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30-2487: Anti-Human TCR Cbeta1 Antibody (Clone : JOVI.1)

Clonality :	Monoclonal
Clone Name :	JOVI.1
Application :	FACS , IP, IHC(F)
Reactivity :	Human
Gene :	TRBC1
Gene ID :	28639
Format :	Purified
Alternative Name :	TCRCB1, TRBC1,T cell receptor beta constant 1
Isotype :	Mouse IgG2a kappa
Immunogen Information :	Thymus, spleen, and mesenteric lymph nodes isolated from a mouse transgenic for human TCR Vbeta3Cbeta1

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.
Specificity : The mouse monoclonal antibody JOVI.1 recognizes an extracellular epitope on TCR Cbeta1 (TRBC1).

Product Info

Amount :	0.1 mg
Purification :	Purified by protein-A affinity chromatography
Content :	1 mg/ml Formulation : Phosphate buffered saline (PBS) solution with 15 mM sodium azide
Storage condition :	Store at 2-8°C. Do not freeze.

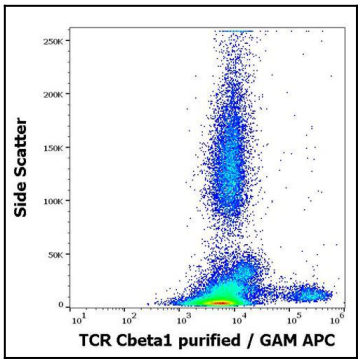


Figure 1 : Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-human TCR Cbeta1 (JOVI.1) purified antibody (concentration in sample 1.7 µg/ml, GAM APC).

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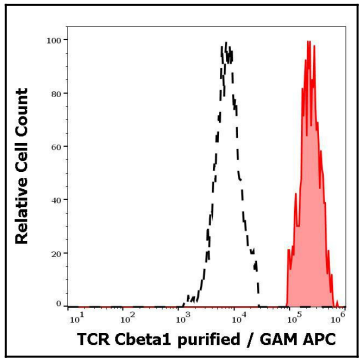


Figure 2 : Separation of human TCR Cbeta1 positive lymphocytes (red-filled) from TCR Cbeta1 negative lymphocytes (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using anti-human TCR Cbeta1 (JOVI.1) purified antibody (concentration in sample 1.7 µg/ml, GAM APC).

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