

[54] **SMOOTH MUSCLE CELL GROWTH INHIBITOR**

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[57] **ABSTRACT**

An epithelium-derived inhibitor of the growth of smooth muscle cells is disclosed along with methods for purifying this substance. As initially isolated, the inhibitor comprises a heparan sulfate proteoglycan having a buoyant density of less than 1.4 g/ml which releases a glycosaminoglycan chain having a molecular weight of about 55,000 to 75,000 on protease cleavage. Growth inhibiting activity is found in the glycosaminoglycan chain and in glycosaminoglycan fragments derived therefrom. Use of a dialyzable detergent in purification steps greatly aids in the handling and purification of the inhibitor. The inhibitor can be used in a variety of techniques for inhibiting the growth of smooth muscle cells, both in vivo and in vitro.