

PE/Dazzle™ 594 anti-mouse TCR β chain Antibody

Catalog# / Size	109239 / 25 µg 109240 / 100 µg
Clone	H57-597
Regulatory Status	RUO
Other Names	TCR-β chain, TCR-β, β-TCR
Isotype	Armenian Hamster IgG
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-β is a member of the immunoglobulin superfamily and a component of the CD3/TCR complex (along with TCR-α). It is expressed on α/β TCR-bearing T cells and thymocytes. The CD3/TCR complex plays a key role in antigen recognition, signal transduction, and T cell activation.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Armenian Hamster
Immunogen	Affinity purified TCR from mouse DO-11.10 cells
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography and conjugated with PE/Dazzle™ 594 under optimal conditions.
Concentration	0.2 mg/ml
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 ≤0.25 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application. * PE/Dazzle™ 594 has a maximum excitation of 566 nm and a maximum emission of 610 nm.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	H57-597 is a hamster mAb directed to an epitope of the C region of TCR β chain ¹² . The H57-597 antibody does not cross-react with γ/δ TCR-bearing T cells. Immobilized or soluble H57-597 antibody can activate α/β TCR-bearing T cells. Additional reported applications (for the relevant formats) for this antibody include: immunoprecipitation ² , <i>in vitro</i> stimulation ^{2,3} , <i>in vivo</i> depletion ⁴⁻⁶ , and immunohistochemical staining of acetone-fixed frozen sections ^{7,8,9} . The Ultra-LEAF™ purified antibody (Endotoxin <0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 109253-109258).
Application References	<ol style="list-style-type: none"> 1. Gascoigne NJ. 1990. <i>J. Biol. Chem.</i> 265:9296. 2. Kruisbeek A, et al. 1991. <i>In Current Protocols in Immunology</i>. pp. 3.12.1. (Costim IP) 3. Davenport C, et al. 1995. <i>J. Immunol.</i> 155:3742. (Costim) 4. Drobyski W, et al. 1996. <i>Blood</i> 87:5355. (Deplete) 5. Kummer U, et al. 2001. <i>Immunol. Lett.</i> 75:153. (Deplete) 6. van der Heyde HC, et al. 1995. <i>J. Immunol.</i> 154:3985. (Deplete) 7. Tomita K, et al. 1999. <i>Genes Dev.</i> 13:1203. (IHC) 8. Podd BS, et al. 2006. <i>J. Immunol.</i> 176:6532. (IHC)
(PubMed link indicates BioLegend citation)	

9. Ponomarev ED, *et al.* 2007. *J. Immunol.* 178:39. (IHC)
10. Chappaz S, *et al.* 2007. *Blood* doi:10.1182/blood-2007-02-074245. (FC) [PubMed](#)
11. Tsukumo S, *et al.* 2006. *J. Immunol.* 177:8365. (FC) [PubMed](#)
12. Grégoire C, *et al.* 1991. *Proc. Natl. Acad. Sci USA* 88:8077.

Product Citations

1. Hirai T, *et al.* 2020. *Immunity.* 54(1):84-98.e5. [PubMed](#)
2. Yin Q, *et al.* 2021. *Proc Natl Acad Sci US A.* 118: . [PubMed](#)
3. Toshiro Hirai *et al.* 2019. *Immunity.* 50(5):1249-1261 . [PubMed](#)
4. Godwin MS, *et al.* 2019. *JCI Insight.* 4:e126070. [PubMed](#)

RRID

AB_2565654 (BioLegend Cat. No. 109239)
 AB_2565655 (BioLegend Cat. No. 109240)

Antigen Details

Structure	Ig superfamily, CD3/TCR complex with CD3 and TCR α subunit
Distribution	Majority of T cells and thymocytes (correlated to differentiation)
Function	Antigen recognition, T cell activation
Ligand/Receptor	Peptide bound-MHC class I and II
Antigen References	<ol style="list-style-type: none"> 1. Davis MM, <i>et al.</i> 1998. <i>Ann. Rev. Immunol.</i> 16:523. 2. Huppa JB, <i>et al.</i> 2003. <i>Nat. Immunol.</i> 4:749. 3. Kubo R, <i>et al.</i> 1989. <i>J. Immunol.</i> 142:2736.
Gene ID	21577

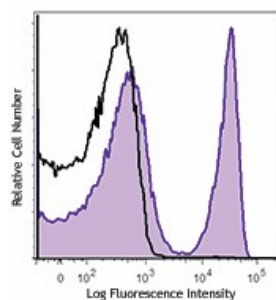
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-mouse TCR β chain, Biotin anti-mouse TCR β chain, FITC anti-mouse TCR β chain, PE anti-mouse TCR β chain, PE/Cyanine5 anti-mouse TCR β chain, Purified anti-mouse TCR β chain, Alexa Fluor® 488 anti-mouse TCR β chain, Alexa Fluor® 647 anti-mouse TCR β chain, APC/Cyanine7 anti-mouse TCR β chain, PE/Cyanine7 anti-mouse TCR β chain, Alexa Fluor® 700 anti-mouse TCR β chain, Pacific Blue™ anti-mouse TCR β chain, Brilliant Violet 421™ anti-mouse TCR β chain, PerCP/Cyanine5.5 anti-mouse TCR β chain, Brilliant Violet 570™ anti-mouse TCR β chain, Brilliant Violet 510™ anti-mouse TCR β chain, Purified anti-mouse TCR β chain (Maxpar® Ready), Alexa Fluor® 594 anti-mouse TCR β chain, PE/Dazzle™ 594 anti-mouse TCR β chain, Brilliant Violet 605™ anti-mouse TCR β chain, Brilliant Violet 711™ anti-mouse TCR β chain, APC/Fire™ 750 anti-mouse TCR β chain, TotalSeq™-A0120 anti-mouse TCR β chain, Brilliant Violet 785™ anti-mouse TCR β chain, Brilliant Violet 650™ anti-mouse TCR β chain, Ultra-LEAF™ Purified anti-mouse TCR β chain, TotalSeq™-C0120 anti-mouse TCR β chain, TotalSeq™-B0120 anti-mouse TCR β chain

Product Data



C57BL/6 mouse splenocytes were stained with TCR- β (clone H57-597) PE/Dazzle™ 594 (filled histogram) or Armenian hamster IgG PE/Dazzle™ 594 isotype control (open histogram).

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