

# CD8- $\beta$ (53-5.8): sc-18915

## 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 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 ( $\alpha\alpha$  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.

## REFERENCES

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2. Allison, J.P., et al. 1991. The immunobiology of T cells with invariant gamma delta antigen regions. *Annu. 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. *Semin. 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. *Semin. Immunol.* 3: 177-185.
5. Janeway, C.A., Jr. 1992. The T cell receptor as a multicomponent signalling machine: CD4/CD8 coreceptors and CD45 in T cell activation. *Annu. 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. Ehrlich, 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<sup>+</sup> 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: Cd8b1 (mouse) mapping to 6 C1.

## SOURCE

CD8- $\beta$  (53-5.8) is a rat monoclonal antibody immunized with antigen from mouse thymus or spleen.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD8- $\beta$  (53-5.8) is available conjugated to either phycoerythrin (sc-18915 PE) or fluorescein (sc-18915 FITC), 200  $\mu$ g/ml, for IF, IHC(P) and FCM.

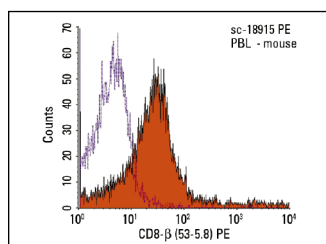
## APPLICATIONS

CD8- $\beta$  (53-5.8) is recommended for detection of CD8- $\beta$  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) and flow cytometry (1  $\mu$ g per  $1 \times 10^6$  cells).

Suitable for use as control antibody for CD8- $\beta$  siRNA (m): sc-42757, CD8- $\beta$  shRNA Plasmid (m): sc-42757-SH and CD8- $\beta$  shRNA (m) Lentiviral Particles: sc-42757-V.

Molecular Weight of CD8- $\beta$ : 32 kDa.

## DATA



CD8- $\beta$  (53-5.8) PE: sc-18915 PE. FCM analysis of mouse peripheral blood leukocytes. Black line histogram represents the isotype control, normal rat IgG<sub>2a</sub>: sc-2872.

## 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](http://www.scbt.com) for detailed protocols and support products.