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Product datasheet for KN223950BN

Heparan Sulfate Proteoglycan 2 (HSPG2) Human Gene Knockout Kit (CRISPR)

Product data:

Product Type:	Knockout Kits (CRISPR)
Format:	2 gRNA vectors, 1 mBFP-Neo donor, 1 scramble control
Donor DNA:	mBFP-Neo
Symbol:	Heparan Sulfate Proteoglycan 2
Locus ID:	3339
Components:	**KN223950G1**, Heparan Sulfate Proteoglycan 2 gRNA vector 1 in pCas-Guide CRISPR vector (GE100002) **KN223950G2**, Heparan Sulfate Proteoglycan 2 gRNA vector 2 in pCas-Guide CRISPR vector (GE100002) **KN223950BND**, donor DNA containing left and right homologous arms and mBFP-Neo functional cassette. **GE100003**, scramble sequence in pCas-Guide vector
Disclaimer:	These products are manufactured and supplied by OriGene under license from ERS. The kit is designed based on the best knowledge of CRISPR technology. The system has been functionally validated for knocking-in the cassette downstream the native promoter. The efficiency of the knock-out varies due to the nature of the biology and the complexity of the experimental process.
RefSeq:	NM_001291860, NM_005529
UniProt ID:	P98160
Synonyms:	HSPG; PLC; PRCAN; SJA; SJS; SJS1

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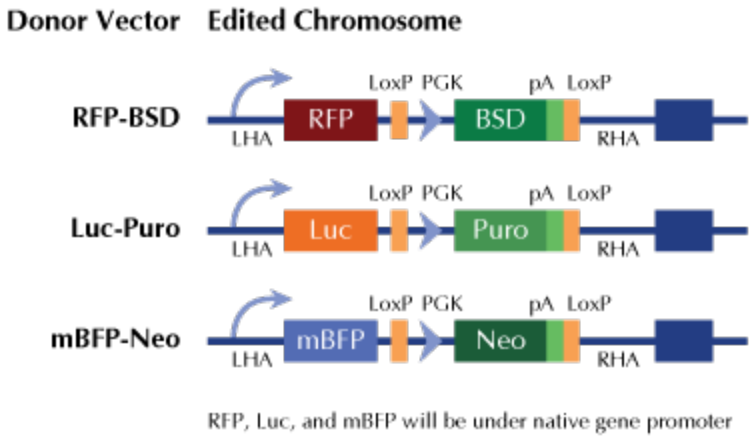
Summary: This gene encodes the perlecan protein, which consists of a core protein to which three long chains of glycosaminoglycans (heparan sulfate or chondroitin sulfate) are attached. The perlecan protein is a large multidomain proteoglycan that binds to and cross-links many extracellular matrix components 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. [provided by RefSeq, May 2014]

Product images:



RFP, Luc, and mBFP will be under native gene promoter