SONY

# Product Data Sheet

## Brilliant Violet 421™ anti-mouse CD8a

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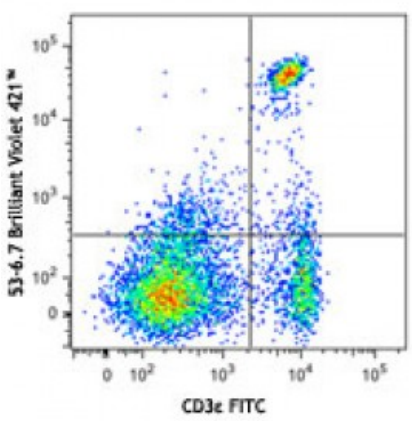
| **Catalog # / Size:** | 1103685 / 125 µl<br>1103690 / 500 µl<br><br>1103765 / 50 µg |
| **Clone:** | 53-6.7 |
| **Isotype:** | Rat IgG2a, κ |
| **Immunogen:** | Mouse thymus or spleen |
| **Reactivity:** | Mouse |
| **Preparation:** | The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 421™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 421™ and unconjugated antibody. |
| **Formulation:** | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA). |
| **Concentration:** | microg sizes: 0.2 mg/ml<br>microL sizes: lot-specific |




C57BL/6 mouse splenocytes were stained with CD3ε FITC and CD8a (clone 53-6.7) Brilliant Violet 421™. Quadrant gating was based on the rat IgG2a, κ Brilliant Violet 421™ isotype control.

## Applications:

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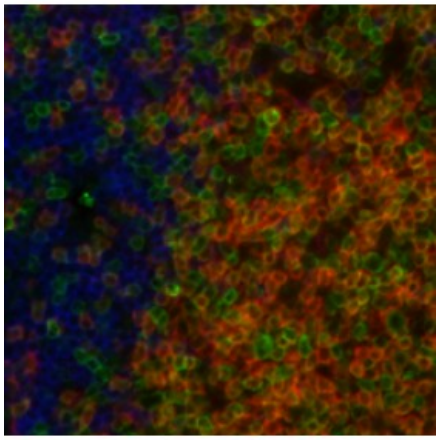
| **Applications:** | Flow Cytometry |
| **Recommended Usage:** | Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For immunofluorescent staining using the microg size, the suggested use of this reagent is ≤0.5 microg per million cells in 100 microL volume. For immunofluorescent staining using microL sizes, the suggested use of this reagent is ≤5 microL per million cells or 5 microL per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.<br><br>Brilliant Violet 421™ excites at 405 nm and emits at 421 nm. The standard bandpass filter 450/50 nm is recommended for detection. Brilliant Violet 421™ is a trademark of Sirigen Group Ltd.<br><br>This product is subject to proprietary rights of Sirigen Inc. and is made and sold under license from Sirigen Inc. The purchase of this product conveys to the buyer a non-transferable right to use the purchased product for research purposes only. This product may not be resold or incorporated in any manner |



BL6 mouse lymph nodes, fixed O/N in PLP, blocked with 10% rat serum, stained with CD8a-BV421 (red), B220-Alexa Fluor® 647 (blue), and TCRβ-Alexa Fluor® 488 (green) in 1% BSA and 0.1% Tween-20 in PBS. Images were acquired with an automated wid

into another product for resale. Any use for therapeutics or diagnostics is strictly prohibited. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents.

**Application Notes:** Clone 53-6.7 antibody competes with clone 5H10-1 antibody for binding to thymocytes3. The 53-6.7 antibody has been reported to block antigen presentation via MHC class I and inhibit T cell responses to IL-2. This antibody has also been used for depletion of $CD8a^+$ cells. Additional reported applications (for the relevant formats) include: immunoprecipitation[1,3], *in vivo* and *in vitro* cell depletion[2,10,15], inhibition of CD8 T cell proliferation3, blocking of cytotoxicity[3,4], and immunohistochemical staining[5,6] of acetone-fixed frozen sections and zinc-fixed paraffin-embedded sections. Clone 53-6.7 is not recommended for immunohistochemistry of formalin-fixed paraffin sections. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 100716). For *in vivo* studies or highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 100746) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/microg).

**Application References:**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**Description:** CD8, also known as Lyt-2, Ly-2, or T8, consists of disulfide-linked

α and β chains that form the α(CD8a)/β(CD8b) heterodimer and α/α homodimer. CD8a is a 34 kD protein that belongs to the immunoglobulin family. The CD8 α/β heterodimer is expressed on the surface of most thymocytes and a subset of mature TCR α/β T cells. CD8 expression on mature T cells is non-overlapping with CD4. The CD8 α/α homodimer is expressed on a subset of γ/δ TCR-bearing T cells, NK cells, intestinal intraepithelial lymphocytes, and lymphoid dendritic cells. CD8 is an antigen co-receptor on T cells that interacts with MHC class I on antigen-presenting cells or epithelial cells. CD8 promotes T cell activation through its association with the TCR complex and protein tyrosine kinase lck.

**Antigen References:**

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