

# Anti- Human $\alpha\beta$ T Cell Receptor (IP26)





TCRABPE

100 test



## 1. PRODUCT DESCRIPTION

**Clone:** IP26

**Isotype:** Mouse IgG1

**Tested application:** flow cytometry

**Species reactivity:** Human

**Storage instruction:** store in the dark at 2-8 °C

**Storage buffer:** aqueous buffered solution containing protein stabilizer and 0.09% sodium azide (NaN<sub>3</sub>).

**Recommended usage:** Immunostep's anti-human T cell receptor (TCR) antibody, clone IP26, is a monoclonal antibody designed for the identification and enumeration of  $\alpha/\beta$  TCR, a member of the immunoglobulin superfamily.

This antibody targets a constant region determinant found on the surface of all  $\alpha/\beta$  TCR-bearing T lymphocytes 1. The  $\alpha/\beta$  TCR, in conjunction with CD3, forms the CD3/TCR complex, which is crucial for T cell and thymocyte function 2. This reagent is effective for direct immunofluorescence staining of human tissue for flow cytometric analysis using 1 test for 10<sup>6</sup> cells.

**Presentation:** liquid

**Source:** Supernatant proceeding from an in vitro cell culture of a cell hybridoma.

**Purification:** Affinity chromatography.

## 2. ANTIGEN DETAILS

**Large description:** The IP26 antibody reacts with a monomorphic determinant of the  $\alpha/\beta$  T-cell receptor (TCR), which is expressed on more than 95% of normal peripheral blood CD3<sup>+</sup> T cells1. The  $\alpha/\beta$  TCR is a heterodimeric protein composed of alpha ( $\alpha$ ) and beta ( $\beta$ ) chains, both of which belong to the immunoglobulin superfamily 2. This receptor plays a crucial role in the adaptive immune response by recognizing peptide antigens presented by major histocompatibility complex (MHC) molecules on the surface of antigen-presenting cells 4. The  $\alpha/\beta$  TCR recognizes peptides bound to MHC class I or class II molecules, leading to T-cell activation 3. This interaction is highly specific and involves the binding of the TCR to both the peptide and the MHC molecule, forming a trimolecular complex 5. The recognition of peptide-MHC complexes by the TCR is the first step in T-cell activation, which subsequently triggers a cascade of intracellular signaling events 6.

## 3. WARNINGS AND RECOMMENDATIONS

**Other Names:**  $\alpha/\beta$  TCR, TCR  $\alpha/\beta$

**Gene ID:** 6957

**Molecular weight:** 34792 Da (310 amino acids)

For research use only, not for diagnostic procedures.

Please, refer to [www.immunostep.com](http://www.immunostep.com) technical support for more information.

## 4. WARRANTY

Warranted only to conform to the quantity and contents stated on the label or in the product labelling at the time of delivery to the customer. Immunostep disclaims hereby other warranties.

Immunostep's sole liability is limited to either the replacement of the products or refund of the purchase price.

## 5. REFERENCES

1. McMichael AJ. Leucocyte typing III: white cell differentiation antigens. Oxford: Oxford University Press; 1987.
2. Mason D. Leucocyte typing VII: white cell differentiation antigens: proceedings of the Seventh International Workshop and Conference held in Harrogate, United Kingdom. Oxford: Oxford University Press; 2002.
3. Szeto C, Lobos CA, Nguyen AT, Gras S. TCR Recognition of Peptide-MHC-I: Rule Makers and Breakers. Int J Mol Sci. 2021;22(1):68.
4. Messaoudi I, LeMaoult J, Nikolic-Zugic J. The Mode of Ligan Recognition by Two Peptide:MHC Class I-Specific Monoclonal Antibodies. J Immunol. 1999;163(6):3286-3294.
5. Ardain A, et al. Nature. 2019;570:528.

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## 6. EXPLANATION OF SYMBOLS



Product reference



Content for &lt;n&gt; analysis



Regulatory Status



Research Use Only



Manufacturer

## 7. MANUFACTURED BY



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