



Armenian Hamster Anti-Mouse TCR V γ 1.1/Cr4 Monoclonal antibody, clone 2.11 (CABT-L4501)

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

PRODUCT INFORMATION

Product Overview

The 2.11 monoclonal antibody reacts with an epitope in the Cr4 domain of TCR V γ 1.1 (T cell receptor V gamma 1.1). The TCR is expressed on the surface of T lymphocytes and is responsible for recognizing fragments of antigen as peptides bound to MHC molecules. When the TCR engages with antigenic peptide and MHC the T lymphocyte is activated through signal transduction. The V γ 1J γ 4C γ 4 chain is expressed by a major population of $\gamma\delta$ T cells in the thymus and peripheral lymphoid organs of adult mice. However, during postnatal and early life stages only a minor population of $\gamma\delta$ T cells express V γ 1J γ 4C γ 4 during fetal and early postnatal life.

Target	Mouse TCR V γ 1.1/Cr4
Immunogen	3.13.1 T cell hybridoma
Isotype	IgG
Source/Host	Armenian Hamster
Species Reactivity	Mouse
Clone	2.11
Purification	Protein G purified. Purity>95%. Determined by SDS-PAGE
Conjugate	Functional Grade
Applications	FC
Molecular Weight	150 kDa
Format	0.2 μ M filtered liquid. Purified from tissue culture supernatant in an animal free facility

Concentration	Lot specific
Size	5 mg
Buffer	PBS, pH 7.0. Contains no stabilizers or preservatives. [low endotoxin azide-free] Endotoxin level: <2EU/mg (<0.002EU/μg). Determined by LAL gel clotting assay Related dilution buffer: CABT-LB04
Preservative	None
Storage	The antibody solution should be stored undiluted at 4°C, and protected from prolonged exposure to light. Do not freeze.
Ship	Wet ice

BACKGROUND

Introduction	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 gamma locus. The gamma locus includes V (variable), J (joining), and C (constant) segments. During T cell development, the gamma chain is synthesized by a recombination event at the DNA level joining a V segment with a J segment; 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.
Keywords	TCRG;T-cell receptor gamma chain;T cell antigen receptor gamma subunit;T cell rearranging gene gamma;T cell receptor gamma locus;T cell receptor gamma v region;tarp included;tcrp alternate reading frame protein included;TCRGV1S1;TCRGV2S1;TCRGV3S1;TCRGV5S3

GENE INFORMATION

Official Symbol	T-cell receptor gamma chain
Synonyms	TCRG; T-cell receptor gamma chain; T cell antigen receptor gamma subunit; T cell rearranging gene gamma; T cell receptor gamma locus; T cell receptor gamma v region; tarp included; tcrp alternate reading frame protein included; TCRGV1S1; TCRGV2S1; TCRGV3S1; TCRGV5S3

References

Narayan, K., et al. (2012). "Intrathymic programming of effector fates in three molecularly distinct gammadelta T cell subtypes." *Nat Immunol* 13(5): 511-518. PubMed;
