

# Monoclonal Antibody Anti-TCR V $\beta$ 11-Biotin

PN IM2018 – Freeze-dried – 0.1 mg – Clone C21

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

## SPECIFICITY

Human variable V $\beta$ 11 chain of the T-cell receptor is also called TCRBV11S1 according to the nomenclature from Wei et al (1).

V $\beta$ 11 is a subfamily of the T cell receptor. Two V $\beta$ 11 sequences (PL3.12 and PH15) have been described (2, 3). These sequences differ only in their leader sequence and therefore lead to the same mature protein. V $\beta$ 11 has been shown to be expanded in a clonal fashion in the CD3<sup>+</sup> CD8<sup>-</sup> CD4<sup>-</sup> cell population in PBL of several donors (4). The monoclonal antibody C21 recognizes the gene product of these sequences. On the average, the monoclonal antibody C21 stains 0.8% of peripheral CD3<sup>+</sup> cells from normal donors

The V $\beta$ 11 sequence is also referred to as TRV25-1 (based on the IMGT gene nomenclature) (5).

The specificity of this antibody has been confirmed at the first Human TcR Monoclonal Antibody Workshop in San Francisco in 1995 (6).

## REAGENT

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**Clone** C21

**Isotype** IgG2a, mouse

**Immunogen** Human T-cell clone

**Hybridoma** PA1 x Balb/c spleen cells

**Source** 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.

## 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.

## CONJUGATION

The purified Ig is conjugated to biotin. Revelation procedure requires streptavidin conjugated with a probe as an additional step after binding of the primary antibody.

## 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., Charnley, 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. Concannon, P., Pickering, L., Kung, P., Hood, L., "Diversity and structure of human T-cell receptor beta-chain variable region genes", 1986, Proc. Natl. Acad. Sci. USA, 83, 6598-6602
3. Tillinghast, J.P., Behlke, M.A., Loh, D.Y., "Structure and diversity of the human T-cell receptor beta chain variable region genes", 1986, Science, 22, 879-883.
4. Dellabona, P., Casorati, G., Fredli, B., Angman, L., Sallusto, F., Tunnacliffe, A., Roosnek, E., Lanzavecchia, A., "In vivo persistence of expanded clones specific for bacterial antigens within the human T-cell receptor  $\alpha\beta$  CD4<sup>+</sup> subset", 1993, J. Exp. Med., 177, 1763.
5. Lefranc, M.P., Giudicelli, V., Ginestoux, C., Bodmer, J., Muller, W., Bontrop, R., Lemaitre, M., Malik, A., Barbie, V., Chaurme D., "IMGT, the international ImMunoGeneTics database", 1999, Nucleic Acids Res., 27, 209-212.
6. 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.

## 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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