

## PDGFR- $\alpha$ (7A3) Mouse mAb

CatalogNo: YM3687

Orthogonal Validated 

### Key Features

#### Host Species

- Mouse

#### Reactivity

- Human, Mouse, Rat

#### Applications

- IF, IHC

#### MW

- 180kD (Observed)

### Storage

**Storage\*** -15°C to -25°C/1 year (Do not lower than -25°C)

**Formulation** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

### Recommended Dilution Ratios

IF 1:50-200

IHC 1:100-200

### Basic Information

**Clonality** Monoclonal

**Clone Number** 7A3

### Immunogen Information

**Immunogen** Synthetic Peptide of PDGFR $\alpha$  at AA range of 1010-1090

**Specificity** PDGFR $\alpha$  protein detects endogenous levels of PDGFRA

### Target Information

**Gene name** PDGFRA PDGFR2 RHEPDGFRA

**Protein Name** 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) (CD140a antigen) (Platelet-derived growth factor alpha receptor) (Platelet-derived growth factor receptor 2) (PDGFR-2) (CD antigen CD140a)

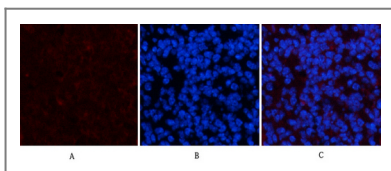
| Organism | Gene ID                 | UniProt ID               |
|----------|-------------------------|--------------------------|
| Human    | <a href="#">5156</a> ;  | <a href="#">P16234</a> ; |
| Mouse    | <a href="#">18595</a> ; | <a href="#">P26618</a> ; |
| Rat      | <a href="#">25267</a> ; | <a href="#">P20786</a> ; |

**Cellular Localization** Cell membrane ; Single-pass type I membrane protein . Cell projection, cilium . Golgi apparatus .

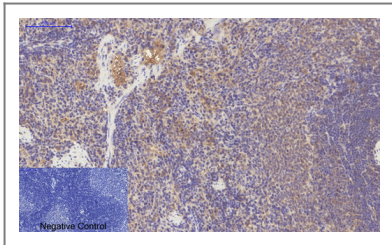
**Tissue specificity** Detected in platelets (at protein level). Widely expressed. Detected in brain, fibroblasts, smooth muscle, heart, and embryo. Expressed in primary and metastatic colon tumors and in normal colon tissue.

**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.

## Validation Data



Immunofluorescence analysis of mouse-spleen tissue. 1, PDGFR $\alpha$  Mouse Monoclonal Antibody(7A3)(red) was diluted at 1:200(4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300(room temperature, 50min). 3, Picture B: DAPI(blue) 10min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B



Immunohistochemical analysis of paraffin-embedded Rat-spleen tissue. 1,PDGFR $\alpha$  Mouse Monoclonal Antibody(7A3) was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

## | Contact information

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Please scan the QR code to access additional product information:  
**PDGFR- $\alpha$  (7A3)**  
**Mouse mAb**

For Research Use Only. Not for Use in Diagnostic Procedures.

[Antibody](#) | [ELISA Kits](#) | [Protein](#) | [Reagents](#)