ARG57676
anti-CD140b / PDGFRB antibody [RM303]

Package: 50 µl
Store at: -20°C

Summary

Product Description	Rabbit Monoclonal antibody [RM303] recognizes CD140b / PDGFRB
Tested Reactivity	Hu
Tested Application	IHC-P, WB
Host	Rabbit
Clonality	Monoclonal
Clone	RM303
Isotype	IgG
Target Name	CD140b / PDGFRB
Antigen Species	Human
Immunogen	Synthetic peptide around the C-terminus of Human CD140b.
Conjugation	Un-conjugated
Alternate Names	PDGF-R-beta; IBGC4; CD antigen CD140b; Platelet-derived growth factor receptor beta; CD140B; PDGFR; PDGFR-1; Beta platelet-derived growth factor receptor; PDGFR1; Platelet-derived growth factor receptor 1; PDGFR-beta; CD140 antigen-like family member B; IMF1; EC 2.7.10.1; JTK12; Beta-type platelet-derived growth factor receptor

Application Instructions

Application table

Application	Dilution
IHC-P	1:500 - 1:1000
WB	1:250 - 1:500

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Calculated Mw: 124 kDa

Properties

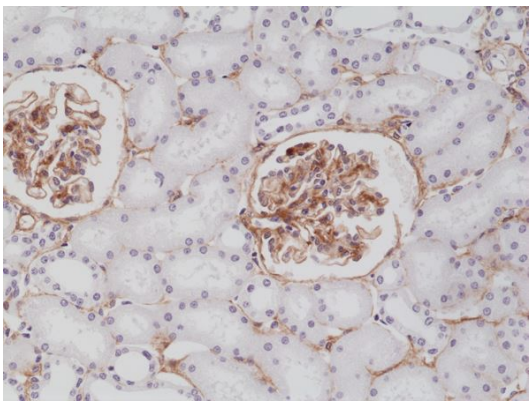
Form	Liquid
Purification	Purification with Protein A.
Buffer	PBS, 0.09% Sodium azide, 50% Glycerol and 1% BSA.
Preservative	0.09% Sodium azide
Stabilizer	50% Glycerol and 1% BSA
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

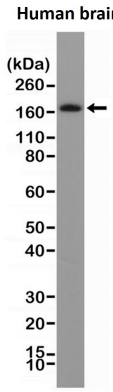
Gene Symbol	PDGFRB
Gene Full Name	platelet-derived growth factor receptor, beta polypeptide
Background	This gene encodes a cell surface tyrosine kinase receptor for members of the platelet-derived growth factor family. These growth factors are mitogens for cells of mesenchymal origin. The identity of the growth factor bound to a receptor monomer determines whether the functional receptor is a homodimer or a heterodimer, composed of both platelet-derived growth factor receptor alpha and beta polypeptides. This gene is flanked on chromosome 5 by the genes for granulocyte-macrophage colony-stimulating factor and macrophage-colony stimulating factor receptor; all three genes may be implicated in the 5-q syndrome. A translocation between chromosomes 5 and 12, that fuses this gene to that of the translocation, ETV6, leukemia gene, results in chronic myeloproliferative disorder with eosinophilia. [provided by RefSeq, Jul 2008]
Function	Tyrosine-protein kinase that acts as cell-surface receptor for homodimeric PDGFB and PDGFD and for heterodimers formed by PDGFA and PDGFB, and plays an essential role in the regulation of embryonic development, cell proliferation, survival, differentiation, chemotaxis and migration. Plays an essential role in blood vessel development by promoting proliferation, migration and recruitment of pericytes and smooth muscle cells to endothelial cells. Plays a role in the migration of vascular smooth muscle cells and the formation of neointima at vascular injury sites. Required for normal development of the cardiovascular system. Required for normal recruitment of pericytes (mesangial cells) in the kidney glomerulus, and for normal formation of a branched network of capillaries in kidney glomeruli. Promotes rearrangement of the actin cytoskeleton and the formation of membrane ruffles. Binding of its cognate ligands - homodimeric PDGFB, heterodimers formed by PDGFA and PDGFB or homodimeric PDGFD -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 PLCG1, PIK3R1, PTPN11, RASA1/GAP, CBL, SHC1 and NCK1. 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. Phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, leads to the activation of the AKT1 signaling pathway. Phosphorylation of SHC1, or of the C-terminus of PTPN11, creates a binding site for GRB2, resulting in the activation of HRAS, RAF1 and down-stream MAP kinases, including MAPK1/ERK2 and/or MAPK3/ERK1. Promotes phosphorylation and activation of SRC family kinases. Promotes phosphorylation of PDCD6IP/ALIX and STAM. 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. [UniProt]
Highlight	Related products: CD140b antibodies; Anti-Rabbit IgG secondary antibodies; Related news: Pericytes, new therapeutic target for Alzheimer's disease?
Cellular Localization	Cell membrane; Single-pass type I membrane protein. Cytoplasmic vesicle. Lysosome lumen. Note=After ligand binding, the autophosphorylated receptor is ubiquitinated and internalized, leading to its degradation. [UniProt]

Images



ARG57676 anti-CD140b / PDGFRB antibody [RM303] IHC-P image

Immunohistochemistry: Formalin-fixed and paraffin-embedded Human kidney tissue section stained with ARG57676 anti-CD140b / PDGFRB antibody [RM303] at 1:200 dilution.



ARG57676 anti-CD140b / PDGFRB antibody [RM303] WB image

Western blot: Human brain tissue lysate stained with ARG57676 anti-CD140b / PDGFRB antibody [RM303] at 1:100 dilution.