

PE/Cyanine7 anti-human TCR γ/δ Antibody

Catalog# / Size	331221 / 25 tests 331222 / 100 tests
Clone	B1
Regulatory Status	RUO
Other Names	T cell receptor γ/δ , γ/δ TCR, TCR- γ/δ
Isotype	Mouse IgG1, κ
Description	T cell receptor (TCR) is a heterodimer consisting of an α and a β chain (TCR α/β) or a γ and a δ chain (TCR γ/δ). TCR γ/δ is involved in the recognition of certain bacterial, self-CD1 molecule, and tumor antigens bound to MHC class I. The γ/δ TCR associates with CD3 and is expressed on a subset of T cells found in the thymus, the intestinal epithelium, and the peripheral lymphoid tissues and peritoneum. Most γ/δ T cells are CD4 ⁻ /CD8 ⁻ , some are CD8 ⁺ . T cells expressing the γ/δ TCR have been shown to play a role in oral tolerance, innate immune response for some tumor cells, and autoimmune disease. It has been reported that γ/δ T cells also play a principal role in antigen presentation.

Product Details

Verified Reactivity	Human, Cynomolgus, Rhesus
Reported Reactivity	African Green, Baboon, Pigtailed Macaque
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with PE/Cyanine7 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis . For flow cytometric staining, the suggested use of this reagent is 5 μ l per million cells in 100 μ l staining volume or 5 μ l per 100 μ l of whole blood.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	Clone B1 is also known as clone B1.1. Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen sections ³ and paraffin-embedded sections ⁵ , <i>in vitro</i> blocking, and spatial biology (IBEX) ^{8,9} . The Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/ μ g, Azide-Free, 0.2 μ m filtered) is recommended for highly sensitive assays (Cat. Nos. 331235 and 331236).
Additional Product Notes	BioLegend is in the process of converting the name PE/Cy7 to PE/Cyanine7. The dye molecule remains the same, so you should expect the same quality and performance from our PE/Cyanine7 products. Please contact Technical Service if you have any questions.
Application References	<ol style="list-style-type: none"> Rodriguez-Gago M, <i>et al.</i> 2001. <i>Transplantation</i>. 72:503. Lehmann FS, <i>et al.</i> 2002. <i>Am. J. Physiol. Gastrointest. Liver. Physiol.</i> 283:G481. (FC) Bordignon M, <i>et al.</i> 2008. <i>Mol. Med. Rep.</i> 1:485. (IHC) Conrad M, <i>et al.</i> 2007. <i>Cytom. Part A</i> 71A:925. (FC)

5. Pollinger B, *et al.* 2011. *J. Immunol.* 186:2602. (IHC)
6. Correia DV, *et al.* 2011. *Blood.* 118:992. (Block)
7. Laurent AJ, *et al.* 2014. *PLoS One.* 9:103683. [PubMed](#)
8. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci USA.* 117:33455-33465. (SB) [PubMed](#)
9. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

Product Citations

1. Gantner P, *et al.* 2020. *Nat Commun.* 3:297916667. [PubMed](#)
2. Ollé Hurtado M, *et al.* 2019. *PLoS One.* 14:e0216373. [PubMed](#)
3. Westera L, *et al.* 2017. *Clin Transl Gastroenterol.* 8:e126. [PubMed](#)
4. Du Y, *et al.* 2022. *Nat Commun.* 13:231. [PubMed](#)
5. Russell ML, *et al.* 2022. *Elife.* 11:. [PubMed](#)
6. Huang C, *et al.* 2021. *Front Immunol.* 631077:12. [PubMed](#)
7. Frasca D, *et al.* 2018. *PLoS One.* 13:e0197472. [PubMed](#)
8. Kathamuthu GR, *et al.* 2021. *Front Cell Infect Microbiol.* 11:756854. [PubMed](#)
9. Yang C, *et al.* 2019. *Nat Commun.* 10:3931. [PubMed](#)

RRID

AB_2562890 (BioLegend Cat. No. 331221)
 AB_2562891 (BioLegend Cat. No. 331222)

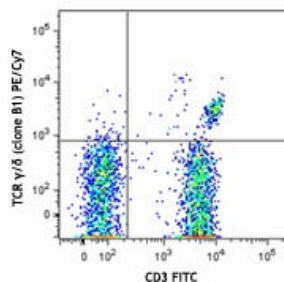
Antigen Details

Structure	Ig superfamily, associates with CD3 complex
Distribution	T subset in thymus, intestinal epithelium, peripheral lymphoid tissues and peritoneum
Function	Antigen recognition
Ligand/Receptor	Some bacterial or tumor antigens bound MHC class I, CD1 molecule
Cell Type	Epithelial cells, T cells
Biology Area	Adaptive Immunity, Immunology
Molecular Family	TCRs
Antigen References	<ol style="list-style-type: none"> 1. Lanier LL, <i>et al.</i> 1987. <i>J. Clin. Immunol.</i> 7:429. 2. Spencer J, <i>et al.</i> 1989. <i>Eur. J. Immunol.</i> 19:1335. 3. Uyemura K, <i>et al.</i> 1991. <i>J. Exp. Med.</i> 174:683. 4. Spada FM, <i>et al.</i> 2000. <i>J. Exp. Med.</i> 191:907.
Gene ID	6964 6965

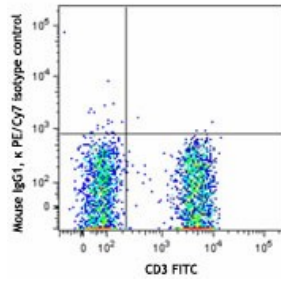
Other Formats

Purified anti-human TCR γ/δ , Biotin anti-human TCR γ/δ , FITC anti-human TCR γ/δ , PE anti-human TCR γ/δ , APC anti-human TCR γ/δ , Alexa Fluor® 647 anti-human TCR γ/δ , Brilliant Violet 421™ anti-human TCR γ/δ , Brilliant Violet 510™ anti-human TCR γ/δ , PE/Cyanine7 anti-human TCR γ/δ , PerCP/Cyanine5.5 anti-human TCR γ/δ , PE/Dazzle™ 594 anti-human TCR γ/δ , APC/Fire™ 750 anti-human TCR γ/δ , TotalSeq™-A0139 anti-human TCR γ/δ , TotalSeq™-C0139 anti-human TCR γ/δ , TotalSeq™-B0139 anti-human TCR γ/δ , Ultra-LEAF™ Purified anti-human TCR γ/δ , PE/Fire™ 700 anti-human TCR γ/δ Antibody, Alexa Fluor® 660 anti-human TCR γ/δ Antibody, TotalSeq™-D0139 anti-human TCR γ/δ

Product Data



Human peripheral blood lymphocytes were stained with CD3 FITC and TCR γ/δ (clone B1) PE/Cyanine7 (top) or mouse IgG1, κ PE/Cyanine7 isotype control (bottom).



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