

Product datasheet for **SM1230P**

T Cell Receptor (TCR) alpha/beta (alpha chain) Mouse Monoclonal Antibody [Clone ID: 3A8]

Product data:

Product Type:	Primary Antibodies
Clone Name:	3A8
Applications:	IHC, IP
Recommended Dilution:	Immunoprecipitation. Immunohistochemistry on Frozen Sections.
Reactivity:	Human
Host:	Mouse
Isotype:	IgG2a
Clonality:	Monoclonal
Specificity:	This antibody clone 3A8 reacts with the alpha chain constant region found on all alpha/beta TCR bearing T-lymphocytes. It reacts with 92-98% of all CD3 + peripheral blood lymphocytes. Negative Species: Mouse, Rat.
Formulation:	PBS State: Purified State: Liquid purified IgG fraction Stabilizer: 0.5% BSA Preservative: 0.09% Sodium Azide
Concentration:	lot specific
Purification:	Affinity Chromatography on Protein A
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C. DO NOT FREEZE!
Stability:	Shelf life: one year from despatch.
Database Link:	P01848



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Background:

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 beta locus. The beta locus includes V (variable), J (joining), diversity (D), and C (constant) segments. During T cell development, the beta 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 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 addition of nucleotides by terminal deoxynucleotidyltransferase. Several V segments and one J segment of the beta locus are known to be incapable of encoding a protein and are considered pseudogenes. The beta locus also includes eight trypsinogen genes, three of which encode functional proteins and five of which are pseudogenes. Chromosomal abnormalities involving the T-cell receptor beta locus have been associated with T-cell lymphomas.

Synonyms:

TCRA, TCRB, T-Cell Receptor alpha, T-Cell Receptor beta, T-Cell Receptor alpha beta