

## Product Datasheet

### Anti-Hu TCR Cbeta1 PE GRP13252

#### Description

Alpha-beta T cell receptors (TCRs) are antigen specific receptors, which are essential to the immune response and are present on the cell surface of T lymphocytes. They recognize peptide-loaded major histocompatibility complexes (pMHCs), that are displayed by antigen presenting cells (APCs). Binding of alpha-beta TCR to pMHC initiates TCR-CD3 clustering on the cell surface and intracellular activation of LCK, that phosphorylates the ITAM motifs of CD3gamma, CD3delta, CD3epsilon and CD3zeta, 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 signaling, the mitogen-activated protein kinase (MAPK) kinase and the nuclear factor NFkappaB (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 by V-D-J-C rearrangements. This repertoire is then shaped by intrathymic selection events to generate a peripheral T cell pool of self-MHC restricted, non-autoaggressive T cells. Post-thymic interaction of alpha-beta TCRs with the pMHCs shapes TCR structural and functional avidity.

#### Reactivity

Human

#### Tested Applications

FC

#### Immunogen

thymus, spleen, and mesenteric lymph nodes isolated from a mouse transgenic for human TCR Vbeta3Cbeta1

#### Form/Appearance

PE

#### Preservatives

Stabilizing phosphate buffered saline (PBS) solution containing 15 mM sodium azide

#### Storage

Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light. Do not use after expiration date stamped on vial label.

#### Note

For research use only.

#### Isotype

Mouse IgG2a kappa

#### Clone ID

J0V1.1

#### NCBI

28639