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# Mouse Pdgfra Antibody (Center) Blocking Peptide

**Synthetic peptide**
**Catalog # BP14254c**

## Specification

### Mouse Pdgfra Antibody (Center) Blocking Peptide - Product Information

Primary Accession P26618

### Mouse Pdgfra Antibody (Center) Blocking Peptide - Additional Information

**Gene ID** 18595

**Other Names**
Platelet-derived growth factor receptor alpha, PDGF-R-alpha, PDGFR-alpha, Alpha platelet-derived growth factor receptor, Alpha-type platelet-derived growth factor receptor, CD140 antigen-like family member A, Platelet-derived growth factor alpha receptor, CD140a, Pdgfra

**Format**
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

### Mouse Pdgfra Antibody (Center) Blocking Peptide - Protein Information

**Name** Pdgfra

**Function**
Tyrosine-protein kinase that acts as a cell-surface receptor for PDGFA, PDGFB and PDGFC and plays an essential role in the regulation of embryonic development, cell proliferation, survival and chemotaxis. Depending on the context, promotes or inhibits cell proliferation and cell migration. Plays an important role in the differentiation of bone marrow-derived mesenchymal stem cells. Required for normal skeleton development and cephalic closure during embryonic development. Required for normal development of the mucosa lining the gastrointestinal tract, and for recruitment of mesenchymal cells and normal development of intestinal villi. Plays a role in cell migration and chemotaxis in wound healing. Plays a role in platelet activation, secretion of agonists from platelet granules, and in thrombin-induced platelet aggregation. Binding of its cognate ligands - homodimeric PDGFA, homodimeric PDGFB, heterodimers formed by PDGFA and PDGFB or homodimeric PDGFC -leads to the activation of several signaling cascades; the response depends on the nature of the bound ligand and is modulated by the formation of heterodimers between PDGFRA and PDGFRB. Phosphorylates PIK3R1, PLCG1, and PTPN11. Activation of PLCG1 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate, mobilization of cytosolic Ca(2+) and the activation of protein kinase C. Phosphorylates PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, and thereby

mediates activation of the AKT1 signaling pathway. Mediates activation of HRAS and of the MAP kinases MAPK1/ERK2 and/or MAPK3/ERK1. Promotes activation of STAT family members STAT1, STAT3 and STAT5A and/or STAT5B. Receptor signaling is down-regulated by protein phosphatases that dephosphorylate the receptor and its down-stream effectors, and by rapid internalization of the activated receptor.

**Cellular Location**
Cell membrane {ECO:0000250|UniProtKB:P16234}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P16234} Cell projection, cilium. Golgi apparatus

**Tissue Location**
Focally expressed in cortical interstitial cells and highly expressed in the interstitium of the papillary region. Also expressed by adventitial cells in arterial vessels. Up-regulated in areas of renal fibrosis. In mice with unilateral ureteral obstruction, expression in cortical interstitial cells becomes prominent at day 4 which increases progressively until day 14

## Mouse Pdgfra Antibody (Center) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

## Mouse Pdgfra Antibody (Center) Blocking Peptide - Images

## Mouse Pdgfra Antibody (Center) Blocking Peptide - Background

Receptor that binds both PDGFA and PDGFB and has a tyrosine-protein kinase activity.

## Mouse Pdgfra Antibody (Center) Blocking Peptide - References

Artus, J., et al. Development 137(20):3361-3372(2010)Bardsley, M.R., et al. Gastroenterology 139(3):942-952(2010)Bax, N.A., et al. Dev. Dyn. 239(8):2307-2317(2010)Lei, H., et al. Am. J. Pathol. 177(1):132-140(2010)Zheng, K., et al. J. Neurosci. 30(24):8245-8250(2010)