

LYVE-1 (E9VA4): sc-65647

BACKGROUND

Lymphatic vessel endothelial hyaluronan receptor-1 (LYVE-1) is expressed on the cell surface as a protein that is reduced by glycosidase treatment. LYVE-1 is abundant in spleen, lymph node, heart, lung and fetal liver, and is less abundant in appendix, bone marrow, placenta, muscle and adult liver. Expression of LYVE-1 is largely restricted to endothelial cells lining lymphatic vessels and splenic sinusoidal endothelial cells. LYVE-1 binds to both soluble and immobilized hyaluronan (HA) with greater specificity than HCAM. Like HCAM, the LYVE-1 molecule binds both soluble and immobilized HA. However, unlike HCAM, the LYVE-1 molecule co-localizes with HA on the luminal face of the lymph vessel wall and is completely absent from blood vessels. Hence, LYVE-1 is the first lymph-specific HA receptor to be characterized and is a uniquely powerful marker for lymph vessels themselves. LYVE-1 is used as a marker to study tumor lymphangiogenesis, which is an important area of investigation.

REFERENCES

1. Banerji, S., et al. 1999. LYVE-1, a new homolog of the CD44 glycoprotein, is a lymph-specific receptor for hyaluronan. *J. Cell Biol.* 144: 789-801.
2. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 605702. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: Lyve1 (mouse) mapping to 7 F1.

SOURCE

LYVE-1 (E9VA4) is a rat monoclonal antibody raised against the extracellular domain of recombinant LYVE-1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgM in 1.0 mL PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

LYVE-1 (E9VA4) is recommended for detection of LYVE-1 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immuno-precipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for LYVE-1 siRNA (m): sc-42902, LYVE-1 shRNA Plasmid (m): sc-42902-SH and LYVE-1 shRNA (m) Lentiviral Particles: sc-42902-V.

Molecular Weight of LYVE-1: 40 kDa.

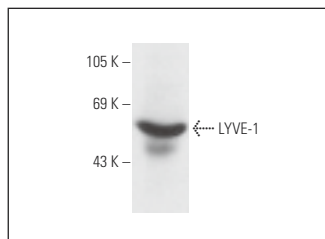
Molecular Weight of glycosylated LYVE-1: 60 kDa.

Positive Controls: mouse lung extract: sc-2390 or mouse lymph node extract: sc-364243.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



LYVE-1 (E9VA4): sc-65647. Western blot analysis of LYVE-1 expression in mouse lung tissue extract.

SELECT PRODUCT CITATIONS

1. Kelley, P.M., et al. 2011. Regressed lymphatic vessels develop during corneal repair. *Lab. Invest.* 91: 1643-1651.
2. Fink, D.M., et al. 2014. Nerve growth factor regulates neurolymphatic remodeling during corneal inflammation and resolution. *PLoS ONE* 9: e112737.
3. Chen, H. and Dai, J. 2018. MiR-409-3p suppresses the proliferation, invasion and migration of tongue squamous cell carcinoma via targeting RDX. *Oncol. Lett.* 16: 543-551.
4. Cano-Ballesteros, S., et al. 2021. Fsp1 cardiac embryonic expression delineates atrioventricular endocardial cushion, coronary venous and lymphatic valve development. *J. Anat.* 238: 508-514.
5. Nishida-Fukuda, H., et al. 2021. Evaluation of the antiproliferative effects of the HASPIN inhibitor CHR-6494 in breast cancer cell lines. *PLoS ONE* 16: e0249912.
6. Paulson, D., et al. 2021. Loss of primary cilia protein IFT20 dysregulates lymphatic vessel patterning in development and inflammation. *Front. Cell Dev. Biol.* 9: 672625.
7. Zhou, J., et al. 2021. ADSCs enhance VEGFR3-mediated lymphangiogenesis via METTL3-mediated VEGF-C m6A modification to improve wound healing of diabetic foot ulcers. *Mol. Med.* 27: 146.
8. Wang, X., et al. 2023. Single-cell RNA sequencing and spatial transcriptomics reveal pathogenesis of meningeal lymphatic dysfunction after experimental subarachnoid hemorrhage. *Adv. Sci.* 10: e2301428.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.