

CD8- β (H-149): sc-9147

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 γ/δ 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 co-receptors 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. 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⁺ T cell immune responses and viral replication. *AIDS 2 Suppl.*: S81-S85.

CHROMOSOMAL LOCATION

Genetic locus: CD8B1 (human) mapping to 2p12.

SOURCE

CD8- β (H-149) is a rabbit polyclonal antibody raised against amino acids 22-170 of CD8- β of human origin.

PRODUCT

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

Available as fluorescein conjugate for immunofluorescence, sc-9147 FITC, 200 μ g/1 ml.

RESEARCH USE

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

APPLICATIONS

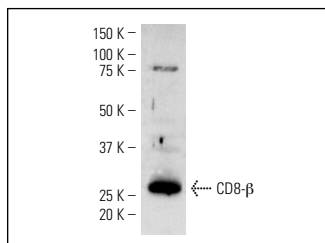
CD8- β (H-149) is recommended for detection of CD8- β chain of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) 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: SUP-T1 whole cell lysate: sc-364796 or CCRF-HSB-2 cell lysate: sc-2265.

DATA



CD8- β (H-149): sc-9147. Western blot analysis of CD8- β expression in SUP-T1 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Dadi, H.K., et al. 2003. Effect of CD3- δ deficiency on maturation of α/β and γ/δ T-cell lineages in severe combined immunodeficiency. *N. Eng. J. Med.* 349: 1821-1828.
2. Singh, A.K., et al. 2003. Lipopolysaccharide (LPS) induced activation of the immune system in control rats and rats chronically exposed to a low level of the organothiophosphate insecticide, acephate. *Toxicol. Ind. Health* 19: 93-108.
3. Pang, D.J., et al. 2007. CD8 raft localization is induced by its assembly into CD8- α/β heterodimers, not CD8- α/α homodimers. *J. Biol. Chem.* 282: 13884-13894.

STORAGE

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



Try **CD8- β (F-5): sc-25277** or **CD8- β (5F2): sc-19994**, our highly recommended monoclonal alternatives to CD8- β (H-149).