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CXCL12 Protein (AA 22-93) (His tag)



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Quantity:	1 mg		
Target:	CXCL12		
Protein Characteristics:	AA 22-93		
Origin:	Mouse		
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:	KPVSLSYRCP CRFFESHIAR ANVKHLKILN TPNCALQIVA RLKNNNRQVC IDPKLKWIQE		
	YLEKALNKRL KM		
	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. Mouse 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		

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.

Purification:

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.

Purity:

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

Sterility:

0.22 µm filtered

CYCL 12

Endotoxin Level:

Endotoxin has not been removed. Please contact us if you require endotoxin removal.

Grade:

Target

Crystallography grade

Target Details

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. 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. Plays a protective role after myocardial
infarction. Induces down-regulation and internalization of ACKR3 expressed in various cells (By
similarity). Has several critical functions during embryonic development, required for B-cell
lymphopoiesis, myelopoiesis in bone marrow and heart ventricular septum formation.
{ECO:0000250, ECO:0000269 PubMed:8134392, ECO:0000269 PubMed:8757135}., Stimulates
the proliferation of bone marrow-derived b progenitor cells in the presence of IL-7 as well as
growth of the stromal cell-dependent B-cell clone DW34 cells.

Molecular Weight:	9.5 kDa Including tag.	
UniProt:	P40224	
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:	Protein has not been tested for activity yet. 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.	

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Expiry Date:

Unlimited (if stored properly)