



## Anti-rat PlGF



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

<b>Cat.-no.:</b>	<b>104-PA04S</b>
Size:	100 µg
Lot. No.:	According to product label
Country of origin:	Germany

**Preparation:** Produced from sera of rabbits pre-immunized with highly pure (>95%) recombinant rat PlGF (Ala24-Leu158) from insect cells.

### Target Background

<b>Synonyms:</b>	PlGF, Placenta Growth Factor
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Placenta growth factor (PlGF) is a member of the vascular endothelial growth factor (VEGF) family of growth factors. PlGF and VEGF share primary structural as well as limited amino acid sequence homology with the A and B chains of PDGF. All eight cysteine residues involved in intra and interchain disulfides are conserved among these growth factors. As a result of alternative splicing, three PlGF RNAs encoding monomeric human PlGF-1, PlGF-2 and PlGF-3 isoform precursors containing 149, 179 and 219 amino acid residues, respectively, have been described. In normal mouse and rat tissues, only one PlGF mRNA encoding the equivalent of human PlGF-2 has been identified. Rat PlGF shares about 60% amino acid identity with human PlGF-2. The gene for PlGF has been mapped to rat chromosome 6. PlGF binds with high affinity to Flt1, but not to Flk1/KDR.

However, little information regarding the expression pattern and cellular localization of PlGF mRNA in rat placenta during pregnancy is known. RT-PCR analysis shows that the expression level of PlGF mRNA increased as gestation advanced. Using in situ hybridization histochemistry, positive cells of PlGF mRNA were detected in chorionic villi, in the trophoblast and stroma cells surrounding the blood vessels within chorionic villi on day 13 and 15. The expression pattern of PlGF mRNA in rat placenta during pregnancy demonstrates that PlGF plays a functional role for placental growth and fetal development during mid-late pregnancy.

### References

1. Osol G et al, Am J Physiol Heart Circ Physiol 294, 2008
2. Choi WS et al, J Vet Sci 6(3), 2005
3. Koh PO et al, J Vet Med Sci 69(9), 2007
4. Torry RJ et al, J Heart Lung Transplant 28(2), 2009
5. Sands M et al, Respir Res 12, 2011

### Database References Antigen

<b>Protein RefSeq:</b>	NP_446047.1
<b>Uniprot ID:</b>	Q63434
<b>mRNA RefSeq:</b>	NM_053595

### Product Specifications

<b>Species reactivity</b>	rat
<b>Clone/Ab feature</b>	rabbit IgG
<b>Cross reactivity</b>	ND
<b>Host</b>	rabbit
<b>Clonality</b>	polyclonal
<b>Purification</b>	Protein A purified
<b>Immunogen</b>	Recombinant rat PlGF (RT #R20-062)
<b>Formulation</b>	lyophilized
<b>Buffer</b>	5 mM PBS, pH 7.2

**Stability:** The lyophilized antibody is stable at room temperature for up to 1 month. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.

**Reconstitution:** Centrifuge vial prior to opening. Reconstitute in sterile water to a concentration of 0.1-1.0 mg/ml.



AVOID REPEATED FREEZE AND THAW CYCLES!

