

# CD8- $\alpha$ (R-15): sc-1142

## 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 (CD8- $\alpha$  and CD8- $\beta$ ) 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., et al. 1989. Structure and expression of the gene encoding CD8  $\alpha$  chain (Leu-2/T8). *Immunogenetics* 30: 393-397.
2. 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.
3. Allison, J.P., et al. 1991. The immunobiology of T cells with invariant  $\gamma$   $\delta$  antigen regions. *Ann. Rev. Immunol.* 9: 679-705.

## SOURCE

CD8- $\alpha$  (R-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CD8- $\alpha$  of rat 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-1142 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CD8- $\alpha$  (R-15) is recommended for detection of CD8- $\alpha$  of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

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

## 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™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) 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™ Mounting Medium: sc-24941.

## STORAGE

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

## SELECT PRODUCT CITATIONS

1. Margariti, A., et al. 2009. Splicing of HDAC7 modulates the SRF-myocardin complex during stem-cell differentiation towards smooth muscle cells. *J. Cell Sci.* 122: 460-470.
2. Boutin, B., et al. 2013. Androgen deprivation and androgen receptor competition by bicalutamide induce autophagy of hormone-resistant prostate cancer cells and confer resistance to apoptosis. *Prostate* 73: 1090-1102.

## 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- $\alpha$  (OX8): sc-53063** or **CD8- $\alpha$  (6A242): sc-70802**, our highly recommended monoclonal alternatives to CD8- $\alpha$  (R-15).