SONY

Product Data Sheet

Brilliant Violet 570™ anti-mouse TCR β chain

Catalog # / Size: 1146155 / 125 µl

Clone: H57-597

Isotype: Hamster IgG

Immunogen: Affinity purified TCR from mouse DO-11.10 cells

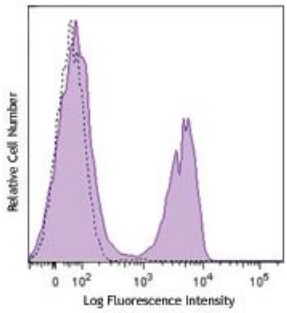
Reactivity: Mouse

Preparation: The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 570™ under optimal conditions.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).

Workshop Number: 750 under optimal conditions.

Concentration: Lot-specific



C57BL/6 mouse splenocytes were stained with TCR β (clone H57-597) Brilliant Violet 570™ (filled histogram) or Armenian hamster IgG Brilliant Violet 570™ isotype control (open histogram).

Applications:

Applications: Flow Cytometry

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 or 5 µl per 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

Brilliant Violet 570™ excites at 405 nm and emits at 570 nm. The bandpass filter 585/42 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. **Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel.** Refer to your instrument manual or manufacturer for support. Brilliant Violet 570™ is a trademark of Sirigen Group Ltd.

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: immunoprecipitation2, *in vitro* stimulation[2,3], *in vivo* depletion[4-6], and immunohistochemical staining of acetone-fixed frozen sections[7,8,9]. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 109214).

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Application References:

1. Gascoigne NJ. 1990. *J. Biol. Chem.* 265:9296.
2. Kruisbeek A, *et al.* 1991. *In Current Protocols in Immunology.* pp. 3.12.1. (Costim IP)
3. Davenport C, *et al.* 1995. *J. Immunol.* 155:3742. (Costim)
4. Drobyski W, *et al.* 1996. *Blood* 87:5355. (Deplete)
5. Kummer U, *et al.* 2001. *Immunol. Lett.* 75:153. (Deplete)
6. van der Heyde HC, *et al.* 1995. *J. Immunol.* 154:3985. (Deplete)
7. Tomita K, *et al.* 1999. *Genes Dev.* 13:1203. (IHC)
8. Podd BS, *et al.* 2006. *J. Immunol.* 176:6532. (IHC)
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.

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.

Antigen References:

1. Davis MM, *et al.* 1998. *Ann. Rev. Immunol.* 16:523.
2. Huppa JB, *et al.* 2003. *Nat. Immunol.* 4:749.
3. Kubo R, *et al.* 1989. *J. Immunol.* 142:2736.

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