

## Technical Data Sheet

## BUV395 Mouse Anti-Human CD8

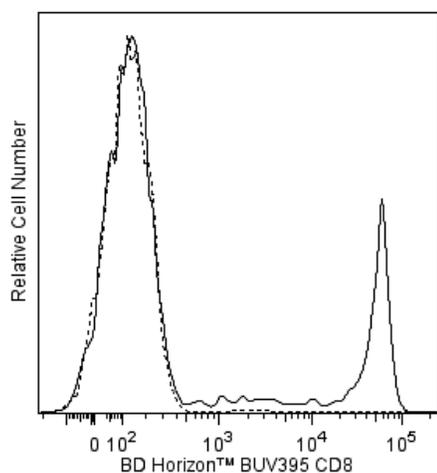
## Product Information

<b>Material Number:</b>	563796
<b>Alternate Name:</b>	CD8 $\alpha$ ; CD8A; CD8 alpha; Leu2; MAL; T8; p32
<b>Size:</b>	25 tests
<b>Vol. per Test:</b>	5 $\mu$ l
<b>Clone:</b>	RPA-T8
<b>Isotype:</b>	Mouse IgG1, $\kappa$
<b>Reactivity:</b>	QC Testing: Human Tested in Development: Rhesus, Cynomolgus, Baboon
<b>Workshop:</b>	IV T171; V T-CD08.03; VI 6T-CD8.1, 6T-081
<b>Storage Buffer:</b>	Aqueous buffered solution containing BSA and $\leq 0.09\%$ sodium azide.

## Description

The RPA-T8 monoclonal antibody specifically binds to CD8 alpha (CD8 $\alpha$ ). CD8 $\alpha$  is a type I transmembrane glycoprotein and a member of the immunoglobulin superfamily. CD8 $\alpha$  is expressed by the majority of thymocytes, by subpopulations of  $\alpha\beta$  T cells and  $\gamma\delta$  T cells and by some NK cells. Cell surface CD8 $\alpha$  is expressed either as a disulfide-linked homodimer (CD8 $\alpha\alpha$ ) or as a heterodimer (CD8 $\alpha\beta$ ) when disulfide-bonded to a CD8 beta chain (CD8 $\beta$ ). CD8-positive  $\alpha\beta$  T cells coexpress both CD8 $\alpha\alpha$  homodimers and CD8 $\alpha\beta$  heterodimers whereas some  $\gamma\delta$  T cells and NK cells express CD8 $\alpha\alpha$  homodimers. CD8 plays important roles in T cell activation and selection. The extracellular IgSF domain of CD8 $\alpha$  binds to a non-polymorphic determinant on HLA class I molecules ( $\alpha 3$  domain) and enables CD8 to function as a co-receptor with MHC class I-restricted TCR during T cell recognition of antigen. The cytoplasmic domain of CD8 $\alpha$  associates with Lck, a Src family protein tyrosine kinase that is involved in intracellular signaling. The RPA-T8 and HIT8a monoclonal antibodies are not cross-blocking.

The antibody was conjugated to BD Horizon™ BUV395 which has been exclusively developed by BD Biosciences as an optimal dye for use on a 355 nm laser equipped instrument. With an Ex Max at 348 nm and an Em Max at 395 nm, this dye has virtually no spillover into any other detector. BD Horizon™ BUV395 can be excited with a 355 nm laser and detected with a 379/28 filter.



**Flow cytometric analysis of CD8 $\alpha$  expression on human peripheral blood lymphocytes.** Human whole blood was stained with either BD Horizon™ BUV395 Mouse Anti-Human CD8 antibody (Cat. No. 563795/563796; solid line histogram) or BD Horizon™ BUV395 Mouse IgG1,  $\kappa$  Isotype Control (Cat. No. 563547; dashed line histogram). The erythrocytes were lysed with BD FACS™ Lysing Solution (Cat. No. 349202). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of intact lymphocytes. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer System.

## Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

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

The antibody was conjugated with BD Horizon™ BUV395 under optimum conditions, and unconjugated antibody and free BD Horizon™ BUV395 were removed.

## Application Notes

## Application

Flow cytometry

Routinely Tested

## BD Biosciences

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## Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
554656	Stain Buffer (FBS)	500 ml	(none)
563547	BUV395 Mouse IgG1, k Isotype Control	50 µg	X40
563795	BUV395 Mouse Anti-Human CD8	100 tests	RPA-T8
349202	BD FACST <sup>™</sup> Lysing Solution	100 ml	(none)
555899	Lysing Buffer	100 ml	(none)

## Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use  $1 \times 10^6$  cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
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.
5. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
7. Please refer to [www.bdbiosciences.com/pharmingen/protocols](http://www.bdbiosciences.com/pharmingen/protocols) for technical protocols.

## References

Knapp W, Dörken B, Gilks WR, et al, ed. *Leukocyte Typing IV*. New York, NY: Oxford University Press; 1989:1-1182. (Clone-specific)  
Schlossman SF, Boumsell L, Gilks W, et al, ed. *Leukocyte Typing V: White Cell Differentiation Antigens*. New York: Oxford University Press; 1995. (Clone-specific)  
Zola H, Swart B, Nicholson I, Voss E. *Leukocyte and Stromal Cell Molecules. The CD Markers*. Hoboken, New Jersey: John Wiley & Sons, Inc.; 2007:1-581. (Biology)

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