

Monoclonal Antibody Anti-TCR V β 5.1

PN IM1551 – Purified – Freeze-dried – 0.1 mg – Clone IMMU 157

For Research Use Only. Not for use in diagnostic procedures.

SPECIFICITY

Human variable V β 5.1 chain of the T-cell receptor is also called TCRBV5S1 according to the nomenclature from Wei et al (1). The IMMU 157 monoclonal antibody recognizes the HBP51 sequence (2) of the multimembered V β 5 subfamily. It does not recognize V β 5.2 (PL2.5 sequence) (3) and V β 5.3 (12A1 sequence) (4). Recognition of other members of the V β 5 subfamily has not been detected but cannot be formally excluded.

The antibody has been characterized on transfected cell lines, T cell clones and PBL. Cell sorting on PBL gives a homogenous population that is not recognized by 18 monoclonal antibodies specific for different V β chains (which make up ~ 60% of the $\alpha\beta$ repertoire) (5). The IMMU 157 stains from 4.2 to 7.2% of peripheral CD3⁺ cells in normal blood.

The TCRBV5S1 sequence is also referred to as TRBV5-1 (based on the IMGT gene nomenclature) (6).

The specificity of this antibody has been confirmed at the First Human TcR Monoclonal Antibody Workshop in San Francisco in 1995 (5).

REAGENT

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Clone	IMMU 157
Isotype	IgG2a, mouse
Immunogen	Murine T-cell hybridoma transfected with human V β 5.1 gene segment
Hybridoma Source	P3-X63-Ag.8.653 x SJL Ascites fluid
Purification	Ion exchange or affinity chromatography
Buffer	1 mg/mL bovine serum albumin in phosphate-buffered saline

APPLICATION

Studies of T-cell repertoire by flow cytometry.

Immunohistochemistry on frozen section.

STATEMENT OF WARNINGS

1. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
2. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
3. Do not use antibody beyond the expiration date on the label.
4. Avoid microbial contamination of reagents or incorrect results might occur.
5. Use good laboratory practices when handling this reagent.

STORAGE CONDITIONS AND STABILITY

This freeze-dried form may be stored at 2 – 8°C until the expiration date stated on the vial label.

No preservative has been added.

REAGENT PREPARATION

Depending of usage, reconstitute with 0.5 mL of distilled water, with or without 0.1% sodium azide (w/v).

The reconstituted form including 0.1% sodium azide may be stored for up to one month at 2 – 8°C.

The reconstituted form without sodium azide can be stored at –20°C or less, until the expiration date stated on the vial label.

In this case, aliquotting is recommended to avoid multiple freezing / thawing cycles.

PROCEDURE

For each application, it is recommended to establish the right range of antibody dilutions to be used for the experiment.

It is preferable to double stain the sample with another T-cell marker (CD3, CD4, CD8).

SELECTED RESEARCH REFERENCES

1. Wei, S., Charmley, P., Robinson, M.A., Concannon, P., "The extent of the human germline T-cell receptor V beta gene segment repertoire", 1994, Immunogenetics., 40, 27-36
2. Kimura, N., Toyonaga, B., Yoshikai, Y., Triebel, F., Debré, P., Minden, M., Mak, T., "Sequences and diversity of human T-cell receptor β chain variables region genes", 1986, J. Exp. Med., 164, 739-750.
3. Concannon, P., Pickering, L., Kung, P., Hood, L., "Diversity and structure of human T-cell receptor β chain variable region genes", 1986, Proc. Natl. Acad. Sci. USA, 83, 6598-6602.
4. Leiden, J.M., Strominger, J.L., 1986, "Generation of diversity of the β chain of the human T lymphocyte receptor for antigen. Proc. Natl. Acad. Sci. USA, 83, 4456-4460.
5. Posnett, D.N., Romagné, F., Necker, A., Kotzin, B.L., Sekaly, R.-P., "First Human TcR Monoclonal Antibody Workshop", 1996, The Immunologist, 4, 5-8.
6. Lefranc, M.P., Giudicelli, V., Ginestoux, C., Bodmer, J., Muller, W., Bontrop, R., Lemaitre, M., Malik, A., Barbie, V., Chaume D., "IMGT, the international ImMunoGeneTics database", 1999, Nucleic Acids Res., 27, 209-212

PRODUCT AVAILABILITY

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For additional information in the USA, call 800-526-7694.

Outside the USA, contact your local Beckman Coulter representative.

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