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DP3513P Polyclonal Antibody to LYVE-1 - Aff - Purified

Alternate names: CRSBP-1, CRSBP1, Cell surface retention sequence-binding protein 1, Extracellular link domain-containing protein 1, HAR, Hyaluronic acid receptor, LYVE1, Lymphatic vessel endothelial hyaluronic acid receptor 1, XLKD1

Quantity: 50 µg

Background: LYVE-1 has been identified as a major receptor for HA (extracellular matrix glycosaminoglycan hyaluronan) on the lymph vessel wall. The deduced amino acid sequence of LYVE-1 predicts a 322-residue type I integral membrane polypeptide 41% similar to the CD44 HA receptor with a 212-residue extracellular domain containing a single Link module the prototypic HA binding domain of the Link protein superfamily. Like CD44, the LYVE-1 molecule binds both soluble and immobilized HA. However, unlike CD44, the LYVE-1 molecule colocalizes 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.

Uniprot ID: Q8BHC0

NCBI: NP_444477.2

GeneID: 114332

Host / Isotype: Rabbit / IgG

Immunogen: Highly pure (› 95%) recombinant Mouse soluble LYVE-1 (Ala24-Gly228) produced in insect cells (*Cat.-No* DA3524).
Remarks: The recombinant soluble LYVE-1 consists of amino acid 24 (Ala) to 228 (Gly) and is fused to a C-terminal *His-tag* (6xHis).

Format:
State: Lyophilized purified IgG fraction
Purification: Antigen Affinity Chromatography
Buffer System: PBS, pH 7.4, without preservatives or stabilizers
Reconstitution: Restore in distilled sterile Water to a concentration of 0.1-1.0 mg/ml.

Applications:
ELISA: 1-15 µg/ml.
Western blot: 2-5 µg/ml.
FACS analysis: 3-10 µg/ml.
Immunofluorescence.
Immunohistochemistry on Paraffin and Frozen Sections: 0.25-4 µg/ml.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: Cross reactivity of anti-Mouse Lyve-1 with Rat tissue.
The anti-Mouse Lyve-1 polyclonal antibody *Cat.-No* DP3513P shows a strong cross reaction with Rat Lyve-1 protein.

Species Reactivity: **Tested:** Mouse, Rat.

Storage:

Store lyophilized at 2-8°C for 6 months or at -20°C long term.
After reconstitution store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C long term.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

Product Citations:

Purchased from Acris:

1. Conrad C, Niess H, Huss R, Huber S, von Luettichau I, Nelson PJ, et al. Multipotent mesenchymal stem cells acquire a lymphendothelial phenotype and enhance lymphatic regeneration in vivo. Circulation. 2009 Jan 20;119(2):281-9. doi: 10.1161/CIRCULATIONAHA.108.793208. Epub 2008 Dec 31. PubMed PMID: 19118255.
2. Heishi T, Hosaka T, Suzuki Y, Miyashita H, Oike Y, Takahashi T, et al. Endogenous angiogenesis inhibitor vasohibin1 exhibits broad-spectrum antilymphangiogenic activity and suppresses lymph node metastasis. Am J Pathol. 2010 Apr;176(4):1950-8. doi: 10.2353/ajpath.2010.090829. Epub 2010 Feb 4. PubMed PMID: 20133819.

Originator or purchased from resellers:

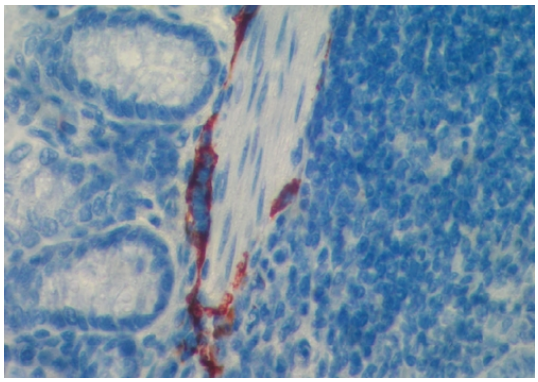
1. Nakao S, Zandi S, Faez S, Kohno R, Hafezi-Moghadam A. Discontinuous LYVE-1 expression in corneal limbal lymphatics: dual function as microvalves and immunological hot spots. FASEB J. 2012 Feb;26(2):808-17. doi: 10.1096/fj.11-183897. Epub 2011 Nov 16. PubMed PMID: 22090317.

