SANTA CRUZ BIOTECHNOLOGY, INC.

CD8-a (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.

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 μg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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 µg per 100-500 µg 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, CCRF-CEM cell lysate: sc-2225 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

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 spieen tissue showing membrane and cytoplasmic staining of subset of cells in red pulp and endothelial cells (**A**). Immunoperoxidase staining of formalin fixed, paraffinembedded human lymph node tissue showing membrane and cytoplasmic staining of subset of cells in nongerminal center (**B**).

STORAGE

Store at 4° C, **D0 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 for detailed protocols and support products.

CONJUGATES

See **CD8**- α **(D-9): sc-7970** for CD8- α antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.