

## DESCRIPTION

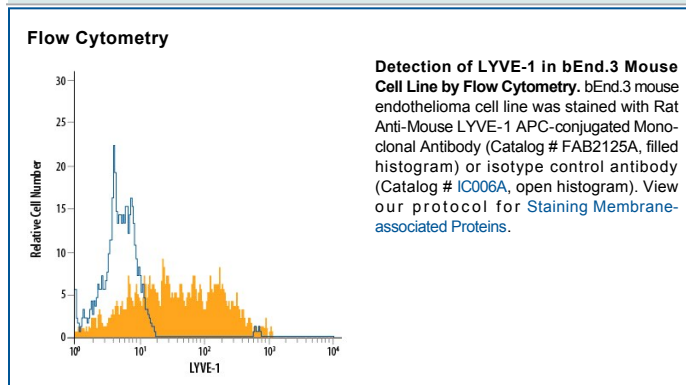
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse LYVE-1 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant mouse CD44 or recombinant human LYVE-1 is observed.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # 223322
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	BaF/3 mouse pro-B cell line transfected with mouse LYVE-1 Ala24-Thr234 Accession # Q8BHC0
<b>Conjugate</b>	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm
<b>Formulation</b>	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.  *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>Recommended Concentration</b>	<b>Sample</b>
<b>Flow Cytometry</b>	10 $\mu$ L/10 <sup>6</sup> cells	See Below

## DATA



## 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>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

## BACKGROUND

Lymphatic vessel endothelial hyaluronan (HA) receptor-1 (LYVE-1) is a recently identified receptor of HA, a linear high molecular weight polymer composed of alternating units of D-glucuronic acid and N-acetyl-D-glucosamine. HA is found in the extracellular matrix of most animal tissues and in body fluids. It modulates cell behavior and functions during tissue remodeling, development, homeostasis, and disease (1). The turnover of HA (several grams/day in humans) occurs primarily in the lymphatics and liver, the two major clearance systems that catabolize approximately 85% and 15% of HA, respectively (1-3). LYVE-1 shares 41% homology with the other known HA receptor, CD44 (4). The homology between the two proteins increases to 61% within the HA binding domain. The HA binding domain, known as the link module, is a common structural motif found in other HA binding proteins such as link protein, aggrecan and versican (1, 5). Human and mouse LYVE-1 share 69% amino acid sequence identity.

LYVE-1 is primarily expressed on both the luminal and abluminal surfaces of lymphatic vessels (4, 5). In addition, LYVE-1 is also present in normal hepatic blood sinusoidal endothelial cells (6). LYVE-1 mediates the endocytosis of HA and may transport HA from tissue to lymph by transcytosis, delivering HA to lymphatic capillaries for removal and degradation in the regional lymph nodes (5, 7, 8). Because of its restricted expression patterns, LYVE-1, along with other lymphatic proteins such as VEGF R3, podoplanin and the homeobox protein prospero-related (Prox-1), constitute a set of markers useful for distinguishing between lymphatic and blood microvasculature (4, 5, 9-11).

## References:

1. Knudson, C.B. and W. Knudson (1993) *FASEB J.* **7**:1233.
2. Evered, D. and J. Whelan (1989) *Ciba Found. Symp.* **143**:1.
3. Laurent, T.C. and J.R.F. Fraser (1992) *FASEB J.* **6**:2397.
4. Banerji, S. *et al.* (1999) *J. Cell Biol.* **144**:789.
5. Prevo, R. *et al.* (2001) *J. Biol. Chem.* **276**:19420.
6. Carreira, C.M. *et al.* (2001) *Cancer Research* **61**:8079.
7. Jackson, D.J. *et al.* (2001) *Trends Immunol.* **22**:317.
8. Zhou, B. *et al.* (2000) *J. Biol. Chem.* **275**:37733.
9. Achen, M. *et al.* (1998) *Proc. Natl. Acad. Sci. USA* **95**:548.
10. Breiteneder-Gellef, S. *et al.* (1999) *Am. J. Pathol.* **154**:385.
11. Wiggle, J.T. and G. Oliver (1999) *Cell* **98**:769.