

Recombinant human PDGF-receptor β ECD

Catalog P002

Lot 536

product specification sheet: PS-P002

U-Protein
Express BV

Life Sciences Incubator
Yalelaan 62
3584 CM Utrecht
The Netherlands

Product description

Platelet derived growth factor Receptor (PDGF-R) is a tyrosine-protein kinase that acts as cell-surface receptor for homodimeric PDGF β and PDGF δ and for heterodimers formed by PDGF α and PDGF β , 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 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 PDGF β , heterodimers formed by PDGF α and PDGF β or homodimeric PDGF δ - 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 PDGF-R α and PDGF-R β . 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

Reference sequences:

NM_002609

NP_002600

Swiss-prot P09619

Alternative names:

PDGF-R-beta

CD140 antigen-like family member B

beta-type platelet-derived growth factor receptor

platelet-derived growth factor receptor 1

Gene ID:

5159

Residues 33-531 of human PDGF-R β containing the extra cellular domain were cloned, the protein was over-expressed in HEK293EBNA1 cells and was purified to homogeneity (figure 1). The calculated molecular weight of monomeric recombinant human PDGF-R β is 56 kDa. Since the protein contains 11 N-linked glycans the protein migrates at an apparent molecular weight of about 90 kDa. The protein contains a C-terminal hexahistidine tag. Each vial contains 100 μ g PDGF-R β -ECD at a concentration of 0.62 mg/ml.

Storage and stability

PDGF-R β -ECD should be stored at - 80 $^{\circ}$ C (stable for at least 1 year). The buffer contains PBS without preservative. After thawing it should be stored in appropriate small aliquots at - 20 $^{\circ}$ C or - 80 $^{\circ}$ C (stable for at least 2 months).

Sequence

GSLVVTTPPGPELVNLVSTFVLTCSGSAPVWVERMSQEPPQEMAKAQDGTFFSVLTLTNLTLGLDTGEYFCTHNSRGLTDERK
RLYIFVDPPTVGLPNDAAELFIFLITEITIPICRVTDLPQLVVTLEHKKGDVALPVPYDHQRFSGIFEDRSYICKTTIGDREVDSDA
YYVYRLQVSSINVSNAVQTIVRQGENITLMCIVIGNEVNFWEVTPRKESGRLVEPVTDFLLDMPYHIRSILHIPSALAEEDSGTY
TCNVTESVNDHQDEKAINITVVEGYSYVRLLEGEVTLQFAELHRSRTLQVVFAYPPPTVLWFKDNRTLGDSSAGEIALSTRNVSE
TRYVSELTLLVRVKVAEAGHYTMRAFHEDAELVQLSFQLQINVPVRVLELSHPSDGEQTVRCRGRGMPQPNIIWSACRDLKRCR
RELPTLLGNSSEEEESQLETNVTYWEEEQEFVSVTLRLQHVDRPLSVRCTLNNAVGDQDQEVIVVPHSLPFKAAAHHHHHH

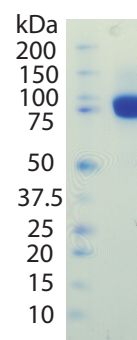


Figure 1. NuPage analysis of purified PDGF-R β -ECD

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