

## Anti-TCR alpha/TRAC Antibody Picoband® FITC Conjugated

Catalog Number: A05315-FITC

### About TRAC

T cell receptors recognize foreign antigens which have been processed as small peptides and bound to major histocompatibility complex (MHC) molecules at the surface of antigen presenting cells (APC). Each T cell receptor is a dimer consisting of one alpha and one beta chain or one delta and one gamma chain. In a single cell, the T cell receptor loci are rearranged and expressed in the order delta, gamma, beta, and alpha. If both delta and gamma rearrangements produce functional chains, the cell expresses delta and gamma. If not, the cell proceeds to rearrange the beta and alpha loci. This region represents the germline organization of the T cell receptor alpha and delta loci. Both the alpha and delta loci include V (variable), J (joining), and C (constant) segments and the delta locus also includes diversity (D) segments. The delta locus is situated within the alpha locus, between the alpha V and J segments. During T cell development, the delta chain is synthesized by a recombination event at the DNA level joining a D segment with a J segment; a V segment is then joined to the D-J gene. The alpha chain is synthesized by recombination joining a single V segment with a J segment. For both chains, the C segment is later joined by splicing at the RNA level. Recombination of many different V segments with several J segments provides a wide range of antigen recognition. Additional diversity is attained by junctional diversity, resulting from the random additional of nucleotides by terminal deoxynucleotidyltransferase. Five variable segments can be used in either alpha or delta chains and are described by TRAV/DV symbols. Several V and J segments of the alpha locus are known to be incapable of encoding a protein and are considered pseudogenes.

### Overview

Product Name	Anti-TCR alpha/TRAC Antibody Picoband® FITC Conjugated
Reactive Species	Human, Mouse, Rat
Application	Flow Cytometry
Clonality	Polyclonal
Formulation	Each vial contains 50% glycerol, 0.9% NaCl, 0.2% Na <sub>2</sub> HPO <sub>4</sub> , 0.02% Na <sub>3</sub> N.
Storage Instructions	At -20°C for one year from date of receipt. Avoid repeated freezing and thawing. Protect from light.
Host	Rabbit
Uniprot ID	P01848

### Technical Details

Immunogen	E. coli-derived human TCR alpha recombinant protein (Position: I1-L114).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Liquid

Concentration	0.5 mg/mL
Purification	Immunogen affinity purified.
Conjugate	FITC Excitation Wavelength: 495 nm Emission Wavelength: 525 nm
Suggested Dilutions	Flow Cytometry, Optimal dilutions should be determined by end users.

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