10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

TRGC2 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP19092a

Specification

TRGC2 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession P03986

TRGC2 Antibody (N-term) Blocking Peptide - Additional Information

Other Names
T-cell receptor gamma-2 chain C region, T-cell receptor gamma chain C region PT-gamma-1/2, TRGC2, TCRGC2

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

TRGC2 Antibody (N-term) Blocking Peptide - Protein Information

Name TRGC2 {ECO:0000303|Ref.4}

Function
Constant region of T cell receptor (TR) gamma chain that participates in the antigen recognition (PubMed:24600447). Gamma-delta TRs recognize a variety of self and foreign non-peptide antigens frequently expressed at the epithelial boundaries between the host and external environment, including endogenous lipids presented by MH-like protein CD1D and phosphoantigens presented by butyrophilin-like molecule BTN3A1. Upon antigen recognition induces rapid, innate-like immune responses involved in pathogen clearance and tissue repair (PubMed:23348415, PubMed:28920588). Binding of gamma-delta TR complex to antigen triggers phosphorylation of immunoreceptor tyrosine-based activation motifs (ITAMs) in the CD3 chains by the LCK and FYN kinases, allowing the recruitment, phosphorylation, and activation of ZAP70 that facilitates phosphorylation of the scaffolding proteins LCP2 and LAT. This lead to the formation of a supramolecular signalosome that recruits the phospholipase PLCG1, resulting in calcium mobilization and ERK activation, ultimately leading to T cell expansion and differentiation into effector cells (PubMed:25674089). Gamma-delta TRs are produced through somatic rearrangement of a limited repertoire of variable (V), diversity (D), and joining (J) genes. The potential diversity of gamma-delta TRs is conferred by the unique ability to rearrange (D) genes in tandem and to utilize all three reading frames. The

combinatorial diversity is considerably increased by the sequence exonuclease trimming and random nucleotide (N) region additions which occur during the V-(D)-J rearrangements (PubMed:24387714).

Cellular Location
Cell membrane.

TRGC2 Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

TRGC2 Antibody (N-term) Blocking Peptide - Images

TRGC2 Antibody (N-term) Blocking Peptide - Background

T cell receptors (TCR) 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 a and one b chain or one d and one g chain. 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. The g/d TCR associates with CD3 and is expressed on a T cell subset found in the thymus, the intestinal epithelium, and the peripheral lymphoid tissues and peritoneum. Most g/d T cells are CD4-/CD8-, some are CD8+. T cells expressing the g/d TCR have been shown to play a role in oral tolerance, tumor-associated tolerance, and autoimmune disease.