

## Product datasheet

# Recombinant Human Heparan Sulfate Proteoglycan 2/Perlecan protein (Tagged) ab114285

[1 Image](#)

### Description

<b>Product name</b>	Recombinant Human Heparan Sulfate Proteoglycan 2/Perlecan protein (Tagged)	
<b>Expression system</b>	Wheat germ	
<b>Accession</b>	<b><u>P98160</u></b>	
<b>Protein length</b>	Protein fragment	
<b>Animal free</b>	No	
<b>Nature</b>	Recombinant	
<b>Species</b>	Human	
<b>Sequence</b>	GLRAYDGLSLPEDIETVTASQMRWTHSYLSDDDEDMLADSI SGDDLGSDDL GSGDFQMVFYFRALVNFTRISIEYSPQLEDAGSREFREVSE AVVDTLESEYL KIPGDQVSV	
<b>Predicted molecular weight</b>	38 kDa including tags	
<b>Amino acids</b>	25 to 134	
<b>Tags</b>	GST tag N-Terminus	

### Specifications

Our **Abpromise guarantee** covers the use of **ab114285** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Applications</b>	ELISA SDS-PAGE Western blot
<b>Form</b>	Liquid
<b>Additional notes</b>	Protein concentration is above or equal to 0.05 µg/µL. This product was previously labelled as Heparan Sulfate Proteoglycan 2.

### Preparation and Storage

**Stability and Storage**

Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles.

pH: 8.00

Constituents: 0.3% Glutathione, 0.79% Tris HCl

**General Info**

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**Function**

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. Endorepellin is 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. The LG3 peptide has anti-angiogenic properties that require binding of calcium ions for full activity.

**Tissue specificity**

Found in the basement membranes.

**Involvement in disease**

Defects in HSPG2 are the cause of Schwartz-Jampel syndrome (SJS1) [MIM:255800]; a rare autosomal recessive disorder characterized by permanent myotonia (prolonged failure of muscle relaxation) and skeletal dysplasia, resulting in reduced stature, kyphoscoliosis, bowing of the diaphyses and irregular epiphyses.

Defects in HSPG2 are the cause of dyssegmental dysplasia Silverman-Handmaker type (DDSH) [MIM:224410]. The dyssegmental dysplasias are rare, autosomal recessive skeletal dysplasias with anisodomy and micromelia. There are two recognized types: the severe, lethal DDSH and the milder Rolland-Desbuquois form. Individuals with DDSH also have a flat face, micrognathia, cleft palate and reduced joint mobility, and frequently have an encephalocele. The endochondral growth plate is short, the calcospherites (which are spherical calcium-phosphorus crystals produced by hypertrophic chondrocytes) are unfused, and there is mucoid degeneration of the resting cartilage.

**Sequence similarities**

Contains 4 EGF-like domains.

Contains 22 Ig-like C2-type (immunoglobulin-like) domains.

Contains 11 laminin EGF-like domains.

Contains 3 laminin G-like domains.

Contains 3 laminin IV type A domains.

Contains 4 LDL-receptor class A domains.

Contains 1 SEA domain.

**Post-translational modifications**

Proteolytic processing produces the C-terminal angiogenic peptide, endorepellin. This peptide can be further processed to produce the LG3 peptide.

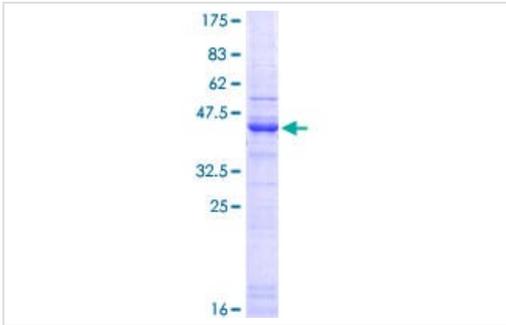
N- and O-glycosylated; contains three heparan sulfate chains. The LG3 peptide contains at least three and up to five potential O-glycosylation sites but no N-glycosylation.

**Cellular localization**

Secreted > extracellular space > extracellular matrix > basement membrane.

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**Images**



12.5% SDS-PAGE showing ab114285 at approximately 37.73kDa stained with Coomassie Blue.

SDS-PAGE - Recombinant Human Heparan Sulfate  
Proteoglycan 2/Perlecan protein (ab114285)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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