

Datasheet for ABIN3094839

PTPN2 Protein (AA 1-415) (His tag)



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1 Image

Overview

Quantity:	1 mg
Target:	PTPN2
Protein Characteristics:	AA 1-415
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PTPN2 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence: MPTTIEREFE ELDTQRRWQP LYLEIRNESH DYPHRVAKFP ENRNRNRYRD VSPYDHSRVK
 LQNAENDYIN ASLVDIEEAQ RSYILTQGGL PNTCCHFWM VWQKTKAVV MLNRIVEKES
 VKCAQYWPTD DQEMLFKETG FSVKLLSEDV KSYTTHLLQ LENINSGETR TISHFHYTTW
 PDFGVPESPA SFLNLFKVR ESGSLNPDHG PAVIHCSAGI GRSGTFLVD TCLVLMKGD
 DINIKVLLN MRKYRMGLIQ TPDQLRFSYM AIEGAKCIK GDSSIQRWK ELSKEDLSPA
 FDHSPNKIMT EKYNGNRIGL EEEKLTGDRG TGLSSKMQDT MEENSESALR KRIREDRKAT
 TAQKVQMKQ RLNENERKRK RWLYWQPILT KMGFMSVILV GAFVGWTLFF QQNAL

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

- Characteristics:
- Made in Germany - from design to production - by highly experienced protein experts.
 - Human PTPN2 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.

Product Details

- 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.

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.
Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin free.
Grade:	Crystallography grade

Target Details

Target:	PTPN2
Alternative Name:	PTPN2 (PTPN2 Products)

Target Details

Background:	<p>Non-receptor type tyrosine-specific phosphatase that dephosphorylates receptor protein tyrosine kinases including INSR, EGFR, CSF1R, PDGFR. Also dephosphorylates non-receptor protein tyrosine kinases like JAK1, JAK2, JAK3, Src family kinases, STAT1, STAT3, STAT5A, STAT5B and STAT6 either in the nucleus or the cytoplasm. Negatively regulates numerous signaling pathways and biological processes like hematopoiesis, inflammatory response, cell proliferation and differentiation, and glucose homeostasis. Plays a multifaceted and important role in the development of the immune system. Functions in T-cell receptor signaling through dephosphorylation of FYN and LCK to control T-cells differentiation and activation.</p> <p>Dephosphorylates CSF1R, negatively regulating its downstream signaling and macrophage differentiation. Negatively regulates cytokine (IL2/interleukin-2 and interferon)-mediated signaling through dephosphorylation of the cytoplasmic kinases JAK1, JAK3 and their substrate STAT1, that propagate signaling downstream of the cytokine receptors. Also regulates the IL6/interleukin-6 and IL4/interleukin-4 cytokine signaling through dephosphorylation of STAT3 and STAT6 respectively. In addition to the immune system, it is involved in anchorage-dependent, negative regulation of EGF-stimulated cell growth. Activated by the integrin ITGA1/ITGB1, it dephosphorylates EGFR and negatively regulates EGF signaling. Dephosphorylates PDGFRB and negatively regulates platelet-derived growth factor receptor-beta signaling pathway and therefore cell proliferation. Negatively regulates tumor necrosis factor-mediated signaling downstream via MAPK through SRC dephosphorylation. May also regulate the hepatocyte growth factor receptor signaling pathway through dephosphorylation of the hepatocyte growth factor receptor MET. Plays also an important role in glucose homeostasis. For instance, negatively regulates the insulin receptor signaling pathway through the dephosphorylation of INSR and control gluconeogenesis and liver glucose production through negative regulation of the IL6 signaling pathways. Finally, it negatively regulates prolactin-mediated signaling pathway through dephosphorylation of STAT5A and STAT5B. May also bind DNA. {ECO:0000269 PubMed:10734133, ECO:0000269 PubMed:11909529, ECO:0000269 PubMed:12138178, ECO:0000269 PubMed:12612081, ECO:0000269 PubMed:14966296, ECO:0000269 PubMed:15592458, ECO:0000269 PubMed:18819921, ECO:0000269 PubMed:22080863, ECO:0000269 PubMed:9488479}.</p>
Molecular Weight:	49.4 kDa Including tag.
UniProt:	P17706
Pathways:	EGFR Signaling Pathway , Carbohydrate Homeostasis , Regulation of Carbohydrate Metabolic Process , Platelet-derived growth Factor Receptor Signaling

Application Details

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.
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.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images



Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process