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ChromaTec

Platelet Factor 4 (PF4) – human

[PF4-h]

Properties*

Product #	**[PF4-h]**
Species	human
Source	platelets
Mol wt	7.8 kDa (monomer); 31.2 kDa (tetramer)
UniProt #	P02776
Purity	> 95% as determined by SDS-PAGE (silver staining)
Product sizes	200 µg, 1 mg (different sizes are available on request)
Quality control	PF4/Heparin-ELISA (HIT-Test)**, PF4-ELISA, SDS-Page, Western Blot; N-terminal sequencing and MALDI-TOF-MS
Physical form	Lyophilized in PBS (0.22 µm filtered), carrier free (different buffers are available on request)
Reconstitution	Reconstitute carefully in *A. dest.* (1µl/µg PF4). Adjust the protein concentration with PBS. Do not vortex.
Shipping	Ambient temperature
Storage	Store dark in working aliquots at -20°C to -80°C. Avoid repeated freezing and thawing.
Stability	Lyophilisate is stable for at least 12 month at -20°C.

Description

Platelet Factor 4 (PF4; also known as CXCL4) is synthesized in megakaryocytes and platelets. The monomer of the chemokine consists of 70 amino acids resulting in a molecular weight of 7.8 kDa. Depending on the protein concentration and buffer conditions, PF4 appears as a mono-, di-, tri-, or tetramer. PF4 is biologically active in the tetrameric form, promotes blood coagulation and is also important in wound healing and inflammation. PF4, together with heparin (PF4-heparin complex) is an important antigen of antibodies inducing heparin- induced thrombocytopenia (HIT). Purified PF4 is used in several laboratory tests for the detection of HIT antibodies.

*Please note that the properties of this product (structure, antigenicity, function etc.) may alter under different experimental conditions. If changes (buffers, pH etc.) are made, the responsibility is transferred from the seller to the customer.

**The production of PF4 and its quality control is performed in collaboration with the Institute of Immunology and Transfusion Medicine, Department of Transfusion Medicine of the University Medicine Greifswald.




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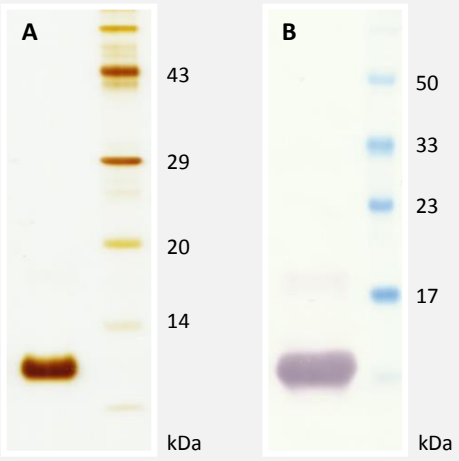
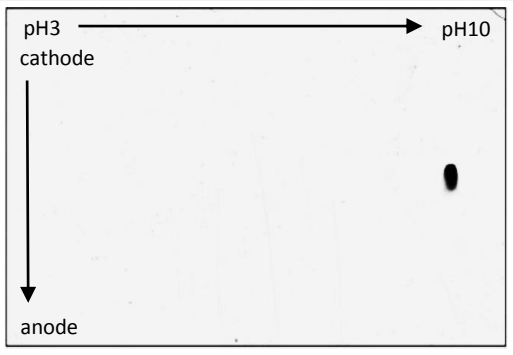
SDS-Page & Western Blot: PF4-h



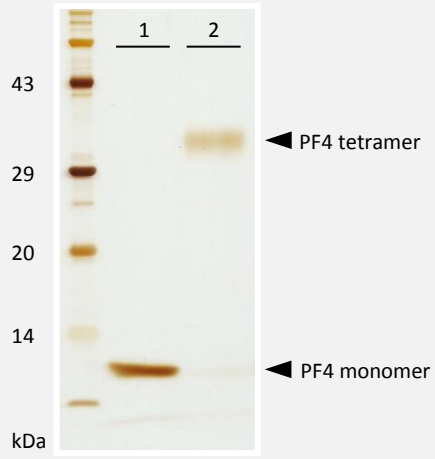
SDS-Page and Western Blot with PF4-h:
A) SDS-Page: Human PF4 appears as a monomer under denaturing conditions. **B)** Western Blot: Human PF4 was detected using PF4 antibodies (G7, Santa Cruz, #sc374195) and alkaline phosphatase conjugated secondary antibodies.

2-dimensional-SDS-Page: PF4-h



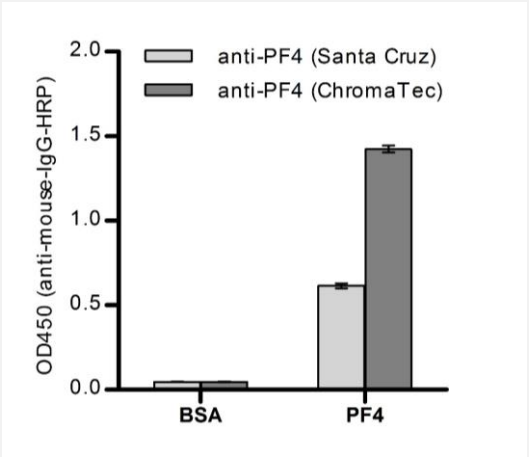
2D-SDS-Page (15% PAA, Coomassie): PF4-h
The monomer of human PF4 (PF4-h) has an isoelectric point (pI) of ~ 8.8

SDS-Page: Crosslinking of PF4-h



SDS-Page after PF4 crosslinking: PF4-h
Lane 1: PF4-h (0.75 µg) appears as a monomer (7.8 kDa) under denaturing conditions. Lane 2: Crosslinking of PF4 (0.75 µg) with BS3 (ThermoScientific, #21580) leads to the appearance of a band at ~ 32 kDa (PF4 tetramer) under denaturing conditions.

ELISA: PF4-h



PF4-ELISA: PF4-h
PF4 (# PF4-h, 1 µg/well) was detected by two different PF4 antibodies: Santa Cruz (# sc374195, 200 ng/ml) and ChromaTec (# a-PF4-h1, 200 ng/ml). 1 µg/well BSA was used as control. PF4 antibody binding was detected using HRP-conjugated secondary antibodies.

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Recent publications referencing this product:

Bertini S, Fareed J, Madaschi L, et al. Characterization of PF4-Heparin Complexes by Photon Correlation Spectroscopy and Zeta Potential. Clin **Appl Thromb Hemost. 2017**; doi: 10.1177/1076029616685430

Nguyen T-H, Greinacher A, Delcea M. Quantitative description of thermodynamic and kinetic properties of the platelet factor 4/heparin bonds. **Nanoscale. 2015**; 7:10130-10139

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