

APC/Fire™ 750 anti-mouse TCR β chain Antibody

Catalog# / Size	109245 / 25 µg 109246 / 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 APC/Fire™ 750 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 ≤0.5 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.

* APC/Fire™ 750 has a maximum excitation of 650 nm and a maximum emission of 787 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).
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Application References

(PubMed link indicates BioLegend citation)

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2. Kruisbeek A, *et al.* 1991. *In Current Protocols in Immunology*. pp. 3.12.1. (Costim IP)
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12. Grégoire C, et al. 1991. *Proc. Natl. Acad. Sci USA* 88:8077.

Product Citations

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2. Wagner KI, et al. 2022. *Cell Rep.* 38:110214. [PubMed](#)
3. Fischer DS, et al. 2021. *Nat Commun.* 12:4515. [PubMed](#)
4. Mudd PA, et al. 2022. *Cell.* 185:603. [PubMed](#)
5. Mateyka LM, et al. 2022. *STAR Protoc.* 3:101699. [PubMed](#)
6. Bajarña S, et al. 2022. *iScience.* 25:103732. [PubMed](#)
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9. Müller TR, et al. 2021. *Cell Rep Med.* 2:100374. [PubMed](#)
10. Teng F, et al. 2021. *Cell Rep.* 37:110051. [PubMed](#)
11. Jaeger N, et al. 2020. *Cell Rep.* 33:108331. [PubMed](#)

RRID

AB_2629696 (BioLegend Cat. No. 109245)
AB_2629697 (BioLegend Cat. No. 109246)

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, et al. 1998. <i>Ann. Rev. Immunol.</i> 16:523.2. Huppa JB, et al. 2003. <i>Nat. Immunol.</i> 4:749.3. Kubo R, et al. 1989. <i>J. Immunol.</i> 142:2736.
Gene ID	21577

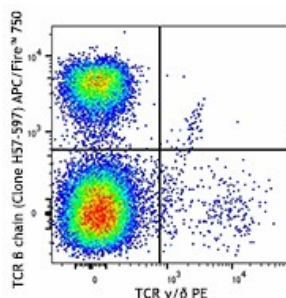
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

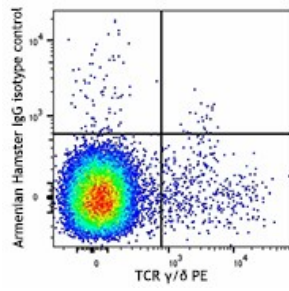
Other Formats

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 splenocytes were stained with TCR γ/δ PE and TCR β chain (clone H57-597) APC/Fire™ 750 (top), or Armenian Hamster IgG APC/Fire™ 750 isotype control (bottom).



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