Anti-LYVE1 antibody - Lymphatic Vessel Marker

ab10278

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Overview

Product name	Anti-LYVE1 antibody - Lymphatic Vessel Marker
Description	Rabbit polyclonal to LYVE1 - Lymphatic Vessel Marker
Tested applications	IHC-Fr, IHC-P, WB
Species reactivity	**Reacts with:** Human **Predicted to work with:** Rat
Immunogen	Recombinant fragment corresponding to Human LYVE1 aa 24-232. Recombinant human soluble LYVE1 fragment produced in insect cells (ab54341). Database link: Q9Y5Y7 (Peptide available as ab54341)
Positive control	human colon carcinoma

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Constituent: PBS
Purity	Protein A purified
Purification notes	Protein-A Chromatography (+his tag depleted).
Primary antibody notes	The lymphatic vasculature forms a second circulatory system that drains extracellular fluid from the tissues and provides an exclusive environment in which immune cells can encounter and respond to foreign antigen. Recently a number of interesting molecules have been identified that may be exploited as markers for lymphatic endothelium, including the hyaluronan receptor LYVE1, PALE, VEGFR3, podoplanin.
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab10278** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

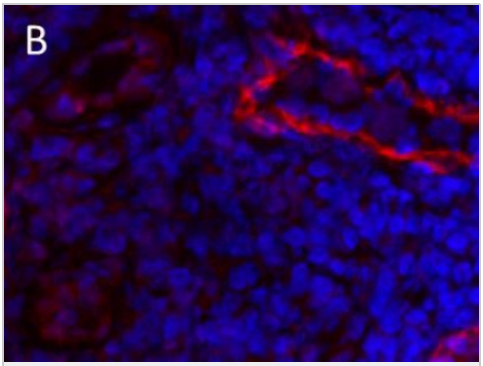
Application	Abreviews	Notes
IHC-Fr		Use a concentration of 6 - 30 µg/ml. Fix sections for 10 min at -20°C in MeOH.
IHC-P		Use a concentration of 2 µg/ml.
WB		Use a concentration of 1 - 2 µg/ml. Detects a band of approximately 35-45 kDa (predicted molecular weight: 35 kDa).Can be blocked with Human LYVE1 protein fragment (ab54341).

Target

Function	Ligand-specific transporter trafficking between intracellular organelles (TGN) and the plasma membrane. Plays a role in autocrine regulation of cell growth mediated by growth regulators containing cell surface retention sequence binding (CRS). May act as a hyaluronan (HA) transporter, either mediating its uptake for catabolism within lymphatic endothelial cells themselves, or its transport into the lumen of afferent lymphatic vessels for subsequent re-uptake and degradation in lymph nodes.

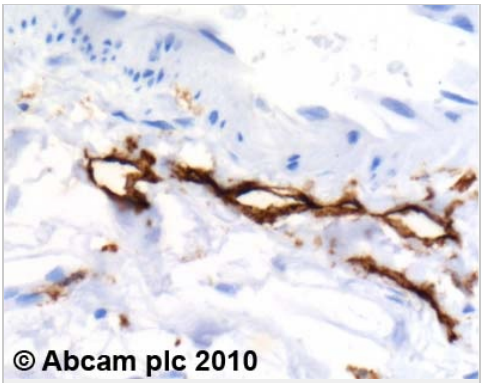
Tissue specificity	Mainly expressed in endothelial cells lining lymphatic vessels.
Sequence similarities	Contains 1 Link domain.
Post-translational modifications	O-glycosylated.
Cellular localization	Membrane. Localized to the plasma membrane and in vesicles near extranuclear membranes which may represent trans-Golgi network (TGN) and endosomes/prelysosomeal compartments. Undergoes ligand-dependent internalization and recycling at the cell surface.

Anti-LYVE1 antibody - Lymphatic Vessel Marker images



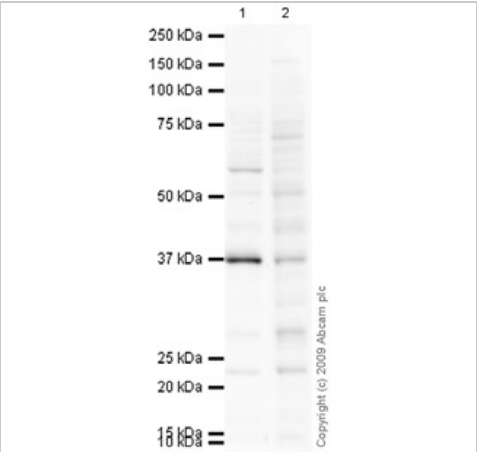
Immunohistochemistry (Frozen sections) - Anti-LYVE1 antibody - Lymphatic Vessel Marker (ab10278)

