

Product datasheet for **DM3525B**

PLGF (PGF) (PIGF-1/2) Mouse Monoclonal Antibody [Clone ID: 178/G10]

Product data:

Product Type:	Primary Antibodies
Clone Name:	178/G10
Applications:	ELISA
Recommended Dilution:	ELISA: 1-5 µg/ml.
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Recombinant Human PIGF-2 [Leu19 – Arg170] produced in insect cells.
Specificity:	The unconjugated monoclonal antibody will detect recombinant Human PIGF-1 and PIGF-2 in Western Blot under <i>reducing</i> and <i>non-reducing</i> conditions.
Formulation:	PBS Label: Biotin State: Purified State: Lyophilized purified IgG fraction Stabilizer: 50X BSA Preservative: 0.02% Sodium Azide
Reconstitution Method:	Restore in sterile Water to a concentration of 0.1-1.0 mg/ml
Purification:	Protein G Chromatography
Conjugation:	Biotin
Storage:	Prior to reconstitution store at 2-8°C. Following reconstitution store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. 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 (PIGF) 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 PIGF forms containing 131 (PIGF1), 152 (PIGF2), and 203 (PIGF3) amino acids (aa) respectively. Only PIGF2 contains a highly basic heparinbinding 21 aa insert at the C-terminus. In the mouse, only one P IGF that is the equivalent of human PIGF2 has been identified. Human PIGF1 shares 56%, 55%, 74% and 95% aa identity with the appropriate isoform of mouse, rat, canine and equine PIGF. PIGF is mainly found as variably glycosylated, secreted, 55 - 60 kDa disulfide linked homodimers. Mammalian cells expressing PIGF include villous trophoblasts, decidual cells, erythroblasts, keratinocytes and some endothelial cells. Circulating PIGF increases during pregnancy, reaching a peak in mid-gestation; this increase is attenuated in preeclampsia. However, deletion of PIGF in the mouse does not affect development or reproduction. Postnatally, mice lacking PIGF show impaired angiogenesis in response to ischemia. PIGF 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. PIGF and VEGF therefore compete for binding to VEGF R1, allowing high PIGF to discourage VEGF/VEGF R1 binding and promote VEGF/VEGF R2mediated angiogenesis. However, PIGF (especially PIGF1) and some forms of VEGF can form dimers that decrease the angiogenic effect of VEGF on VEGF R2. PIGF2, but not PLGF-1, shows heparindependent binding of neuropilin (Npn)-1 and Npn2. PIGF 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, PIGF