

Recombinant Human Placenta growth factor/PIGF-131/PIGF-1 Protein

Catalog No.: RP02896 **Recombinant**

Sequence Information

| Species | Gene ID | Swiss Prot |
|---------|---------|------------|
| Human | 5228 | P49763-2 |

Tags

C-hFc

Synonyms

D12S1900; PGFL; PIGF; PLGF; PIGF-2; SHGC-10760; PGF; PGFL; PIGF; PLGF; PIGF-2 ;SHGC-10760

Product Information

| Source | Purification |
|--------------|--------------|
| HEK293 cells | |

| Calculated MW | Observed MW |
|---------------|-------------|
| 40.68 kDa | 55-60 kDa |

Endotoxin

< 0.1 EU/μg

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

Placenta growth factor (PIGF) is a member of the PDGF/VEGF family of growth factors that share a conserved pattern of eight cysteines (1, 2). Alternative splicing results in at least three human mature PIGF forms containing 131 (PIGF-1), 152 (PIGF-2), and 203 (PIGF-3) amino acids (aa) respectively (1, 2). Only PIGF-2 contains a highly basic heparin-binding 21 aa insert at the C-terminus (1). Human PIGF-1 shares 56%, 55%, 74% and 95% aa identity with the comparable isoform of mouse, rat, canine, and equine PIGF, respectively. PIGF is mainly found as variably glycosylated, secreted, 55-60 kDa disulfide linked homodimers (3). Mammalian cells expressing PIGF include villous trophoblasts, decidual cells, erythroblasts, keratinocytes, and some endothelial cells (1, 4-6). Circulating PIGF increases during pregnancy, reaching a peak in mid-gestation; this increase is attenuated in preeclampsia (7). However, deletion of PIGF in the mouse does not affect development or reproduction. Postnatally, mice lacking PIGF show impaired angiogenesis in response to ischemia (8).

Basic Information

Description

Recombinant Human Placenta growth factor/PIGF-131/PIGF-1 Protein is produced by HEK293 expression system. The target protein is expressed with sequence (Leu19-Arg149) fused with a hFc tag at the C-terminus.

Bio-Activity

Measured by its binding ability in a functional ELISA. Immobilized human VEGFR1/Flt-1 (Catalog: RP01188) at 2 μg/mL (100 μL/well) can bind Human Placenta growth factor/PLGF-131 (Catalog: RP02896) with a linear range of 0.17-41.1 ng/mL.

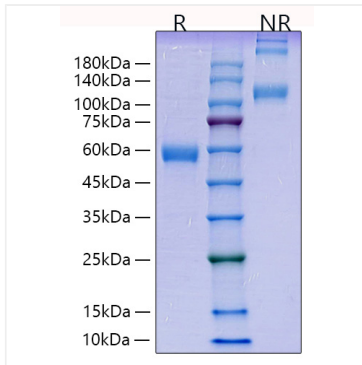
Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Human Placenta growth factor/PLGF-131 Protein was resolved with SDS PAGE under reducing (R) and non-reducing (NR) conditions, showing single bands at 55-60 kDa and 110-120 kDa, respectively.