

## CLM-9 Protein, Human, Recombinant (hFc)

### General Information

Synonyms:	CLM9;NEPMUCIN;CLM-9;CD300 molecule-like family member g;TREM-4;TREM4
Protein Construction:	A DNA sequence encoding the human CD300LG (AAH25395.1) (Met1-Arg247) was expressed, fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Leu 19
Species:	Human
Expression Host:	HEK293 Cells
Accession:	AAH25395.1
Molecular Weight:	51.7 kDa (predicted); 70 and 34 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:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. 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

CLM-9, also known as TREM4, is a receptor which belongs to the TREM family. The TREM family of receptors regulates the activity of various cell types of the immune system including neutrophils, monocyte/macrophages, microglia, and dendritic cells. CLM-9 may mediate L-selectin-dependent lymphocyte rollings. It binds SELL in a calcium dependent manner. CLM-9 also binds lymphocyte which suggests that it functions in lymphocyte adhesion. The major CLM-9 transcript is expressed highly in human heart, skeletal muscle, and placenta. The

mouse protein has been shown to be expressed in capillary endothelial cells. Human CLM-9 mediates the uptake of human IgA2 and mouse IgM.

### Reference

Clark GJ, et al. (2009) The CD300 molecules regulate monocyte and dendritic cell functions. *Immunobiology*. 214(9-10):730-6.

Engel K, et al. (2012) Bacterial expression of mutant argininosuccinate lyase reveals imperfect correlation of in-vitro enzyme activity with clinical phenotype in argininosuccinic aciduria. *J Inher Metab Dis*. 35(1):133-40.

Lamesch P, et al. (2007) hORFeome v3.1: a resource of human open reading frames representing over 10,000 human genes. *Genomics*. 89(3):307-15.

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