### Applications

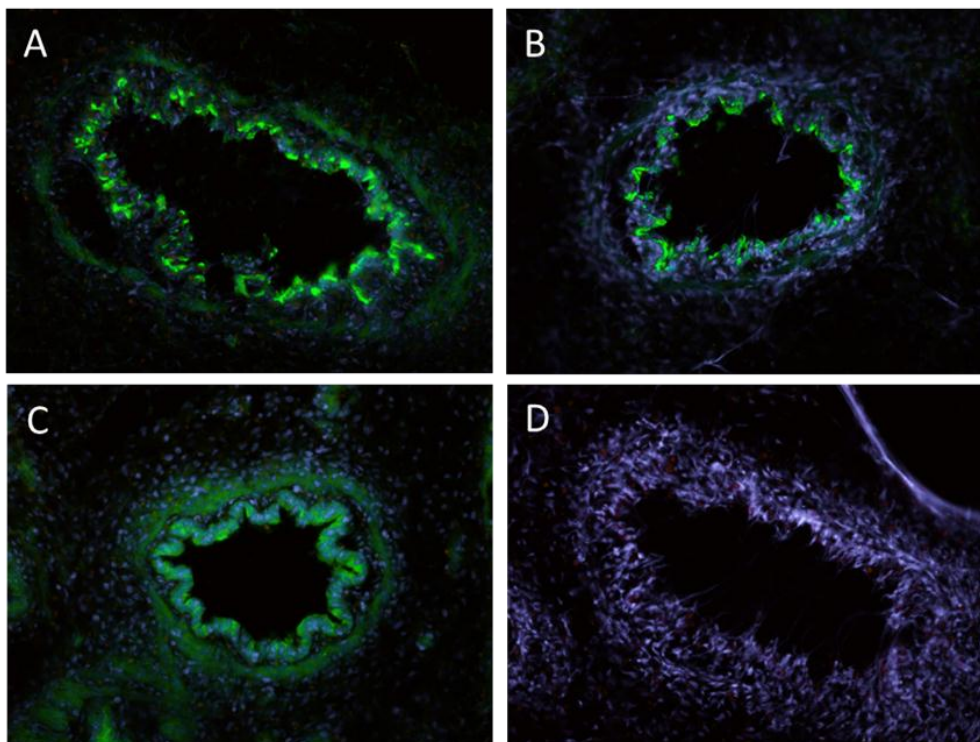
**IF/IHC:** Use 1:200

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

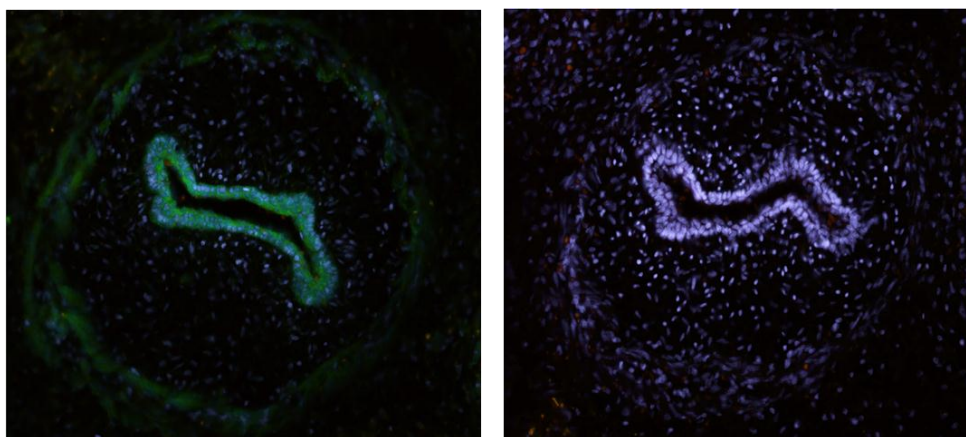


## Anti-rat PIGF

### Handling/Applications



**Figure 1.** Rat embryonic lung tissue labeled with polyclonal antibody against rat PIGF (green) [Cat# 104-PA04]: (A) and (B) unfixed; (C) after sectioning fixed with PFA; (D) unfixed negative control. Note the specific signal in bronchial epithelial cells. Nuclei are counterstained with Dapi (blue).



**Figure 2.** Rat embryonic intestinal tissue labeled with polyclonal antibody against rat PIGF (green) [Cat# 104-PA04]. The sections were fixed with 4% PFA. Staining with polyclonal anti-rat PIGF antibody in gut epithelial cells (left panel), and negative control (right panel).

The experiment was performed by the research group of Prof. Dr. J. Wilting and Dr. K. Buttler, University Medicine Göttingen, Germany.