SANTA CRUZ BIOTECHNOLOGY, INC.

LYVE-1 (M-14): sc-31293

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Lymphatic vessel endothelial hyaluronan receptor-1 (LYVE-1) is expressed on the cell surface as a protein which 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 with greater specificity than CD44. Like CD44, the LYVE-1 molecule binds both soluble and immobilized HA. However, unlike CD44, 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. Jackson, D.G., et al. 2001. LYVE-1, the lymphatic system and tumor lymphangiogenesis. Trends Immunol. 22: 317-321.
3. Cunnick, G.H., et al. 2001. Lymphangiogenesis quantification using quantitative PCR and breast cancer as a model. Biochem. Biophys. Res. Commun. 288: 1043-1046.
4. Mouta-Carreira, C., et al. 2001. LYVE-1 is not restricted to the lymph vessels: expression in normal liver blood sinusoids and downregulation in human liver cancer and cirrhosis. Cancer Res. 61: 8079-8084.
5. Zhang, S.Q., et al. 2009. Clinical implications of increased lymph vessel density in the lymphatic metastasis of early-stage invasive cervical carcinoma: a clinical immunohistochemical method study. BMC Cancer 9: 64.
6. Luong, M.X., et al. 2009. Lack of lymphatic vessel phenotype in LYVE-1/CD44 double knockout mice. J. Cell. Physiol. 219: 430-437.
7. Kubota, Y., et al. 2009. M-CSF inhibition selectively targets pathological angiogenesis and lymphangiogenesis. J. Exp. Med. 206: 1089-1102.

CHROMOSOMAL LOCATION

Genetic locus: LYVE1 (human) mapping to 11p15.4; Lyve1 (mouse) mapping to 7 F1.

SOURCE

LYVE-1 (M-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of LYVE-1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31293 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LYVE-1 (M-14) is recommended for detection of LYVE-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

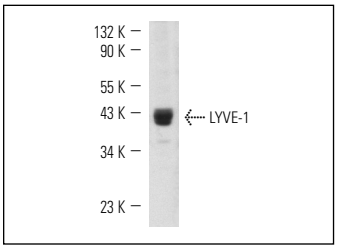
Suitable for use as control antibody for LYVE-1 siRNA (h): sc-42901, LYVE-1 siRNA (m): sc-42902, LYVE-1 shRNA Plasmid (h): sc-42901-SH, LYVE-1 shRNA Plasmid (m): sc-42902-SH, LYVE-1 shRNA (h) Lentiviral Particles: sc-42901-V and LYVE-1 shRNA (m) Lentiviral Particles: sc-42902-V.

Molecular Weight of LYVE-1: 40 kDa.

Molecular Weight of glycosylated LYVE-1: 60 kDa.

Positive Controls: mouse lung extract: sc-2390, SK-N-MC cell lysate: sc-2237 or MCF7 whole cell lysate: sc-2206.

DATA



LYVE-1 (M-14): sc-31293. Western blot analysis of LYVE-1 expression in MCF7 whole cell lysate.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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