

Recombinant Human PLF4 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50799

Size: 10ug, 100ug

Protein Name: Platelet factor 4 (PF-4) (C-X-C motif chemokine 4) (Iroplact) (Oncostatin-A)
[Cleaved into: Platelet factor 4, short form (Endothelial cell growth inhibitor)]

Synonym: PF4, CXCL4, SCYB4

UniProt ID: P02776

UniProt Link: www.uniprot.org/uniprotkb/P02776/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 101 AA

Molecular Weight: 11 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MSSAAGFCASRPGLLFLGLLLLPLVVAFAAEAEEDGDLQCLCVKTTTSQVRPRHITSLEVIKAGPHCP
TAQLIATLKNRGRKICLDLQAPLYKKIIKKLLES

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Platelet factor 4 (PF-4) (C-X-C motif chemokine 4) (Iroplact) (Oncostatin-A) [Cleaved into: Platelet factor 4, short form (Endothelial cell growth inhibitor)] produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Chemokine released during platelet aggregation that plays a role in different biological processes including hematopoiesis, cell proliferation, differentiation, and activation (PubMed:29930254, PubMed:9531587). Acts via different functional receptors including CCR1, CXCR3A or CXCR3B (PubMed:18174362, PubMed:29930254). Upon interaction with CXCR3A receptor, induces activated T-lymphocytes migration mediated via downstream Ras/extracellular signal-regulated kinase (ERK) signaling (PubMed:18174362, PubMed:24469069). Neutralizes the anticoagulant effect of heparin by binding more strongly to heparin than to the chondroitin-4-sulfate chains of the carrier molecule. Plays a role in the inhibition of hematopoiesis and in the maintenance of hematopoietic stem cell (HSC) quiescence (PubMed:9531587). Chemotactic for neutrophils and monocytes via CCR1 (PubMed:29930254). Inhibits endothelial cell proliferation. In cooperation with toll-like receptor 8/TLR8, induces chromatin remodeling and activates inflammatory gene expression via the TBK1-IRF5 axis (PubMed:35701499). In addition, induces myofibroblast differentiation and collagen synthesis in different precursor cells, including endothelial cells, by stimulating endothelial-to-mesenchymal transition (PubMed:34986347). Interacts with thrombomodulin/THBD to enhance the activation of protein C and thus potentiates its anticoagulant activity (PubMed:9395524).

Subcellular Localization: Secreted .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.