

Isolation of Proteoglycans Synthesized by Rat Heart: Evidence for the Presence of Several Distinct Forms

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Abstract

1. The proteoglycans (Ps) synthesized by auricle and ventricle from adult rat heart were studied.
2. Auricle tissue incorporated over two times radioactive sulfate compared to ventricle tissue and the Ps were mainly found in the detergent insoluble fraction.
3. The Ps from both tissues were isolated by ion-exchange chromatography on DEAE-Sephacel, followed by gel filtration on Sepharose CL-6B and SDS-PAGE electrophoresis.
4. Enzymatic and chemical degradation of these Ps suggest that at least three and probably four different species of Ps can be observed in heart tissue. 4. A high molecular weight chondroitin sulfate-P, a high molecular weight heparan sulfate-P, a chondroitin/dermatan sulfate-P of 240-200 kDa and a dermatan sulfate of 115 kDa.
5. This latter P was specifically immunoprecipitated using rat decorin antiserum.