



Product Information

Proteoglycans

Proteoglycans, which consist of a core protein with one or more glycosaminoglycan side chains, are a significant component of the extracellular matrix. Proteoglycans interact with a variety of molecules in the extracellular matrix, including various cell adhesion molecules and growth factors. To assist in your extracellular matrix research, Sigma now offers several proteoglycans isolated from different sources.

Product Number	Description	Source	Storage	Activity	Refs.
A 1960	Aggrecan	bovine articular cartilage	-0°C	Combines with hyaluronic acid to form a very large macromolecular complex. A 2 mg/ml solution of aggrecan will increase the relative viscosity of a 4% hyaluronic acid solution by 40%.	62,63,64, 65,66,67, 68,69,70, 71,72
B 8041	Biglycan			Binds to TGF-β; binds to collagen type I in low ionic strength (less than 3 mM phosphate) buffer. At higher ionic strengths, biglycan does not bind to collagen type I. It enhances the inhibition effect of TGF-β on osteoclast proliferation at a concentration of 4-20 μg/ml. It also prevents the attachment of CHO cells to fibronectin, with a 50% inhibition at 17-21 μg/ml.	63,73,74, 75,76,77, 78,79,80, 81
D 8428	Decorin			Binds to TGF-β; binds to collagen type I. It enhances the inhibition effect of TGF-β on osteoclast proliferation at a concentration of 4-20 μg/ml. It also prevents the attachment of CHO cells to fibronectin, with a 50% inhibition at 3-6 μg/ml and 100% inhibition at 10-20 μg/ml.	62,63,73, 77,82,83, 84
H 4777	Heparan Sulfate Proteoglycan (HSPG) Sterile-filtered solution	basement membrane of Engelbreth-Holm-Swarm mouse sarcoma	-20°C	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 10-100 ng/ml.	85,86

This table is extracted from the Tissue Culture Technical Information Section of the Sigma Catalog. Please refer to the catalog for the complete table of extracellular matrices/attachment factors and references.

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