

Human CXCL4 / PF4 Protein

Catalog Number: 10874-HNAE



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

PF4, CXCL4, MGC138298, SCYB4

Protein Construction:

A DNA sequence encoding the human CXCL4 (NP_002610.1) (Glu 32-Ser 101) was expressed.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 80 % as determined by SDS-PAGE

Bio-Activity

1. Measured by its ability to inhibit human bFGF / FGF2 dependent proliferation of Balb/c3T3 mouse fibroblasts. The ED50 for this effect is typically 5-40 µg/ml.
2. Measured by its binding ability in a functional ELISA. Immobilized human CXCL4 at 20 µg/ml (100 µl/well) can bind biotinylated human VEGF165. The EC50 of biotinylated human VEGF165 is 9.97 µg/ml.

Endotoxin:

Please contact us for more information.

Stability:

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

Predicted N terminal: Met

Molecular Mass:

The recombinant human CXCL4 comprises 71 amino acids with a predicted molecular mass of 7.8 kDa as estimated in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

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

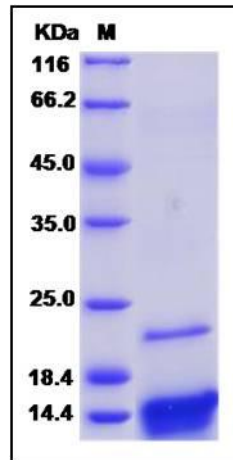
Usage Guide

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.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Platelet factor 4 (PF4) is a 70-amino acid protein belonging to the CXC chemokine family also known as chemokine (C-X-C motif) ligand 4 (CXCL4). It is released from the alpha-granules of activated platelets during platelet aggregation, and promotes blood coagulation by moderating the effects of heparin-like molecules. PF4 is chemotactic for neutrophils, fibroblasts and monocytes, and interacts with a splice variant of the chemokine receptor CXCR3, known as CXCR3B. Its major physiologic role appears to be neutralization of heparin-like molecules on the endothelial surface of blood vessels, thereby inhibiting local antithrombin III activity and promoting coagulation. As a strong chemoattractant for neutrophils and fibroblasts, PF4 plays a critical role in inflammation and wound repair. PF4 is the antigen in heparin-induced thrombocytopenia, an idiosyncratic autoimmune reaction to the administration of the anticoagulant heparin. Its autoantibodies have been found in patients with thrombosis and features resembling HIT but no prior administration of heparin.

References

1. Deuel, T.F. et al., 1981, Proc. Natl. Acad. Sci. U.S.A. 78 (7): 4584-4587.
2. Eisman, R. et al., 1990, Blood. 76 (2): 336-344.
3. O'Donovan, N. et al., 1999, Cytogenet Cell Genet. 84 (1-2): 39-42.
4. Lasagni, L. et al., 2003, J Exp Med. 197 (11): 1537-1549.
5. Warkentin, T. E., 2007, N. Engl. J. Med. 356 (9): 891-893.
6. Warkentin, T. E., et al., 2008, Am. J. Med. 121 (7): 632-636.

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