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

Catalog No.: RP02896

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Sequence Information

Species
Human

Gene ID
5228

Swiss Prot
P49763-2

Tags
C-hFc-6His

Synonyms
D12S1900, PGFL, PlGF, PLGF, PlGF-2, SHGC-10760,PGF,PGFL, PlGF,PLGF,PlGF-2,SHGC-10760

Product Information

Source
HEK293 cells

Purification
≥ 95% as determined by SDS-PAGE.

Calculated MW
40.68 kDa

Observed MW
55-60 kDa

Endotoxin
< 0.1 EU/μg of the protein by LAL method.

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 stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Background

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

Basic Information

Description
Recombinant Human Placenta growth factor/PlGF-131/PlGF-1 Protein is produced by HEK293 expression system. The target protein is expressed with sequence (Leu19-Arg149) fused with hFc-6His tag at the C-terminus.

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.

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃

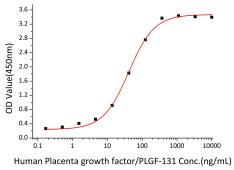
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

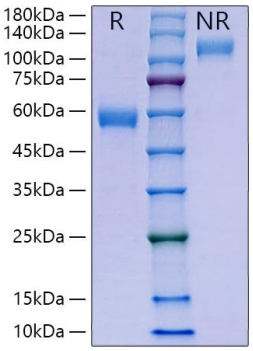
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Validation Data



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.



Recombinant Human Placenta growth factor/PlGF-131/PlGF-1 Protein was determined by SDS-PAGE under reducing (R) and non-reducing (NR) conditions.