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## IL22 Receptor alpha 1 Protein (AA 16-574) (rho-1D4 tag)





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#### Overview

Quantity:	1 mg
Target:	IL22 Receptor alpha 1 (IL22RA1)
Protein Characteristics:	AA 16-574
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This IL22 Receptor alpha 1 protein is labelled with rho-1D4 tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS), Crystallization (Crys)

#### **Product Details**

Sequence:

HAPEDPSDLL QHVKFQSSNF ENILTWDSGP EGTPDTVYSI EYKTYGERDW VAKKGCQRIT RKSCNLTVET GNLTELYYAR VTAVSAGGRS ATKMTDRFSS LQHTTLKPPD VTCISKVRSI QMIVHPTPTP IRAGDGHRLT LEDIFHDLFY HLELQVNRTY QMHLGGKQRE YEFFGLTPDT EFLGTIMICV PTWAKESAPY MCRVKTLPDR TWTYSFSGAF LFSMGFLVAV LCYLSYRYVT KPPAPPNSLN VQRVLTFQPL RFIQEHVLIP VFDLSGPSSL AQPVQYSQIR VSGPREPAGA PQRHSLSEIT YLGQPDISIL QPSNVPPPQI LSPLSYAPNA APEVGPPSYA PQVTPEAQFP FYAPQAISKV QPSSYAPQAT PDSWPPSYGV CMEGSGKDSP TGTLSSPKHL RPKGQLQKEP PAGSCMLGGL SLQEVTSLAM EESQEAKSLH QPLGICTDRT SDPNVLHSGE EGTPQYLKGQ LPLLSSVQIE GHPMSLPLQP PSRPCSPSDQ GPSPWGLLES LVCPKDEAKS PAPETSDLEQ PTELDSLFRG LALTVQWES

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 IL22RA1 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 receival 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 protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.

The concentration of our recombinant proteins is measured using the absorbance at 280nm.

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:

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

- 1. Membrane proteins are fractioned by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot.
- 2. The best performing detergent is used for solubilization and the proteins are purified via their rho1D4 tag via two rho1D4 antibody columns: one DTT resistant, the other one not. Eluate fractions are analyzed by Western blot.
- 3. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatograph. 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:	IL22 Receptor alpha 1 (IL22RA1)
Alternative Name:	IL22RA1 (IL22RA1 Products)
Background:	Component of the receptor for IL20, IL22 and IL24. Component of IL22 receptor formed by
	IL22RA1 and IL10RB enabling IL22 signaling via JAK/STAT pathways. IL22 also induces
	activation of MAPK1/MAPK3 and Akt kinases pathways. Component of one of the receptor for
	IL20 and IL24 formed by IL22RA1 and IL20RB also signaling through STATs activation.
	Mediates IL24 antiangiogenic activity as well as IL24 inhibitory effect on endothelial cell tube
	formation and differentiation. {ECO:0000269 PubMed:11035029,
	ECO:0000269 PubMed:11564763, ECO:0000269 PubMed:11706020,
	ECO:0000269 PubMed:12351624, ECO:0000269 PubMed:12941841,
	ECO:0000269 PubMed:17204547}.
Molecular Weight:	62.7 kDa Including tag.
UniProt:	Q8N6P7
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 gurantee
	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)



**Image 1.** "Crystallography Grade" protein due to multi-step, protein-specific purification process