

CD8- α (0.N.66): sc-70791

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 (CD8- α and CD8- β) 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 proteins; T helper cells express CD4 proteins and T cytotoxic cells display CD8 proteins. CD8s are cell surface glycoproteins that exist as two chain complex ($\alpha\alpha$ or $\alpha\beta$) receptors that bind class I MHC molecules presented by the antigen-presenting cell (APC). A primary function of CD8 proteins 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., Tokito, S., Okumura, K. and Nakauchi, H. 1989. Structure and expression of the gene encoding CD8 α chain (Leu 2/T8). *Immunogenetics* 30: 393-397.
2. Allison, J.P. and Havran, W.L. 1991. The immunobiology of T cells with invariant $\gamma\delta$ antigen regions. *Annu. Rev. Immunol.* 9: 679-705.
3. Zuniga-Pflucker, J.C., Jones, L.A., Chin, L.T. and Kruisbeek, A.M. 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., Croteau, G. and Sekaly, R.P. 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 signaling machine: CD4/CD8 co-receptors and CD45 in T cell activation. *Annu. Rev. Immunol.* 10: 645-674.
6. Julius, M., Maroun, C.R. and Haughn, L. 1993. Distinct roles for CD4 and CD8 as co-receptors in antigen receptor signalling. *Immunol. Today* 14: 177-183.
7. Buseyne, F. and Riviere, Y. 1993. HIV-specific CD8⁺ T cell immune responses and viral replication. *AIDS* 2: S81-S85.

CHROMOSOMAL LOCATION

Genetic locus: CD8A (human) mapping to 2p11.2; Cd8a (mouse) mapping to 6 C1.

SOURCE

CD8- α (0.N.66) is a mouse monoclonal antibody raised against the C-terminus of CD8- α of human 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.

STORAGE

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

APPLICATIONS

CD8- α (0.N.66) is recommended for detection of CD8- α of mouse, rat and 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for CD8- α siRNA (h): sc-29247, CD8- α siRNA (m): sc-43677, CD8- α shRNA Plasmid (h): sc-29247-SH, CD8- α shRNA Plasmid (m): sc-43677-SH, CD8- α shRNA (h) Lentiviral Particles: sc-29247-V and CD8- α shRNA (m) Lentiviral Particles: sc-43677-V.

Molecular Weight of CD8 α : 39 kDa.

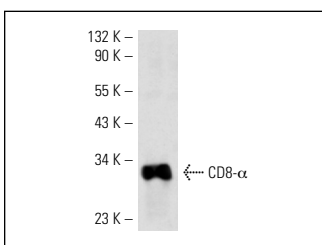
Molecular Weight of CD8 β : 32 kDa.

Positive Controls: SUP-T1 whole cell lysate: sc-364796, HuT 78 whole cell lysate: sc-2208 or MOLT-4 cell lysate: sc-2233.

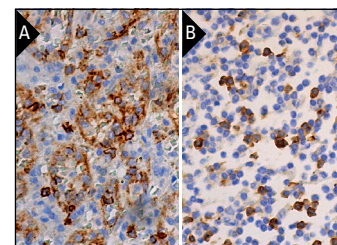
RECOMMENDED SUPPORT REAGENTS

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, 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 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.

DATA



CD8- α (0.N.66): sc-70791. Western blot analysis of CD8- α expression in SUP-T1 whole cell lysate.



CD8- α (0.N.66): sc-70791. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing membrane and cytoplasmic staining of subset of cells in red pulp and endothelial cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing membrane and cytoplasmic staining of subset of cells in non-germinal center (B).

RESEARCH USE

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



See **CD8- α (D-9): sc-7970** for CD8- α antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.