abcam

ab328575

PE/Cy7® Anti-TCR gamma/delta antibody [B1]

Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	PE/Cy7®
Excitation/Emission	Ex: 565nm, Em: 778nm
Storage buffer	pH: 7.4 Preservative: 0.1% Sodium azide Constituents: PBS, 0.2% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Protein within Human TRGC1. Database link P0CF51
Clone number	B1
Purification technique	Size-exclusion chromatography
Specificity	The mouse monoclonal antibody B1 (also known as B1.1) recognizes an extracellular epitope of TCR gamma/delta, the subtype of T cell receptor expressed mainly in epithelial tissues and at the sites of infection.
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.The reactivity of clone B1 (anti-TCR gamma/delta) may be affected by co-staining with an anti-human CD3 mAb, which is likely to block the epitope recognized by clone B1. When using antibody B1 in a panel that includes CD3, it is recommended to apply a staining protocol in which the B1 mAb is added to the sample and incubated for approximately 15 minutes before adding the remaining antibodies. No washing is required between the staining steps.

Target data

See full target information TRGC1

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).

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

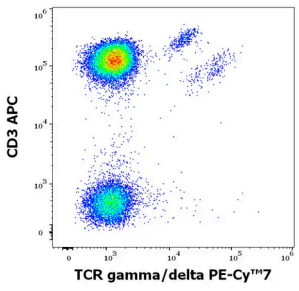
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

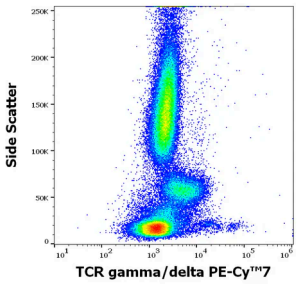
3 product images



Flow Cytometry - PE/Cy7® Anti-TCR gamma/delta antibody [B1] (ab328575)

TCR gamma/delta Flow Cytometry staining of human lymphocytes using mouse Anti-TCR gamma/delta antibody

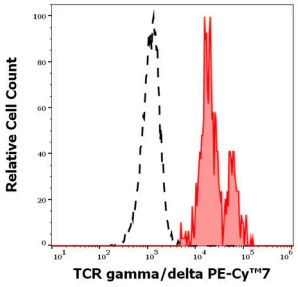
Flow cytometry multicolor surface staining pattern of human lymphocytes stained using anti-human CD3 (UCHT1) APC antibody (10 µl reagent / 100 µl of peripheral whole blood) and anti-human TCR gamma/delta (B1) PE-Cy™7 antibody (4 µl reagent / 100 µl of peripheral whole blood).



Flow Cytometry - PE/Cy7® Anti-TCR gamma/delta antibody [B1] (ab328575)

TCR gamma/delta Flow Cytometry staining of human peripheral whole blood using mouse Anti-TCR gamma/delta antibody

Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-human TCR gamma/delta (B1) PE-Cy™7 antibody (4 µl reagent / 100 µl of peripheral whole blood).



Flow Cytometry - PE/Cy7® Anti-TCR gamma/delta antibody [B1] (ab328575)

TCR gamma/delta Flow Cytometry staining of human peripheral whole blood using mouse Anti-TCR gamma/delta antibody

Separation of human CD3 positive TCR gamma/delta positive lymphocytes (red-filled) from CD3 negative TCR gamma/delta negative lymphocytes (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using anti-human TCR gamma/delta (B1) PE-Cy™7 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'.