Anti-TCRγ/δ antibodies, mouse

For research use only

9 µg equal 60 tests, 30 µg equal 200 tests. One test corresponds to labeling of 10^6 cells.

Product	Content	Order no.
Anti-TCRγ/δ-FITC	9 µg in 300 µL	130-109-796
Anti-TCRγ/δ-FITC	30 µg in 1 mL	130-109-749
Anti-TCRγ/δ-PE	9 µg in 300 µL	130-109-797
Anti-TCRγ/δ-PE	30 µg in 1 mL	130-109-750
Anti-TCRγ/δ-APC	9 µg in 300 µL	130-109-798
Anti-TCRγ/δ-APC	30 µg in 1 mL	130-109-751
Anti-TCRγ/δ-VioBlue	9 µg in 300 µL	130-110-404
Anti-TCRγ/δ-VioBlue	30 µg in 1 mL	130-110-303
Anti-TCRγ/δ-PE-Vio770	9 µg in 300 µL	130-109-799
Anti-TCRγ/δ-PE-Vio770	30 µg in 1 mL	130-109-752
Anti-TCRγ/δ-APC-Vio770	9 µg in 300 µL	130-109-800
Anti-TCRγ/δ-APC-Vio770	30 µg in 1 mL	130-109-753
Anti-TCRγ/δ-PerCP-Vio700	9 µg in 300 µL	130-109-801
Anti-TCRγ/δ-PerCP-Vio700	30 µg in 1 mL	130-109-754
Anti-TCRγ/δ-Biotin	9 µg in 300 µL	130-109-795
Anti-TCRγ/δ-Biotin	30 µg in 1 mL	130-109-748

Warnings

Reagents contain sodium azide. Under acidic conditions sodium azide yields hydrazoic acid, which is extremely toxic. Azide compounds should be diluted with running water before discarding. These precautions are recommended to avoid deposits in plumbing where explosive conditions may develop.

Technical data and background information

Antigen	TCRγ/δ
Clone	REA633
Isotype	recombinant human IgG1
Isotype control	REA Control antibodies
Alternative names of antigen	TCRgd
Distribution of antigen	T cells
Product format	Reagents are supplied in buffer containing stabilizer and 0.05% sodium azide.
Fixation	Cells should be stained prior to fixation, if formaldehyde is used as a fixative.
Storage	Store protected from light at 2–8 °C. Do not freeze.

Clone REA633 recognizes the mouse TCRγ/δ antigen. The T cell receptor (TCR) is a heterodimeric glycoprotein associated with the CD3 antigen. It consists of an α and a β chain (TCRα/β) or a γ and a δ chain (TCRγ/δ). The γ and δ TCR chains are composed of constant and variable regions, each encoded by distinct gene segments. The γ chain forms either disulfide-linked or non-disulfide-linked heterodimers with the δ-subunit. The γ/δ T cell receptor is present on a subset of T lymphocytes in peripheral blood. TCRγ/δ is involved in the antigen recognition of tumor-associated antigens or bacterial antigens presented by MHC class I molecules.
Additional information: Clone REA633 displays negligible binding to Fc receptors.

Reagent requirements

- Buffer: Prepare a solution containing phosphate-buffered saline (PBS), pH 7.2, 0.5% bovine serum albumin (BSA), and 2 mM EDTA by diluting MACS® BSA Stock Solution (# 130-091-376) 1:20 with autoMACS® Rinsing Solution (# 130-091-222). Keep buffer cold (2−8 °C).
  Note: EDTA can be replaced by other supplements such as anticoagulant citrate dextrose formula-A (ACD-A) or citrate phosphate dextrose (CPD). Buffers or media containing Ca^{2+} or Mg^{2+} are not recommended for use.
- (Optional) Fluorochrome-conjugated anti-biotin antibodies, e.g., Anti-Biotin-PE (# 130-090-756) as secondary antibody reagent in combination with biotinylated antibodies.
- (Optional) Propidium Iodide Solution (# 130-093-233) for flow cytometric exclusion of dead cells without fixation.
- (Optional) Fixation and Dead Cell Discrimination Kit (# 130-091-163) for cell fixation and flow cytometric exclusion of dead cells.

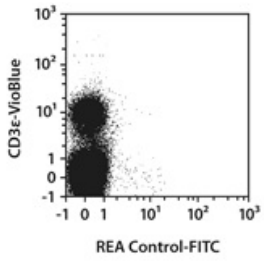
Protocol for cell surface staining

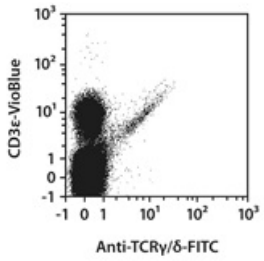
- The recommended antibody dilution for labeling of cells and subsequent analysis by flow cytometry is 1:10 for up to 10^6 cells/50 µL of buffer.
- Volumes given below are for up to 10^6 nucleated cells. When working with fewer than 10^6 cells, use the same volumes as indicated. When working with higher cell numbers, scale up all reagent volumes and total volumes accordingly (e.g. for 2×10^6 nucleated cells, use twice the volume of all indicated reagent volumes and total volumes).

