abcam

ab328552

APC Anti-TCR Cbeta1 antibody [JOVI.1]

Key facts

Isotype	IgG2a
Host species	Mouse
Conjugation	APC
Excitation/Emission	Ex: 650nm, Em: 660nm
Storage buffer	pH: 7.4 Preservative: 0.1% Sodium azide Constituents: PBS, 0.2% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Native Tissue thymus, spleen, and mesenteric lymph nodes isolated from a mouse transgenic for human TCR Vbeta3Cbeta1 within Human TRBC1. Database link P01850
Clone number	JOVI.1
Purification technique	Size-exclusion chromatography
Specificity	The mouse monoclonal antibody JOVI.1 recognizes an extracellular epitope on TCR Cbeta1 (TRBC1).
Light chain type	kappa

Reactivity data

Flow Cyt

Tested

Species	Human

Dilution info	-
Notes	Flow cytometry: The reagent is designed for analysis of human blood cells using 4 µl reagent / 100 µl of whole blood or 10^6 cells in a suspension. The content of a vial (0.4 ml) is sufficient for 100 tests.

Target data

See full target information TRBC1

Function	Constant region of T cell receptor (TR) beta chain (PubMed:24600447). Alpha-beta T cell receptors are antigen specific receptors which are essential to the immune response and are present on the cell surface of T lymphocytes. 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 (PubMed:25493333). 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 (PubMed:23524462, PubMed:9382891). 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. Post-thymic interaction of alpha-beta TR with the pMH complexes shapes TR structural and functional avidity (PubMed:15040585).

Storage

Shipped at conditions	Ambient - Can Ship with Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

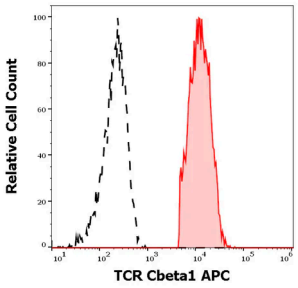
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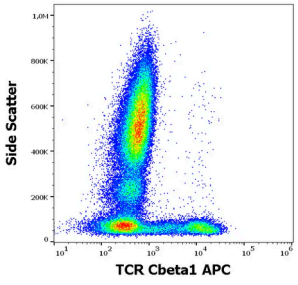
3 product images



Flow Cytometry - APC Anti-TCR Cbeta1 antibody [JOVI.1] (ab328552)

TCR Cbeta1 Flow Cytometry staining of human peripheral whole blood using mouse Anti-TCR Cbeta1 antibody

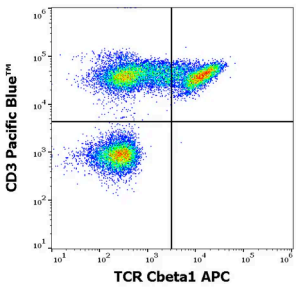
Separation of human TCR Cbeta1 positive lymphocytes (red-filled) from TCR Cbeta1 negative lymphocytes (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using anti-human TCR Cbeta1 (JOVI.1) APC antibody (4 µl reagent / 100 µl of peripheral whole blood).



Flow Cytometry - APC Anti-TCR Cbeta1 antibody [JOVI.1] (ab328552)

TCR Cbeta1 Flow Cytometry staining of human peripheral whole blood using mouse Anti-TCR Cbeta1 antibody

Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-human TCR Cbeta1 (JOVI.1) APC antibody (4 µl reagent / 100 µl of peripheral whole blood).



Flow Cytometry - APC Anti-TCR Cbeta1 antibody [JOVI.1] (ab328552)

TCR Cbeta1 Flow Cytometry staining of human lymphocytes using mouse Anti-TCR Cbeta1 antibody

Flow cytometry multicolor surface staining of human lymphocytes stained using anti-human TCR Cbeta1 (JOVI.1) APC antibody (4 µl reagent / 100 µl of peripheral whole blood) and anti-human CD3(UCHT1) Pacific Blue™ antibody (4 µl reagent / 100 µl of peripheral whole blood).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.