

Active Recombinant Human HSPG2 protein, His-tagged

Cat. No. HSPG2-01H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human HSPG2 protein, fused to His-tag, was expressed in NS0.
Species	Human
Source	NS0
Description	This gene encodes the perlecan protein, which consists of a core protein to which three long chains of glycosaminoglycans (heparan sulfate or chondroitin sulfate) are attached. The perlecan protein is a large multidomain proteoglycan that binds to and cross-links many extracellular matrix components and cell-surface molecules. It has been shown that this protein interacts with laminin, prolargin, collagen type IV, FGFBP1, FBLN2, FGF7 and transthyretin, etc., and it plays essential roles in multiple biological activities. Perlecan is a key component of the vascular extracellular matrix, where it helps to maintain the endothelial barrier function. It is a potent inhibitor of smooth muscle cell proliferation and is thus thought to help maintain vascular homeostasis. It can also promote growth factor (e.g., FGF2) activity and thus stimulate endothelial growth and re-generation. It is a major component of basement membranes, where it is involved in the stabilization of other molecules as well as being involved with glomerular permeability to macromolecules and cell adhesion. Mutations in this gene cause Schwartz-Jampel syndrome type 1, Silverman-Handmaker type of dyssegmental dysplasia, and tardive dyskinesia. Alternative splicing of this gene results in multiple transcript variants.
Form	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.

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Bio-activity	Measured by its binding ability in a functional ELISA. When Recombinant Human VEGF R1/Flt-1 is coated at 5 µg/mL (100 µL/well), the concentration of Recombinant Human Endorepellin/Perlecan that produces 50% of the optimal binding response is approximately 0.75-6 µg/mL.
Molecular Mass	Predicted Molecular Mass: 76.7 kDa SDS-PAGE: 90-95 kDa, reducing conditions
N-terminal Sequence Analysis	Arg3684
Endotoxin	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%
Applications	Bioactivity
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
Reconstitution	Reconstitute at 200 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

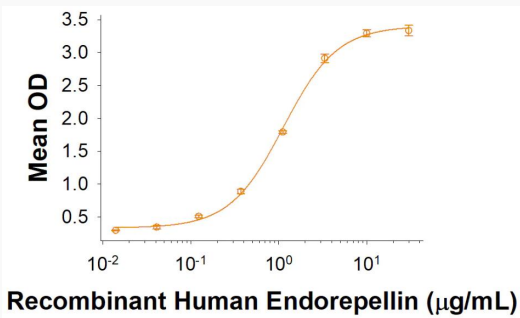
GENE INFORMATION

Gene Name	HSPG2 heparan sulfate proteoglycan 2 [Homo sapiens (human)]
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Official Symbol	HSPG2
Synonyms	Endorepellin; HSPG; HSPG2; PLCSchwartz-Jampel syndrome 1 (chondrodystrophic myotonia); PRCAN; Perlecan; SJA; SJS; SJS1; basement membrane-specific heparan sulfate proteoglycan core protein; endorepellin (domain V region); heparan sulfate proteoglycan 2; perlecan proteoglycan
Gene ID	3339
mRNA Refseq	NM_005529
Protein Refseq	NP_005520
MIM	142461
UniProt ID	P98160
Recombinant Human Endorepellin Protein Binding Activity	 When Recombinant Human VEGFR1/Flt-1 Fc Chimera is immobilized at 5 µg/mL (100 µ/well), Recombinant Human Endorepellin/Perlecan binds with an ED50 of 0.75-6 µg/mL.