

## Brilliant Violet 650™ anti-human/mouse Integrin $\beta$ 7 Antibody

<b>Catalog# / Size</b>	321249 / 25 tests 321250 / 100 tests
<b>Clone</b>	FIB504
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	VI 6T-101, VI A024
<b>Other Names</b>	$\beta$ 7 Integrin, integrin $\beta$ p, ITGB7
<b>Isotype</b>	Rat IgG2a, $\kappa$
<b>Description</b>	<p>Integrin <math>\beta</math>7 is a 130 kD glycoprotein also known as integrin <math>\beta</math>p. It is a member of the Ig superfamily. In association with integrin <math>\alpha</math>4 or <math>\alpha</math>E chain, <math>\beta</math>7 forms <math>\alpha</math>4/<math>\beta</math>7 or <math>\alpha</math>E/<math>\beta</math>7 heterodimer. <math>\alpha</math>4/<math>\beta</math>7 (CD49d/<math>\beta</math>7, LPAM-1) is expressed on the majority of peripheral lymphocytes, on small subsets of thymocytes, and bone marrow progenitors. LPAM-1 binds to several ligands, VCAM-1, MAdCAM-1 and fibronectin, and is involved in lymphocyte adhesion and some hematopoietic progenitor cells migration. <math>\alpha</math>E/<math>\beta</math>7 (CD103/<math>\beta</math>7, <math>\alpha</math>IEL/<math>\beta</math>7) is expressed on intestinal intraepithelial lymphocytes (IEL), dendritic epidermal T cells, T regulatory cells, a subset of CD8+ T cells in lymph nodes and lamina propria. CD103/<math>\beta</math>7 complex is thought to play a role in lymphocyte retention via interaction with its ligand E-Cadherin.</p>

### Product Details

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<b>Verified Reactivity</b>	Human, Mouse, Cynomolgus, Rhesus
<b>Reported Reactivity</b>	African Green, Baboon, Chimpanzee
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Rat
<b>Immunogen</b>	TK1 cells
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 650™ under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our <a href="#">Certificate of Analysis</a> online tool.)
<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>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	<p>Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a>. For flow cytometric staining, the suggested use of this reagent is 5 <math>\mu</math>L per million cells in 100 <math>\mu</math>L staining volume or 5 <math>\mu</math>L per 100 <math>\mu</math>L of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.</p>

Brilliant Violet 650™ excites at 405 nm and emits at 645 nm. The bandpass filter 660/20 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 650™ is a trademark of Sirigen Group Ltd.

[Learn more about Brilliant Violet™.](#)

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any manner 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.

<b>Excitation Laser</b>	Violet Laser (405 nm)
<b>Application Notes</b>	The FIB504 antibody has been reported to react with mouse and human $\beta$ 7 integrin and to block $\beta$ 7 integrin-mediated cell adhesion in <i>in vitro</i> and <i>in vivo</i> studies. Additional reported applications (for the relevant formats) include: blocking of cell adhesion <sup>1,3,4</sup> . The Ultra-LEAF™ purified FIB504 antibody (Endotoxin < 0.01 EU/μg, Azide-Free, 0.2 μm filtered) is recommended for functional assays (Cat. No. 321233-321238).
<b>Application References</b>	1. Andrew DP, <i>et al.</i> 1994. <i>J. Immunol.</i> 153:3847. (Block) 2. Berlin C, <i>et al.</i> 1993. <i>Cell</i> 74:185. 3. Rott LS, <i>et al.</i> 1996. <i>J. Immunol.</i> 156:3727. (Block) 4. Rivera-Nieves J, <i>et al.</i> 2005. <i>J. Immunol.</i> 174:2343. (Block) 5. Ohmori K, <i>et al.</i> 2009. <i>J. Immunol.</i> 182:2835. <a href="#">PubMed</a> 6. Yoshino N, <i>et al.</i> 2000. <i>Exp. Anim. (Tokyo)</i> 49:97. (FC)
<b>(PubMed link indicates BioLegend citation)</b>	
<b>RRID</b>	AB_3683338 (BioLegend Cat. No. 321249) AB_3683338 (BioLegend Cat. No. 321250)

