Technical Data Sheet

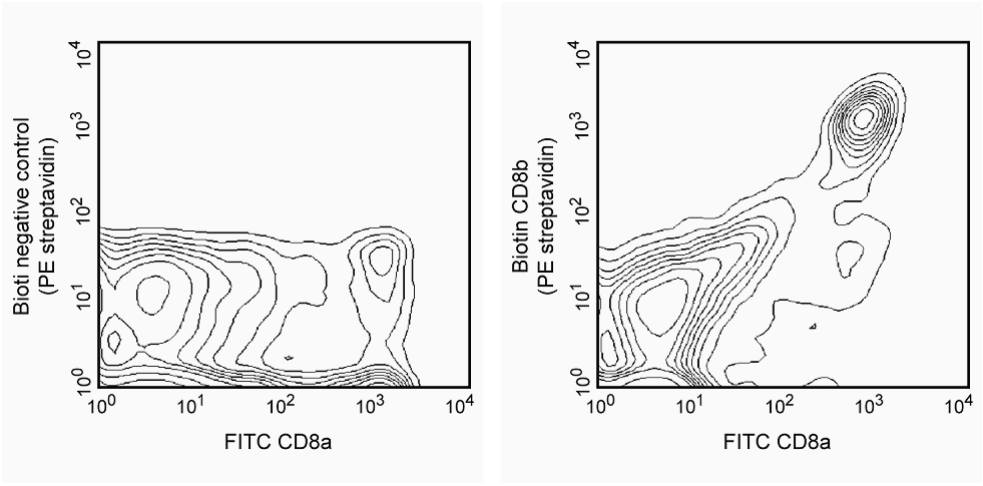
Biotin Mouse Anti-Rat CD8b

Product Information

Material Number:	**550970**
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	341
Immunogen:	CD8-positive Wistar rat splenic T-cell hybridomas
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Rat
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 341 antibody reacts with the β chain of the CD8 antigen on most thymocytes and a subpopulation of mature T lymphocytes (ie, MHC class I-restricted T cells, including most T suppressor/cytotoxic cells). The CD8 α and β chains (CD8a and CD8b, respectively) form a heterodimer on the surface of most thymocytes and thymus-dependent T suppressor/cytotoxic cells, whereas intestinal intraepithelial lymphocytes, many CD8+ T cells of athymic rats, many activated CD4+ T cells, and most NK cells express CD8a without CD8b. It has been suggested that the expression of the CD8a/CD8b heterodimer is restricted to thymus-derived T lymphocytes. CD8 is an antigen co-receptor on the T cell surface which interacts with MHC class I molecules on antigen-presenting cells. It participates in T-cell activation through its association with the T-cell receptor complex and protein tyrosine kinase lck. Macrophages have also been reported to express CD8 α and β chains, which are involved in signal transduction. The 341 mAb blocks proliferative and cytotoxic in vitro responses of CD8+ effectors to allogeneic cells.



Two-color analysis of the expression of CD8b on rat spleen cells. *Lewis rat splenocytes were simultaneously stained with FITC-conjugated anti-rat CD8a mAb OX-8 (Cat. no. 554856) and biotinylated mAb 341 (Right panel), followed by Streptavidin-PE (Cat. no. 554061). Note that the CD8a+CD8b- population represents NK cells. 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 biotin under optimum conditions, and unreacted biotin was removed.
Store undiluted at 4° C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry	Routinely Tested

BD Biosciences

www.bdbiosciences.com

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877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554061	PE Streptavidin	0.5 mg	(none)
550615	Biotin Mouse IgG1 κ Isotype Control	0.25 mg	MOPC-31C

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. 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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Hirji N, Lin TJ, Bissonnette E, Belosevic M, Befus AD. Mechanisms of macrophage stimulation through CD8: macrophage CD8alpha and CD8beta induce nitric oxide production and associated killing of the parasite Leishmania major. *J Immunol.* 1998; 160(12):6004-6011.(Clone-specific: Stimulation)

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Kuhnlein P, Park JH, Herrmann T, Elbe A, Hunig T. Identification and characterization of rat gamma/delta T lymphocytes in peripheral lymphoid organs, small intestine, and skin with a monoclonal antibody to a constant determinant of the gamma/delta T cell receptor. *J Immunol.* 1994; 153(3):979-986.(Biology)

Torres-Nagel N, Kraus E, Brown MH, et al. Differential thymus dependence of rat CD8 isoform expression.. *Eur J Immunol.* 1992; 22(11):2841-2848.(Immunogen: Blocking, Immunoprecipitation, Western blot)