



## Anti-human PIGF



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

<b>Cat.-no.:</b>	<b>102-PA01S</b>
Size:	100 µg
Lot. No.:	According to product label
Country of origin:	Germany

**Preparation:** Produced from sera of rabbits immunized with a highly pure N-terminal 20 amino acid peptide of native human PIGF [Leu19 – Val38] produced in insect cells.

### Target Background

<b>Synonyms:</b>	Placenta growth factor, PIGF
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PIGF is a polypeptide growth factor and a member of the platelet-derived growth factor family but more related to vascular endothelial growth factor (VEGF). PIGF acts only as a weak mitogen for those cell types possessing receptors for binding (e.g. vascular endothelial cells). At least one high-affinity receptor for PIGF (FLT-1 or VEGF-R1) has been demonstrated in different primary cell types (e.g. human umbilical vein endothelial cells and monocytes). In addition to its action as a weak mitogen it is also a chemoattractant for monocytes and endothelial cells. Two different proteins are generated by differential splicing of the human PIGF gene: PIGF-1 (131 aa native chain) and PIGF-2 (152 aa native chain). Both mitogens are secretable proteins, but PIGF-2 can bind to heparin with high affinity. PIGF is apparently a homodimer, but preparations of PIGF show some heterogeneity on SDS gels depending of the varying degrees of glycosylation. All dimeric forms possess similar biological activities. If PIGF is angiogenic in vivo is not clear. However, heterodimers between VEGF and PIGF are mitogenic for endothelial cells and have strong angiogenic activity in vivo (e.g. in the CAM assay or in the cornea pocket assay). Different cells and tissues (e.g. placenta) express PIGF-1 and PIGF-2 at different rates. A much related protein of PIGF is VEGF with about 53% homology and VEGF-B with similar biological activities.

### References

1. DiPalma, T. et al. (1996) Mamm. Genome 7:6.
2. Cao, Y. et al. (1997) Biochem. Biophys. Res. Commun. 235:493.
3. Ferrara, N. et al. (1997) Endocrin. Rev. 18:4
4. Kim KJ et al, Exp Mol Med 44:10-9, 2012
5. De Falco S, Exp Mol Med 44:1-9, 2012

### Database References Antigen

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

### Product Specifications

<b>Species reactivity</b>	human
<b>Clone/Ab feature</b>	Rabbit IgG
<b>Cross reactivity</b>	mouse
<b>Host</b>	rabbit
<b>Clonality</b>	polyclonal
<b>Purification</b>	Protein A purified
<b>Immunogen</b>	N-terminal peptide (20aa) of native human PIGF
<b>Formulation</b>	lyophilized
<b>Buffer</b>	PBS

**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

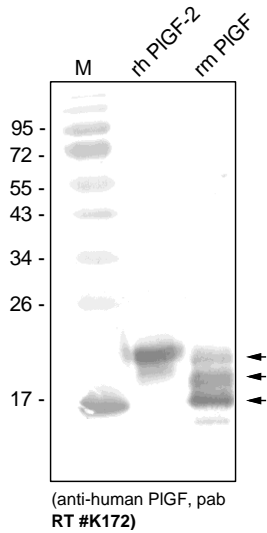
<b>Western Blot:</b>	Use 2-10 µg/ml
<b>ELISA:</b>	Use at 1-5 µg/ml
<b>IF/IHC</b>	Use at 5-25 µg/ml

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



## Anti-human PlGF

### Handling/Applications



**Figure 1:** 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.