

PRODUCT INFORMATION



PF4/CXCL4 (human, recombinant)

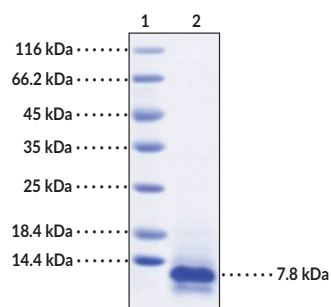
Item No. 44199

Overview and Properties

Synonyms:	Endothelial Cell Growth Inhibitor, Iroplact, C-X-C Motif Chemokine 4, Oncostatin-A, Platelet Factor 4
Source:	Active recombinant human PF4/CXCL4 expressed in <i>E. coli</i>
Amino Acids:	Met1; 32-101
Uniprot No.:	P02776
Molecular Weight:	7.8 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥80% estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile PBS, pH 7.4
Endotoxin Testing:	<1.0 EU/g, determined by the LAL endotoxin assay
Bioactivity:	See figures for details

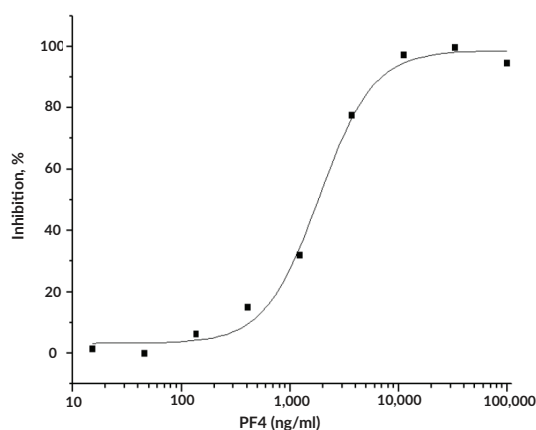
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Lane 1: MW Markers
Lane 2: PF4/CXCL4

SDS-PAGE Analysis of PF4/CXCL4. This protein has a calculated molecular weight of 7.8 kDa.



Measured by its ability to inhibit bFGF-dependent proliferation of human umbilical vein endothelial cells (HUVEC). The ED_{50} for this effect is typically 1-5 μ g/ml in the presence of 5 ng/ml bFGF.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

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Description

Platelet factor 4 (PF4), also known as chemokine (C-X-C) motif ligand 4 (CXCL4), is a chemokine produced by activated platelets with roles in coagulation, innate and adaptive immunity, and aging.¹⁻³ It is produced as a 70-amino acid monomer, but functions as both a monomer and higher order oligomers *in vivo*.⁴ PF4 binds to heparin to inhibit its anticoagulation activity, and it facilitates platelet aggregation and interacts with chemokine (C-X-C) motif receptor 1 (CXCR1) and CXCR2 on polymorphonuclear leukocytes (PMNs) at sites of tissue injury to induce intramuscular accumulation and wound healing.⁵ It is released in response to microorganisms to induce neutrophil recruitment and in response to viral infection to stimulate antigen presenting cells and induce both pro- and antiviral effects.¹ Plasma levels of PF4 are positively correlated with the progression of lung and skin fibrosis and pulmonary arterial hypertension.² Decreased serum levels of PF4 are associated with cognitive decline in patients with Alzheimer's disease.³ Cayman's PF4/CXCL4 (human, recombinant) protein can be used for cell-based assay and Western blot (WB) applications. The protein was synthesized from a DNA sequence encoding the mature form of PF4 (Glu32-Ser101) with an N-terminal translation-initiating methionine (Met1). The expressed protein consists of 71 amino acids, has a calculated molecular weight of 7.8 kDa, and a predicted N-terminus of Met1.

References

1. Cai, Z., Greene, M.I., Zhu, Z., *et al.* Structural features and PF4 functions that occur in heparin-induced thrombocytopenia (HIT) complicated by COVID-19. *Antibodies (Basel)* **9(4)**, 52 (2020).
2. Liu, Z., Li, L., Zhang, H., *et al.* Platelet factor 4(PF4) and its multiple roles in diseases. *Blood Rev.* **64**, 101155 (2026).
3. Li, L. and Xie, C. PF4 in rejuvenation therapy: Neuroprotection and cognitive enhancement. *Biomol. Biomed.* **25(11)**, 2580-2584 (2025).
4. Zhang, X., Chen, L., Bancroft, D.P., *et al.* Crystal structure of recombinant human platelet factor 4. *Biochemistry* **33(27)**, 8361-8366 (1994).
5. Weyrich, A.S. and Zimmerman, G.A. Platelets: Signaling cells in the immune continuum. *Trends Immunol.* **25(9)**, 489-495 (2004).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
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WWW.CAYMANCHEM.COM