Human LYVE-1 Alexa Fluor® 647-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 1072614

Catalog Number: FAB11463R

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human LYVE-1 in direct ELISAs.
Source	Monoclonal Mouse IgG_{2B} Clone # 1072614
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human LYVE-1 Ser24-Thr238 Accession # Q9Y5Y7
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *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.*

Flow Cytometry	Titration recommended for optimal concentration with starting range of 0.1-1 µg/1 million cells. Sample used for this experiment was NS0 cell line transfected with hLYVE-1 or irrelevant NS0 transfectant.

PREPARATION AND STORAGE

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

BACKGROUND

Lymphatic vessel endothelial hyaluronan (HA) receptor-1 (LYVE-1) is a 60-70 kDa type I transmembrane protein that is a 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 propero-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. Jackson, D.J. *et al.* (2001)Trends Immunol. **22**:317.
7. Zhou, B. *et al.* (2000) J. Biol. Chem. **275**:37733.
8. Achen, M. *et al.* (1998) Proc. Natl. Acad. Sci. USA **95**:548.
9. Breiteneder-Gellef, S. *et al.* (1999) Am. J. Pathol. **154**:385.
10. Wiggle, J.T. and G. Oliver (1999) Cell **98**:769.

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