



# Armenian Hamster Anti-Mouse TCR V $\gamma$ 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 $\gamma$ 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 $\gamma$ 1J $\gamma$ 4C $\gamma$ 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 $\gamma$ 1J $\gamma$ 4C $\gamma$ 4 during fetal and early postnatal life.

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

<b>Concentration</b>	Lot specific
<b>Size</b>	5 mg
<b>Buffer</b>	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
<b>Preservative</b>	None
<b>Storage</b>	The antibody solution should be stored undiluted at 4°C, and protected from prolonged exposure to light. Do not freeze.
<b>Ship</b>	Wet ice

## BACKGROUND

<b>Introduction</b>	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.
<b>Keywords</b>	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;tcr alternate reading frame protein included;TCRGV1S1;TCRGV2S1;TCRGV3S1;TCRGV5S3

## GENE INFORMATION

<b>Official Symbol</b>	T-cell receptor gamma chain
<b>Synonyms</b>	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; tcr 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;

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