



11. Kreuger, J., Prydz, K., Pettersson, R.F., Lindahl, U. & Salmivirta, M. Characterization of fibroblast growth factor 1 binding heparan sulfate domain. *Glycobiology* 9, 723-729 (1999).
12. Venkataraman, G., Shriver, Z., Raman, R. & Sasisekharan, R. Sequencing complex polysaccharides. *Science* 286, 537-542 (1999).
13. Rhombert, A.J., Ernst, S., Sasisekharan, R. & Biemann, K. Mass spectrometric and capillary electrophoretic investigation of the enzymatic degradation of heparin-like glycosaminoglycans. *Proc. Natl. Acad. Sci. USA* 95, 4176-4181 (1998).
14. Faham, S., Hileman, R.E., Fromm, J.R., Linhardt, R.J. & Rees, D.C. Heparin structure and interactions with basic fibroblast growth factor. *Science* 271, 1116-1120 (1996).
15. DiGabriele, A.D. *et al.* Structure of a heparin-linked biologically active dimer of fibroblast growth factor. *Nature* 393, 812-817 (1998).
16. Faham, S., Linhardt, R.J. & Rees, D.C. Diversity does make a difference: Fibroblast growth factor-heparin interactions. *Curr. Opin. Struct. Biol.* 8, 578-586 (1998).
17. Jin, L. *et al.* The anticoagulant activation of antithrombin by heparin. *Proc. Natl. Acad. Sci. USA* 94, 14683-14688 (1997).
18. Fry, E.E. *et al.* The structure and function of a foot-and-mouth disease virus-oligosaccharide receptor complex. *EMBO J.* 18, 543-554 (1999).
19. Pervin, A., Gallo, C., Jandik, K.A., Han, X.J. & Linhardt, R.J. Preparation and structural characterization of large heparin-derived oligosaccharides. *Glycobiology* 5, 83-95 (1995).
20. Sperinde, G.V. & Nugent, M.A. Heparan sulfate proteoglycans control intracellular processing of bFGF in vascular smooth muscle cells. *Biochemistry* 37, 13153-13164 (1998).
21. Padera, R., Venkataraman, G., Berry, D., Godavarti, R. & Sasisekharan, R. FGF-2/fibroblast growth factor receptor/heparin-like glycosaminoglycan interactions: A compensation model for FGF-2 signaling. *FASEB J.* 13, 1677-1687 (1999).
22. Wang, H., Tseng, K. & Lebrilla, C.B. A general method for producing bioaffinity MALDI probes. *Anal. Chem.* 71, 2014-2020 (1999).
23. Brickman, Y.G. *et al.* Structural comparison of fibroblast growth factor-specific heparan sulfates derived from a growing or differentiating neuroepithelial cell line. *Glycobiology* 8, 463-471 (1998).

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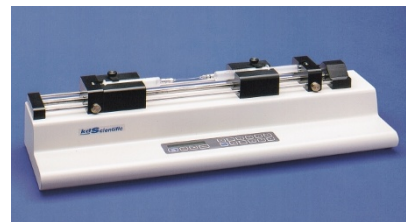
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