Anti-rat PlGF

FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	**104-PA04**
Size:	200 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

Synonyms:	PlGF, Placenta Growth Factor

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

Protein RefSeq:	NP_446047.1
Uniprot ID:	Q63434
mRNA RefSeq:	NM_053595

Product Specifications

Species reactivity	rat
Clone/Ab feature	rabbit IgG
Cross reactivity	ND
Host	rabbit
Clonality	polyclonal
Purification	Protein A purified
Immunogen	Recombinant rat PlGF (RT #R20-062)
Formulation	lyophilized
Buffer	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 PlGF

Handling/Applications

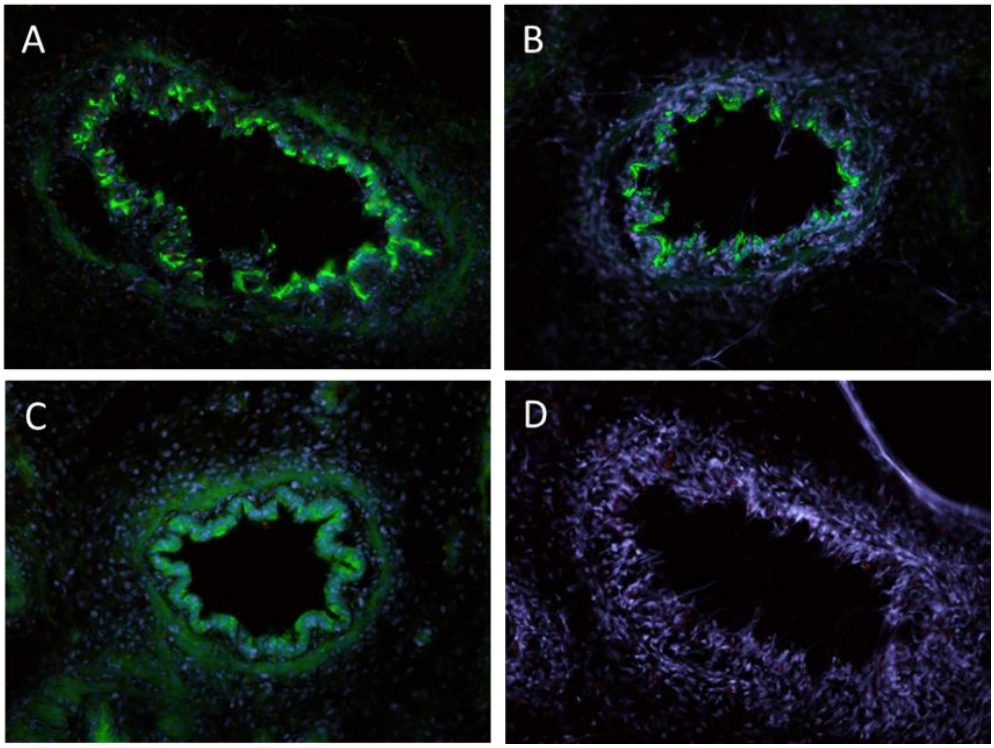

Figure 1. Rat embryonic lung tissue labeled with polyclonal antibody against rat PlGF (green) [Cat# 104-PA04]: (A) and (B) unfixed; (C) after sectioning fixed with PFA; (D) unfixed negative control. Note the specific signal in bronchial epithelial cells. Nuclei are counterstained with Dapi (blue).

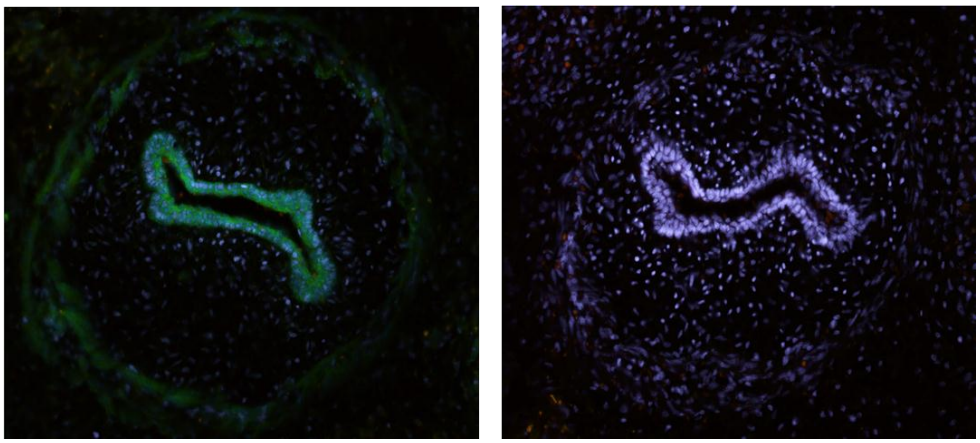

Figure 2. Rat embryonic intestinal tissue labeled with polyclonal antibody against rat PlGF (green) [Cat# 104-PA04]. The sections were fixed with 4% PFA. Staining with polyclonal anti-rat PlGF antibody in gut epithelial cells (left panel), and negative control (right panel).

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