

## Technical Data Sheet

## Purified NA/LE Mouse Anti-Rat CD8b

## Product Information

<b>Material Number:</b>	<b>562210</b>
<b>Alternate Name:</b>	Cd8b; CD8beta; CD8 beta; CD8-beta; CD8β
<b>Size:</b>	0.5 mg
<b>Concentration:</b>	1.0 mg/ml
<b>Clone:</b>	341
<b>Immunogen:</b>	CD8-positive Wistar rat splenic T-cell hybridomas
<b>Isotype:</b>	Mouse (BALB/c) IgG1, κ
<b>Reactivity:</b>	QC Testing: Rat
<b>Storage Buffer:</b>	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2µm sterile filtered. Endotoxin level is ≤0.01 EU/µg (≤0.001 ng/µg) of protein as determined by the LAL assay.

## 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.

## Preparation and Storage

Store undiluted at 4°C.

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

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

## Application Notes

## Application

Flow cytometry	Routinely Tested
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## Product Notices

1. Please refer to [www.bdbiosciences.com/pharmingen/protocols](http://www.bdbiosciences.com/pharmingen/protocols) for technical protocols.
2. Since applications vary, each investigator should titrate the reagent to obtain optimal results.

## References

Bierer BE, Sleckman BP, Ratnoffsky SE, Burakoff SJ. The biologic roles of CD2, CD4, and CD8 in T-cell activation. *Annu Rev Immunol.* 1989; 7:579-599. (Biology)

Hirji N, Lin TJ, Befus AD. A novel CD8 molecule expressed by alveolar and peritoneal macrophages stimulates nitric oxide production. *J Immunol.* 1997; 158(4):1833-1840. (Clone-specific: Stimulation)

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)

Janeway CA Jr. The T cell receptor as a multicomponent signalling machine: CD4/CD8 coreceptors and CD45 in T cell activation. *Annu Rev Immunol.* 1992; 10:645-674. (Biology)

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)

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