



# TCR V $\alpha$ 29 (S-13): sc-55395

## BACKGROUND

The T cell antigen receptor (TCR) recognizes a wide variety of foreign antigens and translates such recognition events into intracellular signals that elicit a change in the cell from a dormant to an activated state. TCR is a heterodimer composed of either  $\alpha$  and  $\beta$  or  $\gamma$  and  $\delta$  chains. The vast majority of circulating T cells (95%) express the  $\alpha/\beta$  heterodimer while roughly 2-5% express the  $\gamma/\delta$  heterodimer. Recognizing such a variety of antigens requires diverse specificities in the TCR repertoire. This is obtained by the somatic recombination of variable (V), diversity (D) and joining (J) gene segments in the assembly of each TCR chain. The TCR  $\beta$  and  $\gamma$  chain genes lie in distinct loci, while the genes encoding the TCR  $\alpha$  and  $\delta$  chains comprise a single locus. The assembled TCR  $\alpha$  chain includes only V and J segments. In mice, 104 V  $\alpha$  segments and 61 J  $\alpha$  segments are found at the  $\alpha/\delta$  loci. The human  $\alpha/\delta$  loci has about half as many V  $\alpha$  segments and approximately the same number of J  $\alpha$  segments.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: TRA@ (human) mapping to 14q11.2.

## SOURCE

TCR V  $\alpha$  29 (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TCR V  $\alpha$  29 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-55395 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TCR V  $\alpha$  29 (S-13) is recommended for detection of TCR V  $\alpha$  29 of human 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).

Suitable for use as control antibody for TCR  $\alpha$  siRNA (h): sc-36626.

Molecular Weight of TCR V  $\alpha$  29: 15 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.

## 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.