Human PDGF Rα Antibody
Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF-307-NA

**DESCRIPTION**

**Species Reactivity** Human

**Specificity** Detects human PDGF Rα in direct ELISAs and Western blots. In direct ELISAs, less than 2% cross-reactivity with recombinant mouse PDGF Rα, recombinant human (rh) PDGF Rβ, rhFGF R2, and rhFGF R3 is observed.

**Source** Polyclonal Goat IgG

**Purification** Antigen Affinity-purified

**Immunogen** *S. frugiperda* insect ovarian cell line Sf 21-derived recombinant human PDGF Rα Gin24-Glu524 Accession #: P16234

**Endotoxin Level** <0.10 EU per µg of the antibody by the LAL method.

**Formulation** Lyophilized from a 0.2 µg/mL filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

**Recommended Concentration**
- Neutralization: 0.1 µg/mL
- Immunohistochemistry: 5-15 µg/mL

**Recommended Sample**
- Neutralization: Recombinant Human PDGF Rα (Catalog # 322-PR)
- Immunohistochemistry: See Below

**Neutralization** Measured by its ability to neutralize PDGF-αA-induced proliferation in the WS-1 human fetal skin fibroblast cell line. The Neutralization Dose (ND₅₀) is typically 1-6 µg/mL in the presence of 10 ng/mL Recombinant Human PDGF-αA.

**APPLICATIONS**

Please Note: Optimal dilutions should be determined by each laboratory for each application. **General Protocols** are available in the Technical Information section on our website.

<table>
<thead>
<tr>
<th>Neutralization</th>
<th>Sample</th>
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<tbody>
<tr>
<td>Recombinant Human PDGF Rα (Catalog # 322-PR)</td>
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**Immunohistochemistry**

PDGF Rα in Human Breast Cancer Tissue. PDGF Rα was detected in immunohistochemistry of human breast cancer tissue using Goat Anti-Human PDGF Rα Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-307-NA) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is counterstained with hematoxylin (blue).

PDGF Rα in Human Ovary. PDGF Rα was detected in immunohistochemistry of human ovary using Goat Anti-Human PDGF Rα Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-307-NA) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PDGF Rα in Human Osteosarcoma. PDGF Rα was detected in immunohistochemistry of human osteosarcoma using Goat Anti-Human PDGF Rα Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-307-NA) at 3 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to plasma membranes. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.
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PREPARATION AND STORAGE

Reconstitution
Reconstitute at 0.2 mg/mL in sterile PBS.

Shipping
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C

Stability & Storage
Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

PDGF is a major serum mitogen that can exist as a homo- or heterodimeric protein consisting of disulfide-linked PDGF-A and PDGF-B chains. The PDGF-AA, PDGF-BB, and PDGF-AB isoforms have been shown to bind to two distinct cell surface PDGF receptors with different affinities. Whereas PDGF Rα binds all three PDGF isoforms with high affinity, PDGF Rβ binds PDGF-BB and -AB, but not PDGF-AA. Both PDGF Rα and PDGF Rβ are members of the class III subfamily of receptor tyrosine kinases (RTK) that also includes the receptors for M-CSF, SCF, and Flt-3 ligand. All class III RTKs are characterized by the presence of five immunoglobulin-like domains in their extracellular region and a split kinase domain in their intracellular region. PDGF binding induces receptor homo- and heterodimerization and signal transduction. The expression of the α and β receptors is independently regulated in various cell types. Only PDGF Rα is expressed in oligodendrocyte progenitor cells, mesothelial cell, and liver endothelial cells. Soluble PDGF Rα has been detected in cell conditioned medium and human plasma. Recombinant soluble PDGF Rα binds PDGF with high affinity and is a potent PDGF antagonist (1).

References: