Human LYVE-1 Antibody

Monoclonal Mouse IgG_1 Clone # 537028

Catalog Number: MAB20892

DESCRIPTION

Species Reactivity	Human
Specificity	Detects endogenous human LYVE-1 in Western blots.
Source	Monoclonal Mouse IgG_1 Clone # 537028
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human LYVE-1 Ser24-Thr238 Accession # Q9Y5Y7
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

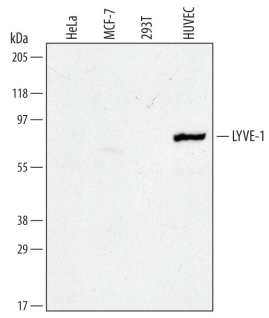
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Flow Cytometry	2.5 µg/10^6 cells	See Below
Immunohistochemistry	8-25 µg/mL	Immersion fixed paraffin-embedded sections of human tonsil
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

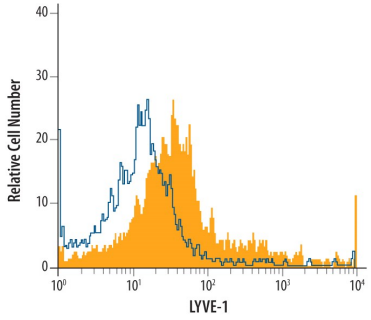
DATA

Western Blot



Detection of Human LYVE-1 by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, MCF-7 human breast cancer cell line, and 293T human embryonic kidney cell line. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human LYVE-1 Monoclonal Antibody (Catalog # MAB20892) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for LYVE-1 at approximately 70 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Flow Cytometry



Detection of LYVE-1 in HUVEC Human Cells by Flow Cytometry. HUVEC human umbilical vein endothelial cells was stained with Mouse Anti-Human LYVE-1 Monoclonal Antibody (Catalog # MAB20892, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram), followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

Lymphatic vessel endothelial hyaluronan (HA) receptor-1 (LYVE-1) is a receptor of HA, a linear high molecular weight polymer composed of alternating units of D-glucuronic acid and N-acetyl-D-glucosamine. HA is found in the extracellular matrix of most animal tissues and in body fluids. It modulates cell behavior and functions during tissue remodeling, development, homeostasis, and disease (1). The turnover of HA (several grams/day in humans) occurs primarily in the lymphatics and liver, the two major clearance systems that catabolize approximately 85% and 15% of HA, respectively (1 - 3). LYVE-1 shares 41% homology with the other known HA receptor, CD44 (4). The homology between the two proteins increases to 61% within the HA binding domain. The HA binding domain, known as the link module, is a common structural motif found in other HA binding proteins such as link protein, aggrecan and versican (1, 5). Human and mouse LYVE-1 share 69% amino acid sequence identity. LYVE-1 is primarily expressed on both the luminal and abluminal surfaces of lymphatic vessels (4, 5). In addition, LYVE-1 is also present in normal hepatic blood sinusoidal endothelial cells (6). LYVE-1 mediates the endocytosis of HA and may transport HA from tissue to lymph by transcytosis, delivering HA to lymphatic capillaries for removal and degradation in the regional lymph nodes (5, 7, 8). Because of its restricted expression patterns, LYVE-1, along with other lymphatic proteins such as VEGF R3, podoplanin and the homeobox protein propero-related (Prox-1), constitute a set of markers useful for distinguishing between lymphatic and blood microvasculature (4, 5, 9 -11).

References:

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