

Brilliant Violet 570™ anti-mouse/human CD44 Antibody

Catalog# / Size	103037 / 125 µL
Clone	IM7
Regulatory Status	RUO
Other Names	Hermes, Pgp-1, H-CAM, HUTCH-1, ECMR III, gp85, Ly-24
Isotype	Rat IgG2b, κ

Description CD44 is a 80-95 kD glycoprotein also known as Hermes, Pgp1, H-CAM, or HUTCH. It is expressed on all leukocytes, endothelial cells, hepatocytes, and mesenchymal cells. As B and T cells become activated or progress to the memory stage, CD44 expression increases from low or mid levels to high levels. Thus, CD44 has been reported to be a valuable marker for memory cell subsets. High CD44 expression on Treg cells has been associated with potent suppressive function via high production of IL-10. CD44 is an adhesion molecule involved in leukocyte attachment to and rolling on endothelial cells, homing to peripheral lymphoid organs and to the sites of inflammation, and leukocyte aggregation.

Product Details

Verified Reactivity	Mouse, Human
Reported Reactivity	Chimpanzee, Baboon, Cynomolgus, Rhesus, Squirrel Monkey, Horse, Cow, Pig, Dog, Cat
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Dexamethasone-induced myeloid leukemia M1 cells
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).
Preparation	The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 570™ under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
Recommended Usage	<p>Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>Brilliant Violet 570™ excites at 405 nm and emits at 570 nm. The bandpass filter 585/42 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 570™ is a trademark of Sirigen Group Ltd.</p> <p>Learn more about Brilliant Violet™.</p> <p>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 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.</p>
Excitation Laser	Violet Laser (405 nm)

Application Notes

Clone IM7 has been reported to recognize an epitope common to alloantigens and all isoforms of CD44^{17,18} that is located between amino acids 145 and 186²⁰. This clone has been verified for immunocytochemistry (ICC) and frozen immunohistochemistry (IHC-F). Additional reported applications (for the relevant formats) include: immunohistochemistry of acetone-fixed frozen sections and formalin-fixed paraffin-embedded sections^{6,7}, complement-mediated cytotoxicity¹, immunoprecipitation^{1,3}, *in vivo* inhibition of DTH^{4,5}, and spatial biology (IBEX)^{23,24}. The Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/μg, Azide-Free, 0.2 μm filtered) is recommended for functional assays (Cat. No. 103046, 103065 - 103069).

Cross-reactivity to ferret has been reported by a collaborator, but not verified in house.

Application References

1. Trowbridge IS, *et al.* 1982. *Immunogenetics* 15:299. (ICFC, IP, CMCD)
2. Katoh S, *et al.* 1994. *J. Immunol.* 153:3440. (ELISA)
3. Budd RC, *et al.* 1987. *J. Immunol.* 138:3120. (IP)
4. Camp RL, *et al.* 1993. *J. Exp. Med.* 178:497. (Block)
5. Weiss JM, *et al.* 1997. *J. Cell Biol.* 137:1137. (Block)
6. Frank NY, *et al.* 2005. *Cancer Res.* 65:4320. (IHC) [PubMed](#)
7. Cuff CA, *et al.* 2001. *J. Clin. Invest.* 108:1031. (IHC)
8. Lee JW, *et al.* 2006. *Nature Immunol.* 8:181.
9. Zhang N, *et al.* 2005. *J. Immunol.* 174:6967. [PubMed](#)
10. Huabiao C, *et al.* 2005. *J. Immunol.* 175:591. [PubMed](#)
11. Gui J, *et al.* 2007. *Int. Immunol.* 19:1201. [PubMed](#)
12. Wang XY, *et al.* 2008. *Blood* 111:2436. [PubMed](#)
13. Kenna TJ, *et al.* 2008. *Blood* 111:2091. [PubMed](#)
14. Yamazaki J, *et al.* 2009. *Blood* [PubMed](#)
15. Kmiecik M, *et al.* 2009. *J. Transl. Med.* 7:89. (FC) [PubMed](#)
16. Chen YW, *et al.* 2010. *Mol. Cancer Ther.* 9:2879. [PubMed](#)
17. Zheng Z, *et al.* 1995. *J. Cell. Biol.* 130:485.
18. Wiranowska M, *et al.* 2010. *Int. J. Cancer* 127:532.
19. Hirokawa Y, *et al.* 2014. *Am J Physiol Gastrointest Liver Physiol.* 306:547. [PubMed](#)
20. Sandmaier BM, *et al.* 1998. *Blood* 91:3494.
21. Yang Y, *et al.* 2015. *Hypertension.* 65:1047. [PubMed](#)
22. Peterson VM, *et al.* 2017. *Nat. Biotechnol.* 35:936. (PG)
23. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci U S A.* 117:33455-65. (SB) [PubMed](#)
24. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