## Antigen Details

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<b>Structure</b>	Integrin family, Ig superfamily, 130 kD, heterodimer with CD49d or CD103
<b>Distribution</b>	CD49d/ $\beta$ 7: majority of lymphocytes, thymocyte subset, and some bone marrow progenitors; CD103/ $\beta$ 7: intestinal intraepithelial lymphocytes (IEL), dendritic epidermal T cells, subset of CD8 T cells in lymph nodes
<b>Function</b>	Lymphocyte adhesion, hematopoietic progenitor cells migration
<b>Ligand/Receptor</b>	CD49d/ $\beta$ 7: VCAM-1 (CD106), MAdCAM-1 and fibronectin; CD103/ $\beta$ 7: E-cadherin
<b>Cell Type</b>	Dendritic cells, Hematopoietic stem and progenitors, Lymphocytes, T cells, Thymocytes, Tregs
<b>Biology Area</b>	Cell Biology, Immunology, Neuroscience, Synaptic Biology
<b>Molecular Family</b>	Adhesion Molecules, CD Molecules
<b>Antigen References</b>	1. Andrew DP, <i>et al.</i> 1994. <i>J. Immunol.</i> 153:3847. 2. Picarella D, <i>et al.</i> 1997. <i>J. Immunol.</i> 158:2099. 3. Lefrancois L, <i>et al.</i> 1994. <i>Eur. J. Immunol.</i> 24:635 4. Cepek KL, <i>et al.</i> 1994. <i>Nature</i> 372:190.
<b>Gene ID</b>	<a href="#">16421</a> <a href="#">3695</a>

## Related Protocols

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- [Cell Surface Flow Cytometry Staining Protocol](#)

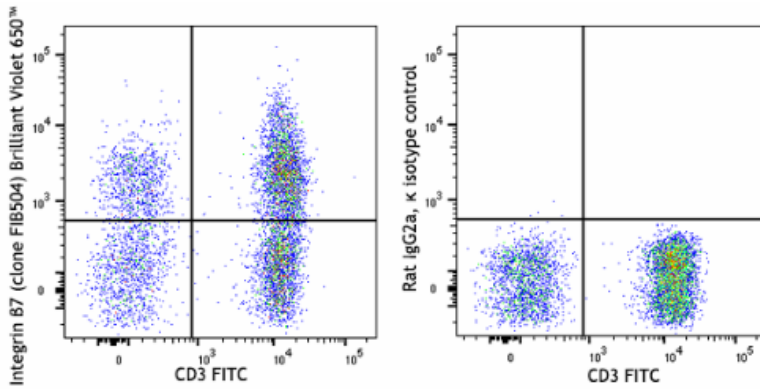
## Other Formats

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PerCP/Cyanine5.5 anti-human/mouse Integrin  $\beta$ 7, Purified anti-human/mouse Integrin  $\beta$ 7, PE anti-human/mouse Integrin  $\beta$ 7, APC anti-human/mouse Integrin  $\beta$ 7, Biotin anti-human/mouse Integrin  $\beta$ 7, FITC anti-human/mouse Integrin  $\beta$ 7, APC/Fire™ 750 anti-human/mouse Integrin  $\beta$ 7, Alexa Fluor® 647 anti-human/mouse Integrin  $\beta$ 7, PE/Dazzle™ 594 anti-human/mouse Integrin  $\beta$ 7, TotalSeq™-A0214 anti-human/mouse integrin  $\beta$ 7, TotalSeq™-C0214 anti-human/mouse integrin  $\beta$ 7, TotalSeq™-B0214 anti-human/mouse integrin  $\beta$ 7, Ultra-LEAF™ Purified anti-human/mouse integrin  $\beta$ 7, Brilliant Violet 711™ anti-human/mouse integrin  $\beta$ 7, PE/Cyanine7 anti-human/mouse integrin  $\beta$ 7 Antibody, Brilliant Violet 785™ anti-human/mouse integrin  $\beta$ 7, Brilliant Violet 421™ anti-human/mouse integrin  $\beta$ 7, Brilliant Violet 605™ anti-human/mouse integrin  $\beta$ 7, Brilliant Violet 650™ anti-human/mouse Integrin  $\beta$ 7 Antibody

## Product Data

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Human peripheral blood lymphocytes were stained with anti-human CD3 (clone UCHT1) FITC and anti-human/mouse Integrin  $\beta$ 7 (clone FIB504) Brilliant Violet 650™ (left) or rat IgG2a,  $\kappa$  Brilliant Violet 650™ isotype control (right)

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