

CD8- β (5F2): sc-19994

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 ($\alpha\alpha$ or $\alpha\beta$) 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.

CHROMOSOMAL LOCATION

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

SOURCE

CD8- β (5F2) is a mouse monoclonal antibody raised against the β chain of CD8 of rat origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD8- β (5F2) is available conjugated to either phycoerythrin (sc-19994 PE) or fluorescein (sc-19994 FITC), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

CD8- β (5F2) is recommended for detection of CD8- β chain of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 μ g per 1 x 10⁶ cells).

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.

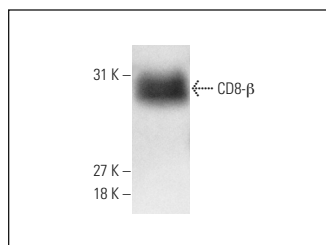
Molecular Weight of CD8- β : 32 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208, CCRF-CEM cell lysate: sc-2225 or SUP-T1 whole cell lysate: sc-364796.

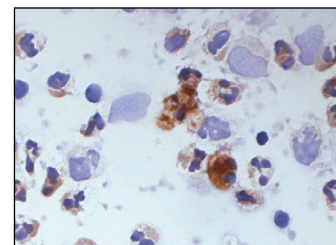
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CD8- β (5F2): sc-19994. Western blot analysis of CD8- β expression in SUP-T1 whole cell lysate.



CD8- β (5F2): sc-19994. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human peripheral blood showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

- Schroers, R., et al. 2005. Immunophenotypic and genetic characterization of a CD8 positive mantle cell lymphoma in a patient with concomitant Mycosis fungoides. *Eur. J. Haematol.* 75: 78-84.
- Devine, L., et al. 2006. Mapping the binding site on CD8- β for MHC class I reveals mutants with enhanced binding. *J. Immunol.* 177: 3930-3938.
- Thakral, D., et al. 2008. Differential expression of the human CD8 β splice variants and regulation of the M-2 isoform by ubiquitination. *J. Immunol.* 180: 7431-7442.
- Leonard, J.A., et al. 2011. HIV-1 Nef disrupts intracellular trafficking of major histocompatibility complex class I, CD4, CD8, and CD28 by distinct pathways that share common elements. *J. Virol.* 85: 6867-6881.
- Ivanov, A.V., et al. 2015. HCV core protein uses multiple mechanisms to induce oxidative stress in human hepatoma Huh7 cells. *Viruses* 7: 2745-2770.
- Thierauf, J., et al. 2015. Identification and clinical relevance of PD-L1 expression in primary mucosal malignant melanoma of the head and neck. *Melanoma Res.* 25: 503-509.
- Smirnova, O.A., et al. 2016. Hepatitis C virus NS5A protein triggers oxidative stress by inducing NADPH oxidases 1 and 4 and cytochrome P450 2E1. *Oxid. Med. Cell. Longev.* 2016: 8341937.

RESEARCH USE

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