Product Citations

1. Qualai J, *et al.* 2016. *PLoS One.* 11: 0156605. [PubMed](#)
2. Darragh LB, *et al.* 2022. *Nat Commun.* 13:7015. [PubMed](#)
3. Toupadakis C, *et al.* 2013. *Cytherapy.* 15:1136. [PubMed](#)
4. Culina S, *et al.* 2015. *Diabetes.* 64: 3532 - 3542. [PubMed](#)
5. Scheyltjens I, *et al.* 2022. *Nat Protoc.* 17:2354. [PubMed](#)

RRID

AB_10900641 (BioLegend Cat. No. 103037)

Antigen Details

Structure	Variable splicing of CD44 gene generates many CD44 isoforms, 80-95 kD
Distribution	All leukocytes, epithelial cells, endothelial cells, hepatocytes, mesenchymal cells
Function	Leukocyte attachment and rolling on endothelial cells, stromal cells and ECM
Ligand/Receptor	Hyaluronan, MIP-1β, fibronectin, collagen
Cell Type	B cells, Endothelial cells, Epithelial cells, Leukocytes, Mesenchymal cells, Mesenchymal Stem Cells, Tregs
Biology Area	Cell Adhesion, Cell Biology, Immunology, Stem Cells
Molecular Family	Adhesion Molecules, CD Molecules
Antigen References	<ol style="list-style-type: none">1. Barclay AN, <i>et al.</i> 1997. <i>The Leukocyte Antigen FactsBook</i> Academic Press.2. Haynes BF, <i>et al.</i> 1991. <i>Cancer Cells</i> 3:347.3. Goldstein LA, <i>et al.</i> 1989. <i>Cell</i> 56:1063.4. Mikecz K, <i>et al.</i> 1995. <i>Nat. Med.</i> 1:558.5. Hegde V, <i>et al.</i> 2008. <i>J. Leukocyte Biol.</i> 84:134.6. Liu T, <i>et al.</i> 2009. <i>Biol. Direct</i> 4:40.
Gene ID	12505 960

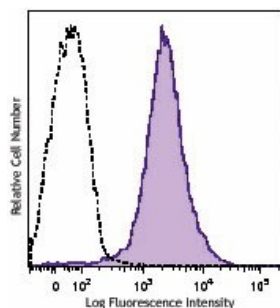
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-mouse/human CD44, Biotin anti-mouse/human CD44, FITC anti-mouse/human CD44, PE/Cyanine5 anti-mouse/human CD44, Purified anti-mouse/human CD44, Brilliant Violet 605™ anti-mouse/human CD44, PE anti-mouse/human CD44, Alexa Fluor® 488 anti-mouse/human CD44, Alexa Fluor® 647 anti-mouse/human CD44, Pacific Blue™ anti-mouse/human CD44, Alexa Fluor® 700 anti-mouse/human CD44, PE/Cyanine7 anti-mouse/human CD44, APC/Cyanine7 anti-mouse/human CD44, PerCP/Cyanine5.5 anti-mouse/human CD44, PerCP anti-mouse/human CD44, Brilliant Violet 421™ anti-mouse/human CD44, Brilliant Violet 570™ anti-mouse/human CD44, Brilliant Violet 785™ anti-mouse/human CD44, Brilliant Violet 510™ anti-mouse/human CD44, Ultra-LEAF™ Purified anti-mouse/human CD44, Brilliant Violet 650™ anti-mouse/human CD44, Purified anti-mouse/human CD44 (Maxpar® Ready), Alexa Fluor® 594 anti-mouse/human CD44, PE/Dazzle™ 594 anti-mouse/human CD44, Brilliant Violet 711™ anti-mouse/human CD44, APC/Fire™ 750 anti-mouse/human CD44, TotalSeq™-A0073 anti-mouse/human CD44, TotalSeq™-C0073 anti-mouse/human CD44, TotalSeq™-B0073 anti-mouse/human CD44, Spark YG™ 570 anti-mouse/human CD44, Spark YG™ 593 anti-mouse/human CD44, TotalSeq™-D0073 anti-mouse/human CD44

Product Data



C57BL/6 mouse splenocytes were stained with CD44 (clone IM7) Brilliant Violet 570™ (filled histogram) or rat IgG2b, κ Brilliant Violet 570™ isotype control (open histogram).

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, www.biolegend.com/ordering#license). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587