



### Anti-human PlGF (#331/H12)

20140414BB



**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

<b>Cat.-no.:</b>	<b>101-M69</b>
Size:	100 µg
Lot. No.:	According to product label
Country of origin:	Germany

**Preparation:** Monoclonal antibodies were produced with the help of BALB/c mice using recombinant human PlGF-2 [Leu19 – Arg170] as the immunizing antigen.

### Target Background

<b>Synonyms:</b>	Placenta growth factor, PlGF
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Human Placenta Growth Factor-2 (PlGF-2), a 22 kDa protein consisting of 152 amino acid residues is produced as a homodimer. PlGF is a polypeptide growth factor and a member of the platelet-derived growth factor family but more related to vascular endothelial growth factor (VEGF). PlGF 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 PlGF (FLT-1 or VEGFR1) 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 PlGF gene: PlGF-1 (131 aa native chain) and PlGF-2 (152 aa native chain). Both mitogens are secretable proteins, but PlGF-2 can bind to heparin with high affinity. PlGF is apparently a homodimer, but preparations of PlGF show some heterogeneity on SDS gels depending of the varying degrees of glycosylation. All dimeric forms possess similar biological activities. If PlGF is angiogenic in vivo is not clear. However, heterodimers between VEGF and PlGF 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 PlGF-1 and PlGF-2 at different rates. A much related protein of PlGF 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>	IgG <sub>1</sub> ; #331/H12
<b>Cross reactivity</b>	Not mouse
<b>Host</b>	mouse
<b>Clonality</b>	monoclonal
<b>Purification</b>	Protein G purified
<b>Immunogen</b>	Recombinant human PlGF-2 (RT #300-019)
<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

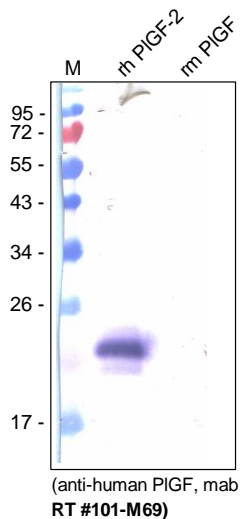
**Western Blot:** Use 2-5 µg/ml

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



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### Handling/Applications



**Figure 1:** Western analysis with human and mouse PlGF-2 derived from insect cells. The monoclonal antibody #331/H12 shows no cross reactivity with the mouse form.