

# CD8- $\alpha$ (C-19): sc-1141

## 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, 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.

## REFERENCES

1. Nakayama, K., et al. 1989. Structure and expression of the gene encoding CD8  $\alpha$  chain (Leu-2/T8). *Immunogenetics* 30: 393-397.
2. 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.
3. 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.

## CHROMOSOMAL LOCATION

Genetic locus: CD8A (human) mapping to 2p12.

## SOURCE

CD8- $\alpha$  (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CD8- $\alpha$  of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-1141 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CD8- $\alpha$  (C-19) is recommended for detection of CD8- $\alpha$  chain of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

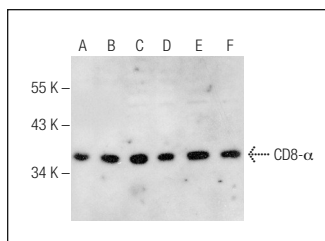
Molecular Weight of CD8- $\alpha$ : 39 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, HL-60 whole cell lysate: sc-2209 or Jurkat whole cell lysate: sc-2204.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## DATA



CD8- $\alpha$  (C-19): sc-1141. Western blot analysis of CD8- $\alpha$  expression in AML-193 (A), Jurkat (B), CCRF-CEM (C), HuT 78 (D), HL-60 (E) and H9 (F) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Morales, P.J., et al. 2003. Placental cell expression of HLA-G2 isoforms is limited to the invasive trophoblast phenotype. *J. Immunol.* 171: 6215-6224.
2. Zehbe, I., et al. 2007. Human papillomavirus 16 E6-specific CD45RA<sup>+</sup> CCR7<sup>+</sup> high avidity CD8<sup>+</sup> T cells fail to control tumor growth despite interferon- $\gamma$  production in patients with cervical cancer. *J. Immunother.* 30: 523-532.

## 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) or our catalog for detailed protocols and support products.



Try **CD8- $\alpha$  (D-9): sc-7970** or **CD8- $\alpha$  (C8/144B): sc-53212**, our highly recommended monoclonal alternatives to CD8- $\alpha$  (C-19). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **CD8- $\alpha$  (D-9): sc-7970**.