

Datasheet for ABIN411347

PLGF ELISA Kit[Go to Product page](#)**1** Image**1** Publication

Overview

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| Quantity: | 96 tests |
| Target: | PLGF (PGF) |
| Binding Specificity: | AA 21-149 |
| Reactivity: | Human |
| Method Type: | Sandwich ELISA |
| Detection Range: | 15.6-1000 pg/mL |
| Minimum Detection Limit: | 15.6 pg/mL |
| Application: | ELISA |

Product Details

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| Purpose: | Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human Placental Growth Factor |
| Brand: | PicoKine™ |
| Sample Type: | Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Plasma (citrate), Urine |
| Analytical Method: | Quantitative |
| Detection Method: | Colorimetric |
| Immunogen: | Expression system for standard: E.coli Immunogen sequence: A21-R149 |
| Specificity: | Expression system for standard: E.coli Immunogen sequence: A21-R149 |

Product Details

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| Cross-Reactivity (Details): | There is no detectable cross-reactivity with other relevant proteins. |
| Sensitivity: | <1pg/mL |
| Material not included: | Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g NaCl |

Target Details

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| Target: | PLGF (PGF) |
| Alternative Name: | PGF (PGF Products) |
| Background: | <p>Protein Function: Growth factor active in angiogenesis and endothelial cell growth, stimulating their proliferation and migration. It binds to the receptor FLT1/VEGFR-1. Isoform PIGF-2 binds NRP1/neuropilin-1 and NRP2/neuropilin-2 in a heparin-dependent manner. Also promotes cell tumor growth. .</p> <p>Background: The protein, also called PGF, is 149 amino acids long and shares 53 % identity with the platelet-derived growth factor-like region of human VPF. And the N-glycosylated PLGF protein is secreted into the medium and that it functions as a dimer¹. The PLGF gene is mapped to 14q24-q31. There are 3 isoforms of PGF, designated PGF1, PGF2, and PGF3. Only PGF2 is able to bind heparin. Additionally, PGF regulates inter- and intramolecular cross-talk between the VEGF receptor tyrosine kinases FLT1 and FLK12. It also can stimulate angiogenesis and collateral growth in ischemic heart and limb with at least a comparable efficiency to VEGF3.</p> <p>Synonyms: Placenta growth factor,PIGF,PGF,PGFL, PLGF,</p> <p>Full Gene Name: Placenta growth factor</p> <p>Cellular Localisation: Secreted. The three isoforms are secreted but PIGF-2 appears to remain cell attached unless released by heparin.</p> |
| Gene ID: | 5228 |
| UniProt: | P49763 |
| Pathways: | VEGFR1 Specific Signals |

Application Details

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| Application Notes: | Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well |
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Application Details

assay was recommended for both standard and sample testing.

Comment: Tissue Specificity: While the three isoforms are present in most placental tissues, PIGF-2 is specific to early (8 week) placenta and only PIGF-1 is found in the colon and mammary carcinomas.

Plate: Pre-coated

Protocol: human PLGF ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for PLGF has been precoated onto 96-well plates. Standards(E.coli, A21-R149) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for PLGF is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human PLGF amount of sample captured in plate.

Assay Procedure: Aliquot 0.1 mL per well of the 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.2pg/mL, 15.6pg/mL human PLGF standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernates, serum, plasma(heparin, EDTA, citrate) or urine to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human PLGF standard solution and each sample be measured in duplicate.

Assay Precision:

- Sample 1: n=16, Mean(pg/ml): 52, Standard deviation: 3.28, CV(%): 6.3
- Sample 2: n=16, Mean(pg/ml): 146, Standard deviation: 8.47, CV(%): 5.8
- Sample 3: n=16, Mean(pg/ml): 526, Standard deviation: 39.5, CV(%): 7.5,
- Sample 1: n=24, Mean(pg/ml): 45, Standard deviation: 3.24, CV(%): 7.2
- Sample 2: n=24, Mean(pg/ml): 165, Standard deviation: 10.9, CV(%): 6.6
- Sample 3: n=24, Mean(pg/ml): 583, Standard deviation: 49, CV(%): 8.4

Restrictions: For Research Use only

Handling

Handling Advice: Avoid multiple freeze-thaw cycles.

Storage: -20 °C, 4 °C

Storage Comment: Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles

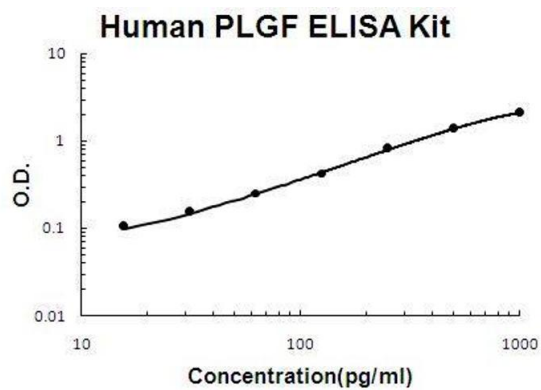
Handling

Expiry Date: 12 months

Publications

Product cited in: Mern, Fontana, Beierfuß, Thomé, Hegewald et al.: "A combinatorial relative mass value evaluation of endogenous bioactive proteins in three-dimensional cultured nucleus pulposus cells of herniated intervertebral discs: identification of potential ..." in: **PLoS ONE**, Vol. 8, Issue 11, pp. e81467, (2013) ([PubMed](#)).

Images



ELISA

Image 1. Human PLGF PicoKine ELISA Kit standard curve