

## LMAN2 Protein, Human, Recombinant (His)

### General Information

Synonyms:	C5orf8;GP36B;lectin, mannose binding 2;VIP36
Protein Construction:	A DNA sequence encoding the human LMAN2 extracellular domain (Q12907) (As p45-Arg 322) was fused with a polyhistidine tag at the C-terminus and an initial Met at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	Q12907
Molecular Weight:	33.2 kDa (predicted); 30 kDa (reducing conditions)

### QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing 50 mM Tris, pH 8.5. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

**Reconstitution:**  
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

LMAN2 (Lectin, Mannose Binding 2, also known as VIP36) is a Protein Coding gene. This gene encodes a type I transmembrane lectin that shuttles between the endoplasmic reticulum, the Golgi apparatus, and the plasma membrane. The encoded protein binds high mannose type glycoproteins and may facilitate their sorting, trafficking, and quality control. The L-type lectin LMAN2 appears to be specifically required for the accumulation of

GPRC5B in the Golgi complex and restriction of GPRC5B transport along the exosomal pathway. This may occur due to interference with the adaptor protein GGA1-mediated trans-Golgi network-to-endosome transport of GPRC5B. A Golgi-traversing pathway for the exosomal release of the cargo protein GPRC5B in which CD2AP facilitates the entry and LMAN2 impedes the exit of the flux, respectively.

### Reference

Nawa D, et al. (2007) Stable interaction of the cargo receptor VIP36 with molecular chaperone BiP. *Glycobiology*. 17 (9): 913-21.

Shimada O, et al. (2003) Localization of VIP36 in the post-Golgi secretory pathway also of rat parotid acinar cells. *J Histochem Cytochem*. 51(8): 1057-63.

Hara-Kuge S, et al. (1999) Vesicular-integral membrane protein, VIP36, recognizes high-mannose type glycans containing alpha1--2 mannosyl residues in MDCK cells. *Glycobiology*. 9(8): 833-9.

Fullekrug J, et al. (1999) VIP36 localisation to the early secretory pathway. *J Cell Sci*. 112 ( Pt 17): 2813-21.

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