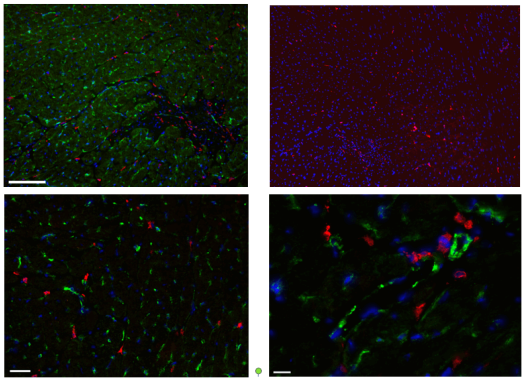
General Readings:

1. Mouta Carreira C, Nasser SM, di Tomaso E, Padera TP, Boucher Y, Tomarev SI, et al. LYVE-1 is not restricted to the lymph vessels: expression in normal liver blood sinusoids and down-regulation in human liver cancer and cirrhosis. Cancer Res. 2001 Nov 15;61(22):8079-84. PubMed PMID: 11719431.
2. Jackson DG. The lymphatics revisited: new perspectives from the hyaluronan receptor LYVE-1. Trends Cardiovasc Med. 2003 Jan;13(1):1-7. PubMed PMID: 12554094.
3. Sleeman JP, Krishnan J, Kirkin V, Baumann P. Markers for the lymphatic endothelium: in search of the holy grail? Microsc Res Tech. 2001 Oct 15;55(2):61-9. PubMed PMID: 11596151.
4. Mäkinen T, Veikkola T, Mustjoki S, Karpanen T, Catimel B, Nice EC, et al. Isolated lymphatic endothelial cells transduce growth, survival and migratory signals via the VEGF-C/D receptor VEGFR-3. EMBO J. 2001 Sep 3;20(17):4762-73. PubMed PMID: 11532940.

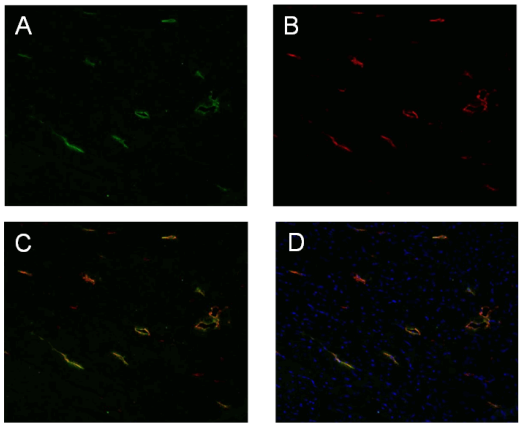
Pictures:

Paraffin Section of Mouse Intestine stained with LYVE-1 Antibody Cat.-No DP3513P. You see the Staining (red) of lymphatic endothelial cells of the intestine.





Rat cardiac lymphatic microvessels, labeled with antibodies against mouse LYVE-1, are revealed in red, and adjacent blood vessels, labeled with antibodies against CD31, are revealed in green. Nuclear stain in blue (Left image). Lymphatic microvessels, labeled with antibodies against mouse LYVE-1, are revealed in red, nuclear stain in blue (Right image). Images were obtained at 10x magnification on a Zeiss fluorescence microscope. Scale bar = 100 µm(upper lane); 20x and 40x magnification, Scale bar = 50 µm (lower panel).
Note: The anti-Mouse Lyve-1 polyclonal antibody Cat.-No DP3513P shows a strong cross reaction with rat Lyve-1 protein.
The experiment was performed by the research group INSERM U1096 in Rouen, France directed by Dr Vincent Richard.



Rat Cardiac **lymphatic microvessels**, labeled with antibodies against rat Podoplanin (**A**, green) (Cat.-No DM3614P) and Mouse LYVE-1 (**B**, red) (Cat.-Non DP3513P). Nuclear stain in blue. Double staining with anti-Mouse LYVE-1 and anti-Rat Podoplanin revealed a nice co-expression of both proteins in lymphatic endothelial cells.
Note: The anti-mouse Lyve-1 polyclonal antibody shows a strong cross reaction with rat Lyve-1 protein.
The experiment was performed by the research group INSERM U1096 in Rouen, France directed by Dr Vincent Richard.