

Product datasheet for **DP3502**

PLGF (PGF) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	ELISA, IF, WB
Recommended Dilution:	Western Blot: 10 µg/ml, it will detect 25-50 ng/lane of recombinant Human PIGF-1 and PIGF-2 under reducing conditions. Dimers are detected at higher protein amounts/lane. ELISA: 1-5 µg/ml, allows the detection of 1.0-2.5 ng/well of recombinant Human PIGF-1 and PIGF-2. Immunofluorescence/Immunohistochemistry: 5-25 µg/ml, allows the detection of PIGF protein in different Human tissue including placenta and brain tumours.
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	N-terminal 20 amino acid peptide of native Human PIGF (Leu19 - Val38) produced in Insect Cells.
Specificity:	The antibody will react with all Human PIGF isoforms.
Formulation:	PBS, pH 7.4 without preservatives State: Purified State: Lyophilized purified Ig fraction
Reconstitution Method:	Restore in sterile water to a concentration of 0.1-1.0 mg/ml.
Purification:	Affinity Chromatography on Protein A
Conjugation:	Unconjugated
Storage:	Store lyophilized at 2-8°C for 6 months or at -20°C long term. After reconstitution store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C long term. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	placental growth factor
Database Link:	Entrez Gene 5228 Human P49763



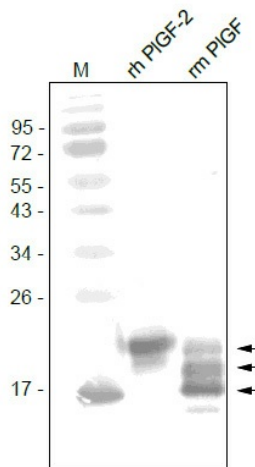
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Background:

Placenta growth factor (PLGF) is a member of the PDGF/VEGF family of growth factors that share a conserved pattern of eight cysteines. Alternate splicing results in at least three human mature PLGF forms containing 131 (PLGF1), 152 (PLGF2), and 203 (PLGF3) amino acids (aa) respectively. Only PLGF2 contains a highly basic heparin-binding 21 aa insert at the C-terminus. In the mouse, only one PLGF that is the equivalent of human PLGF2 has been identified. Human PLGF1 shares 56%, 55%, 74% and 95% aa identity with the appropriate isoform of mouse, rat, canine and equine PLGF. PLGF is mainly found as variably glycosylated, secreted, 55 - 60 kDa disulfide linked homodimers. Mammalian cells expressing PLGF include villous trophoblasts, decidual cells, erythroblasts, keratinocytes and some endothelial cells. Circulating PLGF increases during pregnancy, reaching a peak in mid-gestation; this increase is attenuated in preeclampsia. However, deletion of PLGF in the mouse does not affect development or reproduction. Postnatally, mice lacking PLGF show impaired angiogenesis in response to ischemia. PLGF binds and signals through VEGF R1/Flt1, but not VEGF R2/Flk-1/KDR, while VEGF binds both but signals only through the angiogenic receptor, VEGF R2. PLGF and VEGF therefore compete for binding to VEGF R1, allowing high PLGF to discourage VEGF/VEGF R1 binding and promote VEGF/VEGF R2-mediated angiogenesis. However, PLGF (especially PLGF1) and some forms of VEGF can form dimers that decrease the angiogenic effect of VEGF on VEGF R2. PLGF2, but not PLGF-1, shows heparin-independent binding of neuropilin (Npn)-1 and Npn2. PLGF induces monocyte activation, migration, and production of inflammatory cytokines and VEGF. These activities facilitate wound and bone fracture healing, but also contribute to inflammation in active sickle cell disease and atherosclerosis.

Synonyms:

PGFL, PLGF, PLGF

Product images:

Western analysis of human PLGF-2 with a polyclonal antibody directed against a N-terminal peptide of native human PLGF. There is a strong cross reactivity with Mouse PLGF.