Immunohistochemistry (Frozen sections) analysis of human colon carcinoma tissue sections labelling LYVE1 with ab10278.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - LYVE1 antibody - Lymphatic Vessel Marker (ab10278)

ab10278 (2µg/ml) staining LYVE1 in human colon using an automated system (DAKO Autostainer Plus). Using this protocol there is lymphatic endothelium staining of lymphatic ducts where blood vessel endothelium and smooth muscle is wholly negative.
Sections were rehydrated and antigen retrieved with the Dako 3-in-1 AR buffer citrate pH 6.0 in a DAKO PT Link. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 minutes. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 minutes and detected with Dako Envision Flex amplification kit for 30 minutes. Colorimetric detection was completed with Diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that, for manual staining, optimization of primary antibody concentration and incubation time is recommended. Signal amplification may be required.



Western blot - LYVE1 antibody - Lymphatic Vessel Marker (ab10278)

All lanes : Anti-LYVE1 antibody - Lymphatic Vessel Marker (ab10278) at 1 µg/ml

Lane 1 : A549 (Human lung adenocarcinoma epithelial cell line) Whole Cell Lysate
Lane 4 : HepG2 (Human hepatocellular liver carcinoma cell line) Whole Cell Lysate

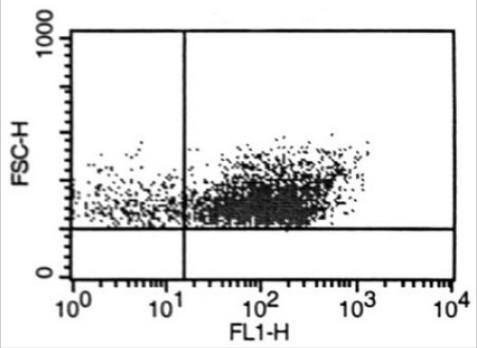
Lysates/proteins at 10 µg per lane.

Secondary
Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution
developed using the ECL technique

Performed under reducing conditions.

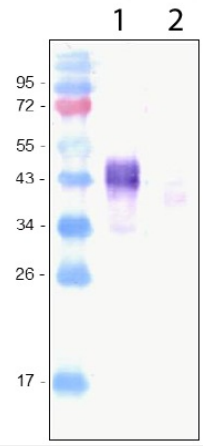
Predicted band size : 35 kDa
Observed band size : 37 kDa
Additional bands at : 22 kDa,55 kDa. We are unsure as to the identity of these extra bands.

Exposure time : 4 minutes LYVE-1 contains a number of potential glycosylation sites (SwissProt) which may explain its migration at a higher molecular weight than predicted.



Flow Cytometry - Anti-LYVE1 antibody - Lymphatic Vessel Marker (ab10278)

Flow Cytometry analysis of human dermal microvascular endothelial cells (HDMVEC) labelling LYVE1 with ab10278.



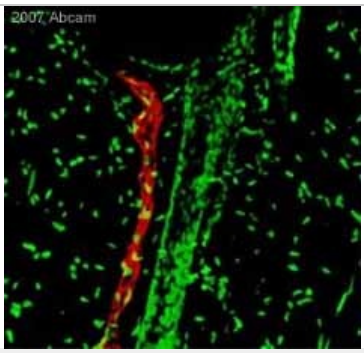
Western blot - Anti-LYVE1 antibody - Lymphatic Vessel Marker (ab10278)

All lanes : Anti-LYVE1 antibody - Lymphatic Vessel Marker (ab10278)

Lane 1 : Human LYVE1 protein fragment (ab54341)

Lane 2 : Mouse LYVE1 protein fragment (ab54342)

Predicted band size : 35 kDa



Immunohistochemistry (Frozen sections) - LYVE1 antibody - Lymphatic Vessel Marker (ab10278)

This image is courtesy of an Abreview submitted by Dr Vyacheslav Ogay

Rat skin was fixed with paraformaldehyde in 15% saturated picric acid solution for 4hr. Prior to sectioning, the specimen was infiltrated in O.C.T. and frozen in isopentane. The frozen specimen was sectioned these were rinsed in PBS for 15 min to remove O.C.T. and incubated in a 3% sodium deoxycholate solution. The specimens were rinsed twice with distilled water and then with PBS three times. The sections were incubated in 10% normal goat serum for 12 hr at 4°C, then for 12 hr with ab10278. After washing with PBS, the specimens were incubated with Alexa Fluor® 555-conjugated goat anti-rabbit IgG (H+L) (1:500), for 12 hr at 4°C. The cell nuclei were counterstained with YoYo-1. Images were obtained by using confocal microscope.

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