APC anti-human TCR γ/δ Antibody

Catalog# / Size	331211 / 25 tests 331212 / 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 APC 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 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.
Excitation Laser	Red Laser (633 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], *in vitro* blocking, and spatial biology (IBEX)[8,9]. The Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for highly sensitive assays (Cat. Nos. 331235 and 331236).

Application References

(PubMed link indicates BioLegend citation)

1. Rodriguez-Gago M, *et al.* 2001. *Transplantation.* 72:503.
2. Lehmann FS, *et al.* 2002. *Am. J. Physiol. Gastrointest. Liver. Physiol.* 283:G481. (FC)
3. Bordignon M, *et al.* 2008. *Mol. Med. Rep.* 1:485. (IHC)
4. Conrad M, *et al.* 2007. *Cytom. Part A* 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. Guo X, *et al.* 2016. Mol Ther Methods Clin Dev. 3:15054. PubMed
2. Novakova L *et al.* 2018. Journal of neurochemistry. 146(3):322-332 . PubMed
3. Barry KC, *et al.* 2018. Nat Med. 24:1178. PubMed
4. Swadling L, *et al.* 2020. Cell Rep. 30:687. PubMed
5. Zhan Y, *et al.* 2021. JCI Insight. 6:. PubMed
6. Lee JM, *et al.* 2022. Lupus Sci Med. 9:. PubMed
7. McIver Z, *et al.* 2013. Haematologica. 98:346. PubMed
8. Namkoong H, *et al.* 2018. PLoS Pathog. 14:e1006955. PubMed

RRID

AB_1089215 (BioLegend Cat. No. 331211)
AB_1089214 (BioLegend Cat. No. 331212)

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	1. Lanier LL, *et al.* 1987. *J. Clin. Immunol.* 7:429. 2. Spencer J, *et al.* 1989. *Eur. J. Immunol.* 19:1335. 3. Uyemura K, *et al.* 1991. *J. Exp. Med.* 174:683. 4. Spada FM, *et al.* 2000. *J. Exp. Med.* 191:907.
Gene ID	6964 6965

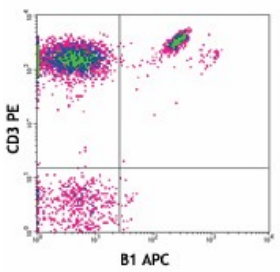
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

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 stained with CD3 PE and B1 APC

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