



# Mouse Anti-Human TCR V beta 5b monoclonal antibody, clone X223 (CABT-L542)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

<b>Specificity</b>	This antibody targets TCR V beta 5b in FACS, IHC-F, IP, TCA, and WB applications and shows reactivity with Human samples.
<b>Target</b>	TCR V Beta 5b
<b>Immunogen</b>	Human TCR Vb 5.3
<b>Isotype</b>	IgG1
<b>Source/Host</b>	Mouse
<b>Species Reactivity</b>	Human
<b>Clone</b>	X223
<b>Purification</b>	Protein G purified
<b>Conjugate</b>	Unconjugated
<b>Applications</b>	FC, IHC-F, IP, WB, T-Cell activation
<b>Format</b>	Liquid
<b>Concentration</b>	0.15 mg/ml
<b>Buffer</b>	PBS with 0.5% BSA
<b>Preservative</b>	0.1% Sodium Azide
<b>Storage</b>	4° C

# BACKGROUND

## Introduction

The ability of T cell receptors (TCR) to discriminate foreign from self-peptides presented by major histocompatibility complex (MHC) class II molecules is essential for an effective adaptive immune response. TCR recognition of self-peptides has been linked to autoimmune disease. Mutant self-peptides have been associated with tumors. Engagement of TCRs by a family of bacterial toxins known as superantigens has been responsible for toxic shock syndrome. Autoantibodies to V beta segments of T cell receptors have been isolated from patients with rheumatoid arthritis (RA) and systemic lupus erythematosus (SLE). The autoantibodies block TH1-mediated inflammatory autodestructive reactions and are believed to be a method by which the immune system compensates for disease. T Cell and TCR Diversity Most human T cells express the TCR alpha-beta and either CD4 or CD8 molecule (single positive, SP). A small number of T cells lack both CD4 and CD8 (double negative, DN). Increased percentages of alpha-beta DN T cells have been identified in some autoimmune and immunodeficiency disorders. Gamma-delta T cells are primarily found within the epithelium. They show less TCR diversity and recognize antigens differently than alpha-beta T cells. Subsets of gamma-delta T cells have shown antitumor and immunoregulatory activity.

## Keywords

Tcrb; T-cell receptor beta chain; TCB; TCBC1; RATTB; RATTBC1; variable region-beta 8.5; T-cell receptor beta cluster

# GENE INFORMATION

## Entrez Gene ID

[6957](#)

## UniProt ID

[P01850A0A5B9](#)