abcam

ab131596

PE Anti-TCR gamma + TCR delta antibody [V65]

Anti-TCR gamma + TCR delta antibody [V65] conjugated to PE - suitable for flow cytometry, and reacts with rat samples. Clone [V65] is a mouse monoclonal antibody cited in 5 publications.

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Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	pH: 7.4 Preservative: 0.1% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing T-cell surface glycoprotein CD3 gamma chain protein. The exact immunogen used to generate this antibody is proprietary information. Database link Q64159
Clone number	V65
Purification technique	Size-exclusion chromatography
Specificity	ab131596 recognizes TCR gamma/delta, the subtype of T cell receptor expressed mainly in epithelial tissues and at the sites of infection.
Light chain type	kappa
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Rat
Dilution info	1-2 µg/mL
Notes	-

Target data

See full target information T-cell surface glycoprotein CD3 gamma chain

Function

Part of the TCR-CD3 complex present on T-lymphocyte cell surface that plays an essential role in adaptive immune response. When antigen presenting cells (APCs) activate T-cell receptor (TCR), TCR-mediated signals are transmitted across the cell membrane by the CD3 chains CD3D, CD3E, CD3G and CD247/CD3Z. All CD3 chains contain immunoreceptor tyrosine-based activation motifs (ITAMs) in their cytoplasmic domain. Upon TCR engagement, these motifs become phosphorylated by Src family protein tyrosine kinases LCK and FYN, resulting in the activation of downstream signaling pathways. In addition to this role of signal transduction in T-cell activation, CD3G plays an essential role in the dynamic regulation of TCR expression at the cell surface. Indeed, constitutive TCR cycling is dependent on the di-leucine-based (diL) receptor-sorting motif present in CD3G.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary

The TCR gamma + TCR delta also known as gamma delta T-cell receptor is a part of the T-cell receptor (TCR) family. It has alternative names like gammadelta TCR or simply TCRδ/γ. The gamma and delta chains form a heterodimer that is part of the cell surface receptor complex. This complex is important for ligand recognition and immune response. The mass of the TCR gamma and TCR delta chains is not specified but they form between ZAP-70 and the CD3 complex on the surface of a subset of T-cells. These receptors are mainly expressed on gamma delta T-cells

	which are a minor population of T-cells in peripheral blood but more abundant in mucosal tissues and epithelial layers.
Biological function summary	TCR gamma and TCR delta are involved in recognizing antigens without presentation by major histocompatibility complex (MHC) molecules. The receptor complex allows these cells to respond to a diverse range of non-peptide antigens mostly derived from microbial origin including phosphoantigens and lipids. This enables gamma delta T-cells to bridge innate and adaptive immunity. They do not always require antigen processing and can recognize antigens directly contributing efficiently to immune surveillance and early response to infections and cellular stress.
Pathways	TCR gamma and TCR delta are important in the signaling networks that mediate immune responses. They are involved in pathways such as the nuclear factor of activated T-cells (NFAT) and mitogen-activated protein kinase (MAPK) pathways. These pathways promote the activation proliferation and differentiation of T-cells upon antigen recognition. The TCR complex including CD3 plays a role in these signal transduction events and ZAP-70 a protein tyrosine kinase is key for initiating these pathways upon TCR activation.
Associated diseases and disorders	Mutations or dysregulation in TCR gamma and TCR delta can lead to immune-related conditions. For example abnormalities in these receptors have been linked to autoimmune diseases such as celiac disease and multiple sclerosis. Their role in these disorders is related to faulty recognition and response to autoantigens leading to inappropriate immune responses. Additionally gamma delta T-cells and their receptors are of interest in cancer research as they participate in tumor immunosurveillance. Connections with molecules like CD3 and ZAP-70 facilitate ongoing exploration for therapeutic interventions targeting immune-related pathologies.

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

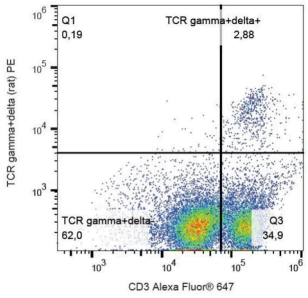
We do not recommend this combination. It is not covered by our product promise.

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.

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1 product image



Flow Cytometry - PE Anti-TCR gamma + TCR delta antibody [V65] (ab131596)

TCR gamma + TCR delta Flow Cytometry staining using mouse Anti-TCR gamma + TCR delta antibody

Flow cytometry analysis (surface staining) of TCR gamma/delta in rat peripheral blood with ab131596.

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