

Product Information

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Heparan Sulfate Proteoglycan from basement membrane

Catalog Number **H4777**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

Synonym: HSPG

Product Description

Heparan sulfate proteoglycan is an integral part of the basement membrane. It is a large biomolecule with a molecular mass $>400\text{ kDa}$, composed of a core protein covalently bound to heparan sulfate chains. The number of the polysaccharide chains and the size of the core protein may vary according to the source.

Heparan sulfate proteoglycan is a multifunctional molecule. It is a component of the extracellular matrix that binds to fibroblast growth factors, vascular endothelial growth factor (VEGF), and VEGF receptors through its sugar moiety. It acts as a docking molecule for matrilysin (MMP-7) and other matrix metalloproteinases. It may be important in cell proliferation and differentiation.

Heparan sulfate proteoglycan promotes the attachment of cells in culture. It binds to a variety of molecules found in the extracellular matrix including laminin, fibronectin, collagen type IV, and FGF-basic. It induces high affinity binding of FGF-basic to cells deficient in heparan sulfate and soluble FGF receptors at a concentration of $10\text{--}100\text{ ng/ml}$.

This product is isolated from the basement membrane of Engelbreth-Holm-Swarm mouse sarcoma. It is a $0.2\text{ }\mu\text{m}$ -filtered solution for cell culture applications. The solution contains 50 mM Tris HCl, pH 7.4, 150 mM NaCl, 1 mM EDTA, and 0.1 mM PMSF.

Content: $\geq 400\text{ }\mu\text{g/ml}$ (protein)
 $\geq 400\text{ }\mu\text{g/ml}$ (glycosaminoglycan)
 $\geq 100\text{ }\mu\text{g/ml}$ (uronic acid)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

The product ships on dry ice and it is recommended to store the product at $-20\text{ }^{\circ}\text{C}$. The product, as supplied, retains its function for 3 years when stored properly.

References

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5. Kreis, T., and Vale, R., eds., Guidebook to the Extracellular Matrix and Adhesion Proteins, Oxford University Press (Oxford, UK: 1993), pp. 79-83.
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DS, RBG, NDH, MAM 06/17-1