

TRBC1 Polyclonal Antibody, Biotin Conjugated

(Catalog # A56726)

Background

TRBC1 (T Cell Receptor Beta Constant 1) is a protein-coding gene. Among its related pathways are innate immune system and class I MHC mediated antigen processing and presentation. TRBC2.alpha-beta is an important paralog of this gene. Antigen-specific receptors are vital to immune response and exist on the cell surface of T lymphocytes. They recognize peptide-major histocompatibility (MH) (pMH) complexes that are displayed by antigen-presenting cells (APC), a prerequisite for efficient T cell adaptive immunity against pathogens. Binding of alpha-beta TR to pMH complex initiates TR-CD3 clustering on the cell surface and intracellular activation of LCK that phosphorylates the ITAM motifs of CD3G, CD3D, CD3E, and CD247 enabling the recruitment of ZAP70. In turn, ZAP70 phosphorylates LAT, which recruits numerous signaling molecules to form the LAT signalosome. The LAT signalosome propagates signal branching to three major signaling pathways, the calcium, the mitogen-activated protein kinase (MAPK) kinase, and the nuclear factor NF-kappa-B (NF-kB) pathways, leading to the mobilization of transcription factors that are critical for gene expression and essential for T cell growth and differentiation. The T cell repertoire is generated in the thymus, by V-(D)-J rearrangement. This repertoire is then shaped by intrathymic selection events to generate a peripheral T cell pool of self-MH restricted, non-autoaggressive T cells. The post-thymic interaction of alpha-beta TR with the pMH complexes shapes TR structural and functional avidity.

Description

TRBC1 Polyclonal Antibody, Biotin Conjugated. Biotin. Raised in: Rabbit.

Formulation

Liquid. 0.03% Proclin 300. 50% Glycerol, 0.01M PBS, PH 7.4.

Specificity

Human

Isotype

IgG

Uniprot ID

P01850

Purification

Protein G purified

Immunogen

Recombinant Human T cell receptor beta constant 1 protein (1-176AA)

Storage

Shipped at 4°C. Upon delivery aliquot and store at -20°C (short-term) or -80°C (long-term). Avoid repeated freeze.

Alternative Names

TRBC1

Application

ELISA; Recommended dilution: ELISA 1:500-1:1000