PGF
Mouse Anti-Human PlGF Clone 178/G10 mAb

Catalog No.	CMP110	**Quantity:**	100 µg

Alternate Names: Placental growth factor, PlGF

Description: Monoclonals were produced with the help of BALB/c mice using Recombinant Human PlGF2 (produced in Insect cells) as the immunizing antigen. Mouse IgG1 antibody (Clone #178/G10) from hybridomas was purified from cell culture supernatant by Protein G Chromatography.
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 (PlGF1), 152 (PlGF2), and 203 (PlGF3) amino acids (aa) respectively. Only PlGF2 contains a highly basic heparinbinding 21 aa insert at the C-terminus. In the mouse, only one P lGF that is the equivalent of human PlGF2 has been identified. Human PlGF1 shares 56%, 55%, 74% and 95% aa identity with the appropriate isoform of mouse, 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 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/Flt1, 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 R2mediated angiogenesis. However, PlGF (especially PlGF1) and some forms of VEGF can form dimers that decrease the angiogenic effect of VEGF on VEGF R2. PlGF2, but not PLGF-1, shows heparindependent binding of neuropilin (Npn)-1 and Npn2. PlGF induces monocyte activation, migration, and production of inflammatory cytokines and VEGF. These activities facilitate wound and bone fracture healing, but also contribute to inflammation in active sickle cell disease and atherosclerosis.

Gene ID: 5281

Specificity: Recognizes Recombinant Human PlGF and PlGF-2

Host: Mouse

Immunogen: Recombinant Human PlGF-2

Isotype: IgG1

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Formulation:	Lyophilized from PBS, pH 7.4. No preservatives and carrier-free.
Purification:	Protein G chromatography
Reconstitution:	**Centrifuge vial prior to opening**. Add sterile distilled water to the vial to fully solubilize the antibody to a concentration of 1.0 mg/ml.
Applications:	ELISA: Use at 1-2 µg/ml Western Blot: Use at 1-2 µg/ml (reducing and non-reducing) IP: Use at 1-2 µg/ml
Application Notes:	The optimal concentration should be determined by the user for each specific application.
Storage & Stability:	Lyophilized product is stable at room temperature, but best stored desiccated below 0°C. Reconstituted antibody is stable at 2-4°C for >6 months or in working aliquots at -20°C for 1 year. **Avoid repeated freeze-thaw cycles**.

NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

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