



## Anti-Human PlGF (#2D93)

20180302BB



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

<b>Cat.-no.:</b>	<b>101-M03</b>
Size:	100 µg
Lot. No.:	According to product label

**Preparation:** This antibody was produced from a hybridoma (mouse myeloma fused with spleen cells from a mouse immunized with human PlGF recombinant protein). The IgG1 fraction of culture supernatant was purified by Protein G affinity chromatography.

### Target Background

<b>Synonyms (Target):</b>	PlGF; placental growth factor
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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 heparinbinding 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 heparindependent 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.

### Database References Target

<b>Protein RefSeq:</b>	NP_001193941.1
<b>Uniprot ID:</b>	P49763
<b>mRNA RefSeq:</b>	NM_001207012.1

### Product Specifications

<b>Host</b>	Mouse
<b>Reactivity against</b>	Human
<b>Clonality</b>	Monoclonal Antibody
<b>Clone</b>	(#2D93)
<b>Isotype</b>	IgG1
<b>Purification</b>	Protein G chromatography
<b>Antigen</b>	recombinant human PlGF
<b>Formulation</b>	lyophilized
<b>Reconstitution buffer</b>	PBS

**Reconstitution:** Reconstitute the antibody with 500 µl sterile PBS and the final concentration is 200 µg/ml.

**Stability:** Lyophilized samples are stable for 2 years from date of receipt when stored at -70°C. Reconstituted antibody can be aliquoted and stored frozen at < -20 °C for at least for six months without detectable loss of activity.

**Remarks:** In WB, this antibody shows no cross-reactivity with human VEGF and human PDGF.



**AVOID REPEATED FREEZE AND THAW CYCLES!**

### Applications

The antibody can be used within the following applications:

WB, IHC

**Recommended usage:**

**WB:** 1:1000-2000

**IHC:** 1:100-300

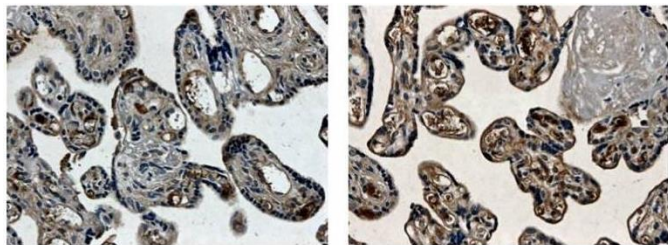
**NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!**



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### Application/Handling



**Fig. 1:** Formalin fixed and paraffin-embedded section of human placental tissue subjected to IHC with monoclonal mouse anti-human PlGF antibody.