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HSPG2 Protein (AA 3514-3707) (His tag)



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Quantity:	1 mg
Target:	HSPG2
Protein Characteristics:	AA 3514-3707
Origin:	Mouse
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Purification tag / Conjugate:	This HSPG2 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)
Product Details	
Sequence:	DAPGQYGAYF YDNGFLGLPG NSFSRSLPEV PETIEFEVRT STADGLLLWQ GVVREASRSK
	DFISLGLQDG HLVFSYQLGS GEARLVSGDP INDGEWHRIT ALREGQRGSI QVDGEDLVTG
	RSPGPNVAVN TKDIIYIGGA PDVATLTRGK FSSGITGCIK NLVLHTARPG APPPQPLDLQ
	HRAQAGANTR PCPS
	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 Hspg2 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.

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

Endotoxin Level:

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

Grade:

Crystallography grade

Target Details

Target:	HSPG2
Alternative Name:	Hspg2 (HSPG2 Products)
Background:	Integral component of basement membranes. Component of the glomerular basement
	membrane (GBM), responsible for the fixed negative electrostatic membrane charge, and which
	provides a barrier which is both size- and charge-selective. It serves as an attachment substrate

for cells. Plays essential roles in vascularization. Critical for normal heart development and for
regulating the vascular response to injury. Also required for avascular cartilage development
(By similarity). {ECO:0000250}., Endorepellin in an anti-angiogenic and anti-tumor peptide that
inhibits endothelial cell migration, collagen-induced endothelial tube morphogenesis and blood
vessel growth in the chorioallantoic membrane. Blocks endothelial cell adhesion to fibronectin
and type I collagen. Anti-tumor agent in neovascularization. Interaction with its ligand, integrin
alpha2/beta1, is required for the anti-angiogenic properties. Evokes a reduction in
phosphorylation of receptor tyrosine kinases via alpha2/beta1 integrin-mediated activation of
the tyrosine phosphatase, PTPN6 (By similarity). {ECO:0000250}., The LG3 peptide has anti-
angiogenic properties that require binding of calcium ions for full activity. (ECO:0000250).

Molecular Weight:	21.6 kDa Including tag.	
UniProt:	Q05793	
Pathways:	Glycosaminoglycan Metabolic Process, Lipid Metabolism	

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.	
Expiry Date:	Unlimited (if stored properly)	