Technical Data Sheet

PE Hamster Anti-Mouse TCR β Chain

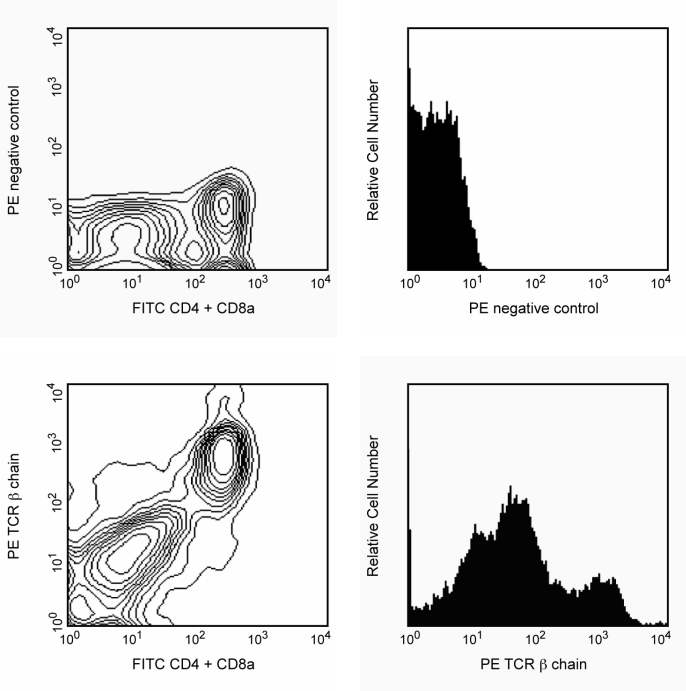
Product Information

Material Number:	**553172**
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	H57-597
Immunogen:	TCR affinity-purified from mouse T-cell hybridoma DO-11.10
Isotype:	Armenian Hamster IgG2, λ1
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The H57-597 antibody reacts with a common epitope of the β chain of the T-cell Receptor (TCR) complex on αβ TCR-expressing thymocytes and peripheral T lymphocytes and NK1.1+ thymocytes and NK-T cells of all mouse strains tested. It does not react with γδTCR-bearing T cells. In the fetal and adult thymus, the TCR βchain may form homodimers or pair with the pre-TCR achain on the surface of immature thymocytes before expression of the TCR achain. Plate-bound or soluble H57-597 antibody activates αβTCR-bearing T cells, and plate-bound mAb can induce apoptotic death.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



TCR β chain expression in spleen and thymus. *C57BL/6 splenocytes were simultaneously stained with FITC-conjugated anti-mouse CD4 mAb RM4-5 (Cat. No. 553046/553047, left panels), FITC-conjugated anti-mouse CD8a mAb 53-6.7 (Cat. No. 553030/553031, left panels), and PE-conjugated mAb H57-597 (bottom left panel) monoclonal antibodies. C57BL/6 thymocytes were stained PE-conjugated mAb H57-597 (bottom right panel) or unstained (top right panel). Flow cytometry was performed on a BD FACScan™ flow cytometry system.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed by gel filtration chromatography.

Store undiluted at 4° C.

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Application Notes

Application

Flow cytometry	Routinely Tested
Fluorescence microscopy	Reported

Recommended Assay Procedure:

It has been observed that pre-incubation of thymus cell suspensions at 37°C for 2 to 4 hours prior to staining enhances the ability of anti-CD3e and anti-TCR β chain mAbs to detect the T cell receptor on immature thymocytes. This antibody conjugate is compatible with intracellular staining protocols using the BD Cytofix/Cytoperm™ Kit (Cat. No. 554714).

Suggested Companion Products

Catalog Number	Name	Size	Clone
554714	BD Cytofix/Cytoperm Fixation/Permeablization Kit	250 tests	(none)
553965	PE Hamster IgG2, λ1 Isotype Control	0.1 mg	Ha4/8
553046	FITC Rat Anti-Mouse CD4	0.1 mg	RM4-5
553030	FITC Rat Anti-Mouse CD8a	0.1 mg	53-6.7

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Although hamster immunoglobulin isotypes have not been well defined, BD Biosciences Pharmingen has grouped Armenian and Syrian hamster IgG monoclonal antibodies according to their reactivity with a panel of mouse anti-hamster IgG mAbs. A table of the hamster IgG groups, Reactivity of Mouse Anti-Hamster Ig mAbs, may be viewed at http://www.bdbiosciences.com/pharmingen/hamster_chart_11x17.pdf.
4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

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