

# TCR V $\gamma$ 3 (536): sc-53027

## 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  $\gamma$  chain includes only V and J segments.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: Tcr $\gamma$ -V3 (mouse) mapping to 13 A2.

## SOURCE

TCR V  $\gamma$  3 (536) is a Syrian hamster monoclonal antibody raised against residues common to the C-termini of  $\gamma$  1-3 chains of mouse origin.

## PRODUCT

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

TCR V  $\gamma$  3 (536) is available conjugated to agarose (sc-53027 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53027 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53027 PE), fluorescein (sc-53027 FITC), Alexa Fluor<sup>®</sup> 488 (sc-53027 AF488), Alexa Fluor<sup>®</sup> 546 (sc-53027 AF546), Alexa Fluor<sup>®</sup> 594 (sc-53027 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-53027 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-53027 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-53027 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

TCR V  $\gamma$  3 (536) is recommended for detection of variable region of TCR V  $\gamma$  3 of mouse origin by 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Molecular Weight of TCR V  $\gamma$  3: 16 kDa.

## SELECT PRODUCT CITATIONS

- Chodaczek, G., Toporkiewicz, M., Zal, M.A. and Zal, T. 2018. Epidermal T cell dendrites serve as conduits for bidirectional trafficking of granular cargo. *Front. Immunol.* 9: 1430.
- Hatano, S., Tun, X., Noguchi, N., Yue, D., Yamada, H., Sun, X., Yoshikai, Y. and Matsumoto, M. 2019. Development of a new monoclonal antibody specific to mouse V $\gamma$ 6 chain. *Life Sci. Alliance* 2: e201900363.

## 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) for detailed protocols and support products.