



Recombinant Mouse Soluble LYVE-1-His



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no:	S01-026
Size:	20 µg
Lot. No.:	According to product label
Country of origin:	Germany

Scientific Background

Gene:	<i>LYVE1</i>
Synonyms:	Lymphatic vessel endothelial hyaluronic acid receptor 1,

A DNA sequence encoding the extracellular domain of mouse LYVE-1 (Met1 – Gly228) was fused to a C-terminal His-tag (6xHis) and expressed in insect cells. Based on N-terminal sequence analysis, the primary structure of recombinant mature sLYVE-1 starts at Ala24. sLYVE-1 has a calculated monomeric molecular mass of about 25kDa but as a result of glycosylation, migrates at approximately 35 - 45kDa under reducing conditions in SDS-PAGE.

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.

References

1. Carriera et al., Cancer Res 61:8079, 2001
2. Jackson DG Trends Cardiovasc Med 13:1, 2003
3. Sleeman et al., Microsc Res Tech 55:61, 2001
4. Mäkinen et al., EMBO J 20 : 4762, 2001

Sequence

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ADLVQDLSISTCRIMGVALVGRNKNPQMNFTANEACKMLGLTLASRDQVES  
AQKSGFETCSYGWVGEQFSVIPRIFSNPRCGKNGKGVLIWNAPSSQKFKAYC  
HNSSDTWVNSCIPEIVTTFYPVLDQTPTATEFSVSSAYLASSPDSTTPVSA  
TTRAPPLTSMARKTKKICITEVYTEPIITMATETEAFVSGAAFKNEAAGHHH  
HHH
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Database References

Protein RefSeq:	NP_444477.2
Uniprot ID:	Q8BHC0
mRNA RefSeq:	NM_053247.4

Product Specifications

Expressed in	Insect cells
Purity	> 95% by SDS-PAGE & silver stain
Buffer	PBS
Stabilizer	None
Formulation	lyophilized
Length (aa):	211
MW:	35 -45 kDa
Result by N-terminal sequencing	ADLVQDLS

Stability: Lyophilized samples are stable for greater than six months at -20°C to -70°C. Reconstituted sLYVE-1 should be stored in working aliquots at -20°C.

Reconstitution: The lyophilized sLYVE-1 is soluble in water and most aqueous buffers. The lyophilized sLYVE-1 should be reconstituted in PBS or medium to a concentration not lower than 50µg/ml.



AVOID REPEATED FREEZE AND THAW CYCLES!

Biological Activity: Not tested so far.



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Handling/Application

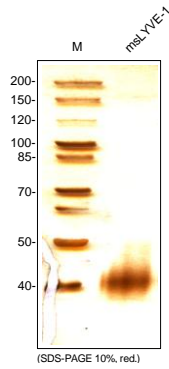


Fig. 1: SDS-PAGE analysis of recombinant mouse soluble LYVE-1 from insect cells. Sample was loaded in 10% SDS-polyacrylamide gel under reducing condition and stained with Silver stain.