SONY

Product Data Sheet

Brilliant Violet 510™ anti-mouse/human CD44

Catalog # / Size: 1115215 / 125 µl
1115220 / 50 µg

Clone: IM7

Isotype: Rat IgG2b, κ

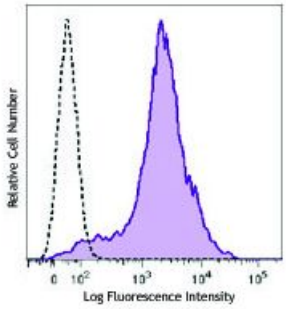
Immunogen: Dexamethasone-induced myeloid leukemia M1 cells

Reactivity: Human

Preparation: The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 510™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 510™ and unconjugated antibody.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).

Concentration: Lot-specific



C57BL/6 mouse splenocytes were stained with CD44 (clone IM7) Brilliant Violet 510™.

Applications:

Applications: Flow Cytometry

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 ≤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.

Brilliant Violet 510™ excites at 405 nm and emits at 510 nm. The bandpass filter 510/50 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 510™ is a trademark of Sirigen Group Ltd.

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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], and *in vivo* inhibition of DTH[4,5]. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 103014). For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 103046) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/µg).

Application References:

1. Trowbridge IS, *et al.* 1982. *Immunogenetics* 15:299. (ICFC, IP, CMCD)
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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. Kmieciak 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 Gastrointerest Liver Physiol.* 306:547. PubMed
20. Sandmaier BM, *et al.* 1998. *Blood* 91:3494.

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.

Antigen References:

1. Barclay AN, *et al.* 1997. The Leukocyte Antigen FactsBook Academic Press.
2. Haynes BF, *et al.* 1991. *Cancer Cells* 3:347.
3. Goldstein LA, *et al.* 1989. *Cell* 56:1063.
4. Mikecz K, *et al*