

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Rat                                                                                                                                                                                                                                                                         |
| <b>Specificity</b>        | Detects rat LYVE-1 in direct ELISA and Western blots. In direct ELISAs, approximately 50% cross-reactivity with recombinant mouse LYVE-1 is observed, and approximately 10% cross-reactivity with recombinant human LYVE-1 is observed.                                     |
| <b>Source</b>             | Polyclonal Sheep IgG                                                                                                                                                                                                                                                        |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant rat LYVE-1<br>Thr53-Thr259<br>Accession # NP_001099756                                                                                                                                                                      |
| <b>Conjugate</b>          | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

## 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.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

LYVE-1 (Lymphatic vessel endothelial hyaluronic acid receptor 1; also CRSBP-1) is a 58-64 kDa, monomeric, glycoprotein member of the Link protein superfamily of hyaluron-binding molecules. It has limited expression, being found on the cell surface of lymphatic endothelial cells, endothelial cells of lymphoid sinuses, nodal stromal cells, and macrophages plus dendritic cells. HA (hyaluronan) is a nonsulfated, freestanding, repeating disaccharide consisting of GlcA (glucuronic acid) in  $\beta$ -linkage with GlcNAc (N-acetylglucosamine). It should not be confused with heparan, which is sulfated, protein-linked, and composed of repeating GlcA/IdoA and GlcNAc residues in both  $\alpha$ - and  $\beta$ -linkages. HA is ubiquitous and occupies space between collagen fibers. It undergoes both normal, and pathology-induced turnover, and presumably does so by binding to LYVE-1, CD44 and HARE on lymphatic endothelium. Ultimately, HA is transported to the liver and nodes where it undergoes degradation. This may be necessary as low MW HA is proinflammatory. LYVE-1 is also a receptor for PDGF-BB and VEGF-A, and LYVE-1 ligation apparently induces endothelial cell contraction with the opening of intercellular junctions. Based on mouse, rat LYVE-1 is synthesized as a 343 amino acid (aa) type I transmembrane protein that contains a very long signal sequence (aa 1-52). The extracellular region is likely to be 182 aa in length (aa 53-234) and contain one Link domain (aa 62-210). LYVE-12 is likely maintained in a default "off mode" by undergoing sialylation, possibly at Thr83. Over aa 53-259, rat LYVE-1 shares 82% and 60% aa sequence identity with mouse and human LYVE-1, respectively.

## PRODUCT SPECIFIC NOTICES

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