# Anti-Mouse PlGF (#8F09)

20150218ML

FOR RESEARCH ONLY! NOT FOR HUMAN USE!

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| **Cat.-no.:** | **103-M03** |
| 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 rat) immunized with mouse PlGF recombinant protein. The IgG2 fraction of culture supernatant was purified by Protein G affinity chromatography.

## Target Background

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| **Synonyms (Target):** | Pgf;PlGF; Plgf; AI854365 |

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 (PlGF-1), 152 (PlGF-2), and 203 (PlGF-3) amino acids (aa) respectively. Only PlGF-2 contains a highly basic heparin-binding 21 aa insert at the C-terminus. In the mouse, only one P lGF that is the equivalent of human PlGF-2 has been identified. Mouse PlGF shares 60%, 92%, 62% and 59% aa identity with the appropriate isoform of human, 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 human 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/Flt-1, 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 human PlGF-1) and some forms of VEGF can form dimers that decrease the angiogenic effect of VEGF on VEGF R2. PlGF-2, like VEGF164/165, shows heparin-dependent binding of neuropilin (Npn)-1 and Npn-2 and can inhibit nerve growth cone collapse. PlGF induces monocyte activation, migration, and production of inflammatory cytokines and VEGF.

### Database References Target

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| **Protein RefSeq:** | NP_032853 |
| **Uniprot ID:** | P49764 |
| **mRNA RefSeq:** | NM_008827 |

## Product Specifications

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| **Host** | Rat |
| **Reactivity against** | Mouse |
| **Clonality** | Monoclonal Antibody |
| **Clone** | (#8F09) |
| **Isotype** | IgG2 |
| **Purification** | Protein G chromatography |
| **Antigen** | recombinant mouse PlGF |
| **Formulation** | lyophilized |
| **Reconstitution buffer** | PBS (sterile) |

**Reconstitution:** Reconstitute the antibody with 200 µl sterile PBS and the final concentration is 500 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:** This antibody recognizes mouse PlGF in Western blot No cross reactivity to other species have not been tested!

*AVOID REPEATED FREEZE AND THAW CYCLES!*

### Applications

The antibody can be used within the following applications:

WB, IHC

**Recommended usage:**

IHC (paraffine): 1:50 - 1:100

Western Blot: 1:500 - 1:1000

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

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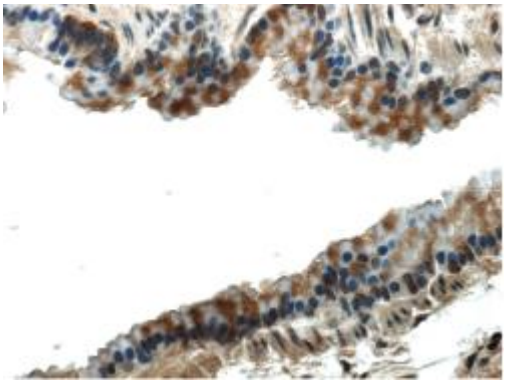
## Application/Handling



PLGF immunohistochemistry staining of paraffin sections of mouse lung tissue from LPS exposed animals.