

## Product Information

### Monoclonal Anti-Placenta Growth Factor-2 clone 62526

produced in rat, purified immunoglobulin

Catalog Number **P3493**

#### Product Description

Monoclonal Anti-Placenta Growth Factor-2 (P/IGF-2) (rat IgG2A isotype) is produced from a mouse hybridoma elicited from a rat immunized with purified recombinant mouse placenta growth factor 2 expressed in Sf 21 cells. The antibody is purified from the IgG fraction of ascities fluid using protein G.

Monoclonal Anti-Placenta Growth Factor-2 recognizes recombinant P/IGF-2 by immunoblotting, and neutralization of receptor-ligand interaction. This antibody shows no cross-reactivity with recombinant human PlGF and recombinant human VEGF. Secreted dimeric glycosylated mouse P/IGF-2 migrates in SDS-PAGE as an ~38 kDa protein.

Placenta growth factor (P/IGF) is a member of the vascular endothelial growth factor (VEGF) family of growth factors. P/IGF, isolated from a human placental cDNA library, has 53% amino acid sequence homology in the PDGF-region of VEGF.<sup>1</sup> As a result of alternative splicing, three human isoform precursors (P/IGF-1, P/IGF-2, and P/IGF-3) have been described.<sup>2</sup> In mouse tissues, there is only one mRNA encoding the equivalent of human P/IGF-2.<sup>3</sup> Mouse P/IGF-2 encodes a 158 amino acid precursor protein that shares a 65% homology with human P/IGF-2.<sup>3</sup> The gene for P/IGF is organized into seven exons and is mapped to chromosome 14.<sup>3,4</sup> Placenta growth factor will potentiate VEGF that is present at low concentrations *in vitro* and *in vivo*.<sup>5</sup> P/IGF binds with high affinity to Flt-1, but not to Flk-1/KDR.<sup>5</sup>

#### Reagent

Supplied as 500 µg of antiserum lyophilized from a 0.2 µm filtered solution of phosphate buffered saline with 5% trehalose.

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Preparation Instructions

To one vial of lyophilized powder, add 1 mL of sterile phosphate buffered saline to produce a 0.5 mg/mL stock solution of antibody.

#### Storage/Stability

Prior to reconstitution, store at -20 °C. Reconstituted product may be stored at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots. Avoid repeated freezing and thawing. Do not store in frost-free freezer.

#### Product Profile

Monoclonal Anti-Placenta Growth Factor-2 has the ability to neutralize receptor-ligand interaction. In a functional ELISA, 0.015-0.06 µg/mL of this antibody will block 50% of the binding of 4 ng/mL of recombinant mouse P/IGF-2 to immobilized recombinant human Flt-1/Fc Chimera coated at 1 µg/mL (100 µL/well). At 1 µg/mL, this antibody will block > 90% of the binding.

**Immunoblotting:** a working antibody concentration of 1 µg/mL is recommended. Using a colorimetric detection system, the detection limit for recombinant mouse placental growth factor 2 is ~25 ng/lane. Use of this antibody under reducing conditions is not recommended.

**Note:** In order to obtain the best results in various techniques and preparations we recommend determining the optimal working dilutions by titration.

Endotoxin level is < 0.1 EU per 1 µg of the antibody as determined by the LAL (Limulus ameocyte lysate) method.

#### References

1. Maglione, D., et al., *Proc. Natl. Acad. Sci. USA*, **88**, 9267 (1991).
2. Cao, Y., et al., *Biochem. Biophys. Res. Commun.*, **235**, 493-498 (1997).
3. DiPalma, T., et al., *Mamm. Genome*, **7**, 6 (1996).

4. Maglione, D., et al., *Oncogene*, **8**, 925 (1993).

5. Park, J., et al., *J. Biol. Chem.*, **269**, 25646 (1994).

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