNA (h) Lentiviral Particles: sc-35029-V and CD8-β shRNA (m) Lentiviral Particles: sc-42757-V.

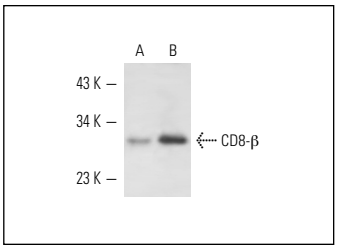
Molecular Weight of CD8-β: 32 kDa.

Positive Controls: mouse thymus extract: sc-2406 or BYDP whole cell lysate: sc-364368.

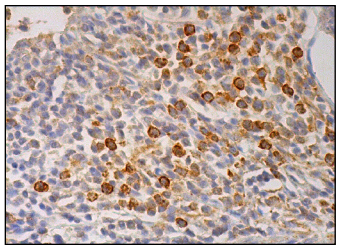
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



CD8-β (M-20): sc-1144. Western blot analysis of CD8-β expression in BYDP whole cell lysate (**A**) and mouse thymus tissue extract (**B**).



CD8-β (M-20): sc-1144. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing membrane and cytoplasmic staining of subset of cells in germinal and non-germinal centers.

SELECT PRODUCT CITATIONS

1. Campregher, C., et al. 2012. MSH3-deficiency initiates EMAST without oncogenic transformation of human colon epithelial cells. PLoS ONE 7: e50541.

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.

PROTOCOLS

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