

Spark PLUS V450™ anti-mouse/human CD44 Antibody

Catalog# / Size	103090 / 25 µg 103091 / 100 µg
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
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
Preparation	The antibody was purified by affinity chromatography and conjugated with Spark PLUS V450™ under optimal conditions.
Concentration	0.2 mg/mL
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	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 ≤ 0.25 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application. * Spark PLUS V450™ has a maximum excitation of 405 nm and a maximum emission of 452 nm.
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 186 ²⁰ . 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 cytotoxicity ¹ , immunoprecipitation ^{1,3} , <i>in vivo</i> 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

(PubMed link indicates
BioLegend citation)

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](#)

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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-1 β , 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	1. Barclay AN, <i>et al.</i> 1997. The Leukocyte Antigen FactsBook 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

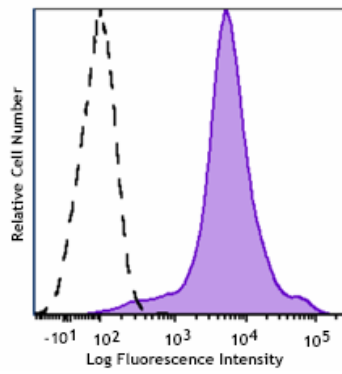
Related Protocols

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

Other Formats

Spark YG™ 570 anti-mouse/human CD44, Spark YG™ 593 anti-mouse/human CD44, TotalSeq™-D0073 anti-mouse/human CD44, PE anti-mouse/human CD44, Brilliant Violet 750™ anti-mouse/human CD44, PerCP/Fire™ 806 anti-mouse/human CD44, Spark Blue™ 550 anti-mouse/human CD44 (Flexi-Fluor™), PE/Dazzle™ 594 anti-mouse/human CD44, Brilliant Violet 711™ anti-mouse/human CD44, APC/Fire™ 750 anti-mouse/human CD44, PerCP/Cyanine5.5 anti-mouse/human CD44, PerCP anti-mouse/human CD44, Ultra-LEAF™ Purified anti-mouse/human CD44, Brilliant Violet 785™ anti-mouse/human CD44, Brilliant Violet 421™ anti-mouse/human CD44, Alexa Fluor® 594 anti-mouse/human CD44, Spark Red™ 718 anti-mouse/human CD44, Spark YG™ 581 anti-mouse/human CD44 (Flexi-Fluor™), Spark NIR™ 685 anti-mouse/human CD44 (Flexi-Fluor™) Antibody, Spark UV™ 387 anti-mouse/human CD44 (Flexi-Fluor™), PE/Fire™ 810 anti-mouse/human CD44, Spark PLUS V450™ anti-mouse/human CD44, Alexa Fluor® 488 anti-mouse/human CD44, Pacific Blue™ anti-mouse/human CD44, APC anti-mouse/human CD44, Alexa Fluor® 700 anti-mouse/human CD44, TotalSeq™-A0073 anti-mouse/human CD44, TotalSeq™-B0073 anti-mouse/human CD44, Brilliant Violet 510™ anti-mouse/human CD44, Brilliant Violet 605™ anti-mouse/human CD44, Brilliant Violet 650™ anti-mouse/human CD44, Purified anti-mouse/human CD44 (Maxpar® Ready), Alexa Fluor® 647 anti-mouse/human CD44, Biotin anti-mouse/human CD44, Brilliant Violet 570™ anti-mouse/human CD44, StarBright UltraViolet 795 anti-mouse/human CD44, PE/Fire™ 744 anti-mouse/human CD44, Spark PLUS UV395™ anti-mouse/human CD44 (Flexi-Fluor™), FITC anti-mouse/human CD44, PE/Cyanine5 anti-mouse/human CD44, Purified anti-mouse/human CD44, PE/Cyanine7 anti-mouse/human CD44, APC/Cyanine7 anti-mouse/human CD44, TotalSeq™-C0073 anti-mouse/human CD44

Product Data



C57BL/6 mouse splenocytes were stained with anti-mouse/human CD44 (clone IM7) Spark PLUS V450™ (filled histogram). Open histogram represent unstained cells.

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