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Datasheet for ABIN3094529  
**PDGFRA Protein (AA 24-528) (His tag)**

Overview

Quantity:	1 mg
Target:	PDGFRA
Protein Characteristics:	AA 24-528
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PDGFRA protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)

Product Details

Sequence: QLSLPSILPN ENKVVQLNS SFSLRCFGES EVSWQYPMSE EESSDVEIRN EENNSGLFVT  
VLEVSSASAA HTGLYTCYYN HTQTEENELE GRHIYIYVPD PDVAFVPLGM TDYLVIVEDD  
DSAIIPCR TT DPETPVT LHN SEGVPASYD SRQGFNGTFT VGPYICEATV KGKFKQTIPF  
NVYALKATSE LDLEMEALKT VYKSGETIVV TCAVFNNEVV DLQWTYPGEV KGKGITMLEE  
IKVPSIKLVY TLTVPEATVK DSGDYECAAR QATREVKEMK KVTISVHEKG FIEIKPTFSQ  
LEAVNLHEVK HFVVEVRAYP PPRISWLKNN LTLIENLTEI TTDVEKIQEI RYRSKLLKLR  
AKEEDSGHYT IVAQNEDAVK SYTFELLTQV PSSILDLVDD HHGSTGGQTV RCTAEGTPLP  
DIEWMICKDI KKCNNETSWT ILANNVSNII TEIHSRDRST VEGRVTFKAV EETIAVRCLA  
KNLLGAENRE LKLVAPTLRS ELTVA

**Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

## Product Details

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### Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Human PDGFRA Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made to order protein and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

The concentration of our recombinant proteins is measured using the absorbance at 280nm. The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.

The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

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### Purification:

Two step purification of proteins expressed in baculovirus infected SF9 insect cells:

1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate fractions are analyzed by SDS-PAGE.
2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

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### Purity:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

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### Sterility:

0.22 µm filtered

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### Endotoxin Level:

Protein is endotoxin free.

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### Grade:

Crystallography grade

## Target Details

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Target: PDGFRA

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Alternative Name: PDGFRA ([PDGFRA Products](#))

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Background: 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. {ECO:0000269|PubMed:10734113, ECO:0000269|PubMed:10947961, ECO:0000269|PubMed:11297552, ECO:0000269|PubMed:12522257, ECO:0000269|PubMed:1646396, ECO:0000269|PubMed:1709159, ECO:0000269|PubMed:17141222, ECO:0000269|PubMed:20972453, ECO:0000269|PubMed:21224473, ECO:0000269|PubMed:21596750, ECO:0000269|PubMed:2554309, ECO:0000269|PubMed:8188664, ECO:0000269|PubMed:8760137, ECO:0000269|PubMed:8943348}.

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Molecular Weight: 57.5 kDa Including tag.

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UniProt: [P16234](#)

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Pathways: [RTK Signaling](#), [Fc-epsilon Receptor Signaling Pathway](#), [EGFR Signaling Pathway](#), [Neurotrophin Signaling Pathway](#), [Platelet-derived growth Factor Receptor Signaling](#)

## Application Details

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**Application Notes:** In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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**Comment:** In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.

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**Restrictions:** For Research Use only

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## Handling

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**Format:** Liquid

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**Buffer:** 100 mM NaCl, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.

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**Handling Advice:** Avoid repeated freeze-thaw cycles.

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**Storage:** -80 °C

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**Storage Comment:** Store at -80°C.

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**Expiry Date:** Unlimited (if stored properly)

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