

## DATA SHEET

Brilliant Violet 785™ anti-mouse CD3ε Antibody

<b>Catalog# / Size</b>	100355 / 50 µg
<b>Clone</b>	145-2C11
<b>Other Names</b>	CD3ε, T3, CD3
<b>Isotype</b>	Armenian Hamster IgG

CD3ε is a 20 kD transmembrane protein, also known as CD3 or T3. It is a member of the Ig superfamily and primarily expressed on T cells, NK-T cells, and at different levels on thymocytes during T cell differentiation. CD3ε forms a TCR complex by associating with the CD3δ, γ and ζ chains, as well as the TCR α/β or γ/δ chains. CD3 plays a critical role in TCR signal transduction, T cell activation, and antigen recognition by binding the peptide/MHC antigen complex.

### Product Details

<b>Reactivity</b>	Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Armenian Hamster
<b>Immunogen</b>	H-2K <sup>b</sup> -specific mouse cytotoxic T lymphocyte clone BM10-37
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA). The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 785™ under optimal conditions.
<b>Concentration</b>	0.2 mg/ml
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	FC - Quality tested
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <u>immunofluorescent staining with Flow cytometric analysis</u> . For flow cytometric staining, the suggested use of this reagent is ≤0.5 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.

Brilliant Violet 785™ excites at 405 nm and emits at 785 nm. The bandpass filter 780/60 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 785™ is a trademark of Sirigen Group Ltd.

**Excitation Laser** Violet Laser (405 nm)

### Application Notes

Clone 145-2C11 is useful for in vitro blocking of target-specific CTL-mediated cell lysis<sup>1</sup>, as well as T cell activation assays, inducing proliferation and cytokine production<sup>1,2,7,12,16</sup>. It also induces apoptosis in immature thymocytes<sup>32</sup>, and in vivo T cell depletion<sup>8-10</sup>. Additional reported applications (for relevant formats of this clone) include: immunoprecipitation<sup>1</sup>, immunohistochemical staining<sup>14,15</sup> of acetone- fixed frozen sections and zinc-fixed paraffin-embedded sections, Western blotting<sup>4</sup>, complement-mediated cytotoxicity<sup>6</sup>, in vitro and in vivo stimulation of T cells<sup>1,2,7,12,16</sup>, immunofluorescent staining<sup>5</sup>, and in vivo T cell depletion<sup>8-10</sup>. The 145-2C11 antibody has been reported to block the binding of 17A2 antibody to CD3 epsilon- specific T cells<sup>11</sup>. Clone 145-2C11 is not recommended for formalin-fixed paraffin embedded sections. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free,

0.2 µm filtered) is recommended for functional assays (Cat. No. 100314). For in vivo studies or highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 100340) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/µg).

## Antigen Details

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Ig superfamily, forms CD3/TCR complex with CD3 $\delta$ ,  $\gamma$  and  $\zeta$  subunits and TCR ( $\alpha/\beta$  and  $\gamma/\delta$ ), 20 kD

**Distribution** Thymocytes (differentiation dependent), mature T cells, NK-T cells

**Function** TCR signal transduction, T cell activation, antigen recognition

**Ligand/Receptor** Peptide antigen/MHC-complex

**Cell Type** NKT cells, T cells, Thymocytes, Tregs

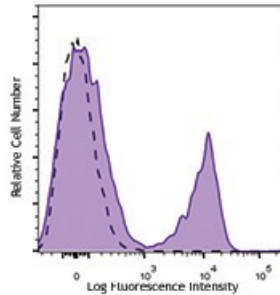
**Biology Area** Immunology

**Molecular Family** CD Molecules, TCRs

**Gene ID** [12501](#)

## Product Data

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C57BL/6 mouse splenocytes were stained with CD3 $\epsilon$  (clone 145-2C11) Brilliant Violet 785™ (filled histogram) or Armenian hamster IgG Brilliant Violet 785™ isotype control (open histogram).

**For In-Vitro Diagnostic Use. Not For Human Or Animal Consumption.**

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