Recombinant Human Platelet Factor-4 (rh PF-4 / CXCL4)

Synonyms: Iroplact, Oncostatin-A, SCYB4,

Introduction: Platelet factor-4 is released from the alpha-granules of activated platelets and binds with high affinity to heparin. 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, PF-4 probably has a role in inflammation and wound repair. Oncostatin-A is a member of the CXC chemokine family. Human PF-4 is used for the proof of heparin-induced thrombocytopenia. Furthermore it is used as an inhibitor in the angiogenesis during tumor therapy.

Description: Human recombinant PF-4 produced in E. coli is a single, non-glycosylated polypeptide chain containing 70 amino acids and having a molecular mass of 7.8 kDa.

Source: Escherichia coli

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: Lyophilized after extensive dialysis against 50mM Tris-HCl pH 8.0 and 150mM NaCl buffer. The aliquots/samples of 1µg contain Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized PF-4 in sterile H2O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized PF-4 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution PF-4 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity: Greater than 95.0% as determined by RP-HPLC and by SDS-PAGE.

Amino Acid Sequence: The sequence of the first four N-terminal amino acids was determined and was found to be Glu-Ala-Glu-Glu-Asp.

Biological Activity: Determined by its ability to inhibit human FGF basic dependent proliferation of NR6R3T3 mouse fibroblasts the ED50 was found to be 5 - 15 µg/ml.

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