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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.

1. Description

This product is for research use only.

Components	1 mL monoclonal Anti-TCR γ/δ antibodies, human conjugated to:								
	<table border="0"> <tr> <td>FITC</td> <td>130-096-884</td> </tr> <tr> <td>PE</td> <td>130-096-869</td> </tr> <tr> <td>APC</td> <td>130-096-866</td> </tr> <tr> <td>Biotin</td> <td>130-096-862</td> </tr> </table>	FITC	130-096-884	PE	130-096-869	APC	130-096-866	Biotin	130-096-862
FITC	130-096-884								
PE	130-096-869								
APC	130-096-866								
Biotin	130-096-862								
Clone	11F2 (isotype: mouse IgG1).								
Capacity	100 tests or up to 10^9 total cells.								
Product format	Antibodies are supplied in buffer containing stabilizer and 0.05% sodium azide.								
Storage	Store protected from light at 2–8 °C. Do not freeze. The expiration date is indicated on the vial label.								

1.1 Background information

- Antigen: TCR γ/δ
- Expression patterns: The T cell receptor is a heterodimeric glycoprotein associated with the CD3 antigen. The TCR consists of a α and a β chain (TCR α/β) or a γ and a δ chain (TCR γ/δ). Clone 11F2 reacts with a framework epitope of the γ/δ T-cell receptor. 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, intestinal epithelium, lymph node, thymus and spleen. TCR γ/δ is involved in the recognition of certain bacterial, self-CD1 molecule, and tumor antigens bound to MHC class I. γ/δ T cells are mainly CD4 negative and CD8 negative. T cells expressing the γ/δ TCR have been shown to play a role in oral tolerance, innate immune response for some tumor cells, and autoimmune disease. Antigen presentation by γ/δ T cells has been reported.

1.2 Applications

- Identification and enumeration of TCR γ/δ^+ cells by flow cytometry.

1.3 Recommended antibody dilution

The recommended antibody dilution for all Anti-TCR γ/δ conjugates is **1:11 for up to 10^7 cells/100 μ L** of buffer for labeling of cells and subsequent analysis by flow cytometry.

The antibody is suited for staining of formaldehyd-fixed cells.

1.4 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 Ca²⁺ or Mg²⁺ are not recommended for use.

- (Optional) Conjugated anti-biotin antibodies, e.g., Anti-Biotin-PE (# 130-090-756) as secondary antibody reagent in combination with Anti-TCR γ/δ -Biotin.
- (Optional) For antibodies for additional staining or for isotype control, refer to www.miltenyibiotec.com/antibodies.
- (Optional) Propidium Iodide Solution (# 130-093-233) for flow cytometric exclusion of dead cells without fixation.

2. General protocol for immunofluorescent staining

Volumes given below are for **up to 10^7** nucleated cells. When working with fewer than 10^7 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 2×10^7 nucleated cells, use twice the volume of all indicated reagent volumes and total volumes).

1. Determine cell number.
2. Centrifuge cell suspension at 300 \times g for 10 minutes. Aspirate supernatant completely.
3. Resuspend up to 10^7 nucleated cells per 100 μ L of buffer.
4. Add 10 μ L of the Anti-TCR γ/δ antibody.

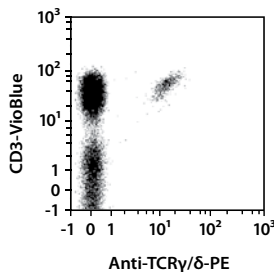
- Mix well and incubate for 10 minutes in the dark in the refrigerator (2–8 °C).

▲ **Note:** Higher temperatures and/or longer incubation times may lead to non-specific cell labeling. Working on ice requires increased incubation times.

- Wash cells by adding 1–2 mL of buffer and centrifuge at 300×g for 10 minutes. Aspirate supernatant completely.
- (Optional) If Anti-TCR γ/δ -Biotin was used, resuspend the cell pellet in 100 μ L of buffer, add 10 μ L of anti-biotin antibody, and continue as described in steps 5 and 6.
- Resuspend cell pellet in a suitable amount of buffer for analysis by flow cytometry or fluorescence microscopy.

3. Example of immunofluorescent staining with Anti-TCR γ/δ antibodies

PBMCs were stained with Anti-TCR γ/δ antibodies conjugated to PE as well as with CD3-VioBlue® (# 130-094-363) and analyzed by flow cytometry using the MACSQuant® Analyzer. Cell debris and dead cells were excluded from the analysis based on scatter signals and propidium iodide fluorescence.



For more examples please refer to the respective product page at www.miltenyibiotec.com/antibodies.

4. References

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MHC-non-restricted lysis by T cell receptor-/CD3⁻, T cell receptor gamma delta+/CD3⁺ and T cell receptor-alpha beta+/CD3⁺ lymphocytes. *J. Immunol.* 142 (5): 1774–1780.

Refer to www.miltenyibiotec.com for all data sheets and protocols.

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