1. Determine cell number.
2. Centrifuge cell suspension at 300×g for 10 minutes. Aspirate supernatant completely.
3. Resuspend up to 10^6 nucleated cells per 45 µL of buffer.
4. Add 5 µL of the antibody.
5. Mix well and incubate for 10 minutes in the dark in the refrigerator (2−8 °C).
   Note: Higher temperatures and/or longer incubation times may lead to non-specific cell labeling. Working on ice requires increased incubation times.
6. Wash cells by adding 1−2 mL of buffer and centrifuge at 300×g for 10 minutes. Aspirate supernatant completely.
7. (Optional) If biotinylated antibody was used, resuspend the cell pellet in 100 µL of buffer, add 10 µL of fluorochrome-conjugated anti-biotin antibody, and continue as described in steps 5 and 6.
8. Resuspend cell pellet in a suitable amount of buffer for analysis by flow cytometry or fluorescence microscopy.

Examples of immunofluorescent staining

Splenocytes from C57BL/6 mice were stained with Anti-TCRγ/δ antibodies or with the corresponding REA Control antibodies (left image) as well as with CD3ε antibodies. Flow cytometry was performed with the MACSQuant® Analyzer. Cell debris and dead cells were excluded from the analysis based on scatter signals and propidium iodide fluorescence.


CD3ε-VioBlue
REA Control-FITC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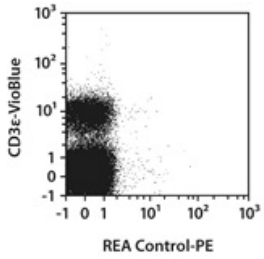
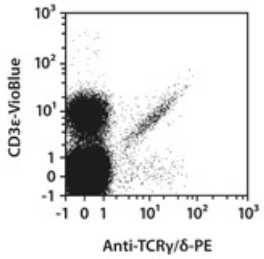
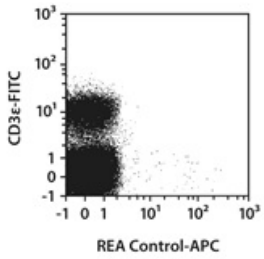
Anti-TCRγ/δ-FITC


CD3ε-VioBlue
REA Control-PE


CD3ε-VioBlue
Anti-TCRγ/δ-PE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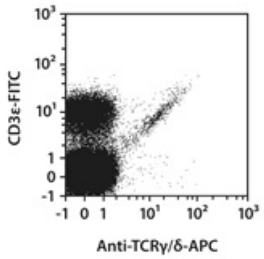
REA Control-APC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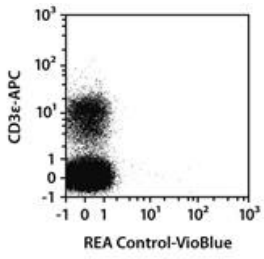
Anti-TCRγ/δ-APC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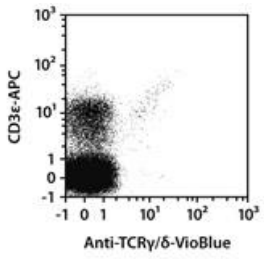
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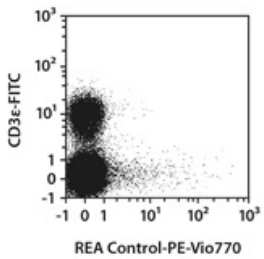
Anti-TCRγ/δ-VioBlue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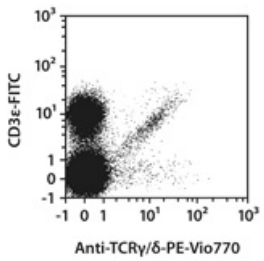
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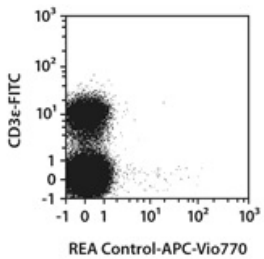
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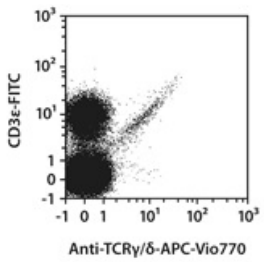
REA Control-APC-Vio770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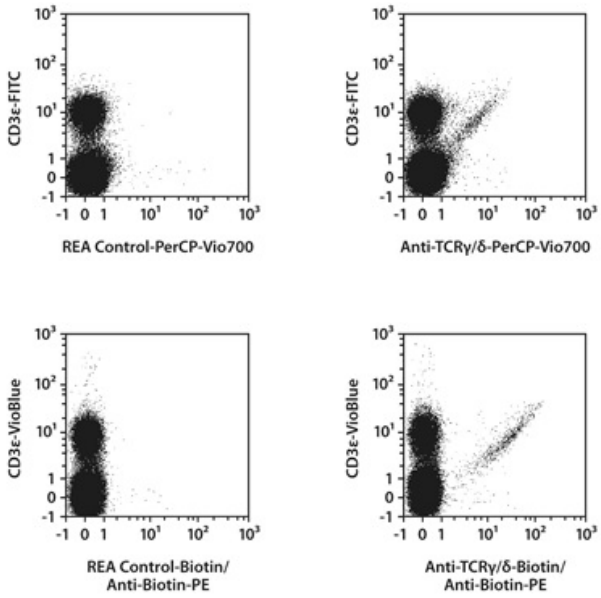
Anti-TCRγ/δ-APC-Vio770



References

1. **Bonneville, M. *et al.*** (2010) Gammadelta T cell effector functions: a blend of innate programming and acquired plasticity. Nat. Rev. Immunol. 10(7): 467–478.
2. **Schmolka, N. *et al.*** (2013) Epigenetic and transcriptional signatures of stable versus plastic differentiation of proinflammatory γδ T cell subsets. Nat. Immunol. 14(10): 1093–1100.
3. **Wiest, D. L.** (2016) Development of γδ T cells, the special-force soldiers of the immune system. Methods Mol. Biol. 1323: 23–32.

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