

Rat CLEC4F / CLECSF13 Protein



Sino Biological
Biological Solution Specialist

Catalog Number: 80215-RNCH

General Information

Gene Name Synonym:

CLEC4F

Protein Construction:

A DNA sequence encoding the rat CLEC4F(NP_446205.1) (Arg70-Ser550) was expressed with two additional amino acids (Gly & Pro) at the N-terminus.

Source: Rat

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Gly

Molecular Mass:

The recombinant rat CLEC4F comprises 483 amino acids and predicts a molecular mass of 53.7 kDa. The apparent molecular mass of the recombinant protein is approximately 63-68 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

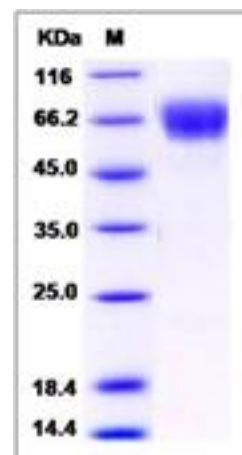
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

CLEC4F, a member of C-type lectins, was firstly purified from rat liver extract with high binding affinity to fucose, galactose and N-acetylgalactosamine, and un-sialylated glucosphingolipids with GalNAc or Gal terminus. However, the biological functions of CLEC4F have not been elucidated. Histochemical staining showed that mouse CLEC4F (mCLEC4F) is only expressed on F4/80+ cells localized in liver, and is undetectable in bone marrow, spleen, lymph nodes, or other tissues in adult mice. However, mCLEC4F is detected in the liver of embryonic day 11.5 (E11.5), which is 1.5 day earlier than the formation of liver (E10) and is 3.5 day earlier than the formation of bone marrow (E15-16). Moreover, recombinant mCLEC4F.Fc binds to alpha-galactoceramide in a Ca⁺⁺-dependent manner, and both galactose and ceramide can partially inhibit CLEC4F.Fc binding to alpha-galactoceramide. Interestingly, mCLEC4F-deficient (mCEC4F k/o) mice produced far less cytokines than wild type littermates after intravenous injection of alpha-galactoceramide. This suggests that mCLEC4F is not only a specific marker for Kupffer cells, but is also critical for the presentation of glycolipid antigen to NKT cells.

References

1. Shie-Liang Edmond Hsieh, *et al.* (2009) CLEC4F, A Kupffer Cells Specific Marker, Is Critical for Presentation of Alfa-Galactoceramide to NKT Cells. *The Journal of Immunology*. 182:78.
2. Ota T, *et al.* (2004) Complete sequencing and characterization of 21,243 full-length human cDNAs. *Nat Genet*. 2004 Jan;36(1):40-5.
3. Bonaldo MF, *et al.* (1996) Normalization and subtraction: two approaches to facilitate gene discovery. *Genome Res*. 1996 Sep;6(9):791-806.

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