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CXCL12 Protein (AA 24-88) (His tag)





Overview

Overview	
Quantity:	1 mg
Target:	CXCL12
Protein Characteristics:	AA 24-88
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Purification tag / Conjugate:	This CXCL12 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)
Product Details	
Sequence:	VSLSYRCPCR FFESHVARAN VKHLKILNTP NCALQIVARL KNNNRQVCID PKLKWIQEYL EKALN
	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 CXCL12 Protein (raised in E. Coli) 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 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. Two step purification of proteins expressed in bacterial culture: 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. >95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot. 0.22 µm filtered Endotoxin has not been removed. Please contact us if you require endotoxin removal. Crystallography grade

Target Details

CVCI 12

Endotoxin Level:

Purification:

Purity:

Sterility:

Grade:

Target

rarget:	CXCL12
Alternative Name:	CXCL12 (CXCL12 Products)
Background:	Chemoattractant active on T-lymphocytes, monocytes, but not neutrophils. Activates the C-X-C
	chemokine receptor CXCR4 to induce a rapid and transient rise in the level of intracellular
	calcium ions and chemotaxis. Also binds to atypical chemokine receptor ACKR3, which
	activates the beta-arrestin pathway and acts as a scavenger receptor for SDF-1. SDF-1-beta(3-
	72) and SDF-1-alpha(3-67) show a reduced chemotactic activity. Binding to cell surface
	proteoglycans seems to inhibit formation of SDF-1-alpha(3-67) and thus to preserve activity on

Handling Advice:

Storage:

	local sites. Acts as a positive regulator of monocyte migration and a negative regulator of
	monocyte adhesion via the LYN kinase. Stimulates migration of monocytes and T-lymphocytes
	through its receptors, CXCR4 and ACKR3, and decreases monocyte adherence to surfaces
	coated with ICAM-1, a ligand for beta-2 integrins. SDF1A/CXCR4 signaling axis inhibits beta-2
	integrin LFA-1 mediated adhesion of monocytes to ICAM-1 through LYN kinase. Inhibits
	CXCR4-mediated infection by T-cell line-adapted HIV-1. Plays a protective role after myocardial
	infarction. Induces down-regulation and internalization of ACKR3 expressed in various cells.
	Has several critical functions during embryonic development, required for B-cell lymphopoiesis,
	myelopoiesis in bone marrow and heart ventricular septum formation.
	{ECO:0000269 PubMed:11069075, ECO:0000269 PubMed:11859124,
	ECO:0000269 PubMed:16107333, ECO:0000269 PubMed:18802065,
	ECO:0000269 PubMed:19255243, ECO:0000269 PubMed:8752281}.
Molecular Weight:	8.6 kDa Including tag.
UniProt:	P48061
Pathways:	Regulation of Cell Size, CXCR4-mediated Signaling Events, Negative Regulation of intrinsic apoptotic 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 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.

Avoid repeated freeze-thaw cycles.

-80 °C

Handling

Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images

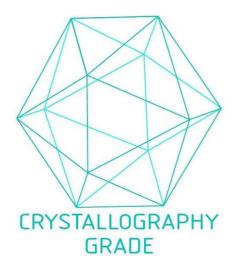


Image 1. "Crystallography Grade" protein due to multi-step, protein-specific purification process