

ARG82708 Human Heparan Sulfate Proteoglycan 2 (Endorepellin) ELISA Kit

Package: 96 wells

Store at: 4°C

Component

Cat. No.	Component Name	Package	Temp
ARG82708-001	Antibody-coated microplate	8 X 12 strips	4°C. Unused strips should be sealed tightly in the air-tight pouch.
ARG82708-002	Standard	2 X 40 ng/vial	4°C
ARG82708-003	Standard/Sample diluent	30 ml (Ready to use)	4°C
ARG82708-004	Antibody conjugate concentrate (100X)	1 vial (100 µl)	4°C
ARG82708-005	Antibody diluent buffer	12 ml (Ready to use)	4°C
ARG82708-006	HRP-Streptavidin concentrate (100X)	1 vial (100 µl)	4°C
ARG82708-007	HRP-Streptavidin diluent buffer	12 ml (Ready to use)	4°C
ARG82708-008	25X Wash buffer	20 ml	4°C
ARG82708-009	TMB substrate	10 ml (Ready to use)	4°C (Protect from light)
ARG82708-010	STOP solution	10 ml (Ready to use)	4°C
ARG82708-011	Plate sealer	4 strips	Room temperature

Summary

Product Description	ARG82708 Human Heparan Sulfate Proteoglycan 2 (Endorepellin) ELISA Kit is an Enzyme Immunoassay kit for the quantification of Human Heparan Sulfate Proteoglycan 2 (Endorepellin) in serum, plasma (EDTA, heparin, citrate) and cell culture supernatants.
Tested Reactivity	Hu
Tested Application	ELISA
Target Name	Heparan Sulfate Proteoglycan 2 (Endorepellin)
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm.
Sensitivity	0.312 ng/ml
Sample Type	Serum, plasma (EDTA, heparin, citrate) and cell culture supernatants.
Standard Range	0.624 - 40 ng/ml
Sample Volume	100 µl
Precision	Intra-Assay CV: 5.4%

Inter-Assay CV: 6.7%

Alternate Names

PRCAN; Perlecan; SJS; SJS1; HSPG; PLC; SJA; Basement membrane-specific heparan sulfate proteoglycan core protein

Application Instructions

Assay Time ~ 5 hours

Properties

Form 96 well

Storage instruction Store the kit at 2-8°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.

Note For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol HSPG2

Gene Full Name heparan sulfate proteoglycan 2

Background 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, 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. [provided by RefSeq, May 2014]

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 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.

The LG3 peptide has anti-angiogenic properties that require binding of calcium ions for full activity. [UniProt]

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

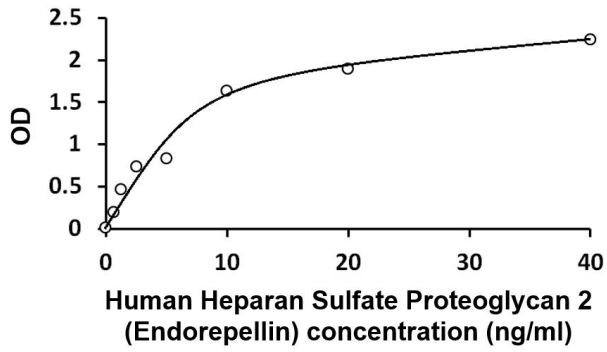
N- and O-glycosylated. O-glycosylated with core 1 or possibly core 8 glycans. Perlecan contains three

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

Cellular Localization

Secreted, extracellular space, extracellular matrix, basement membrane. [UniProt]

Images



ARG82708 Human Heparan Sulfate Proteoglycan 2 (Endorepellin)
ELISA Kit standard curve image

ARG82708 Human Heparan Sulfate Proteoglycan 2 (Endorepellin)
ELISA Kit results of a typical standard run with optical density
reading at 450 nm.