

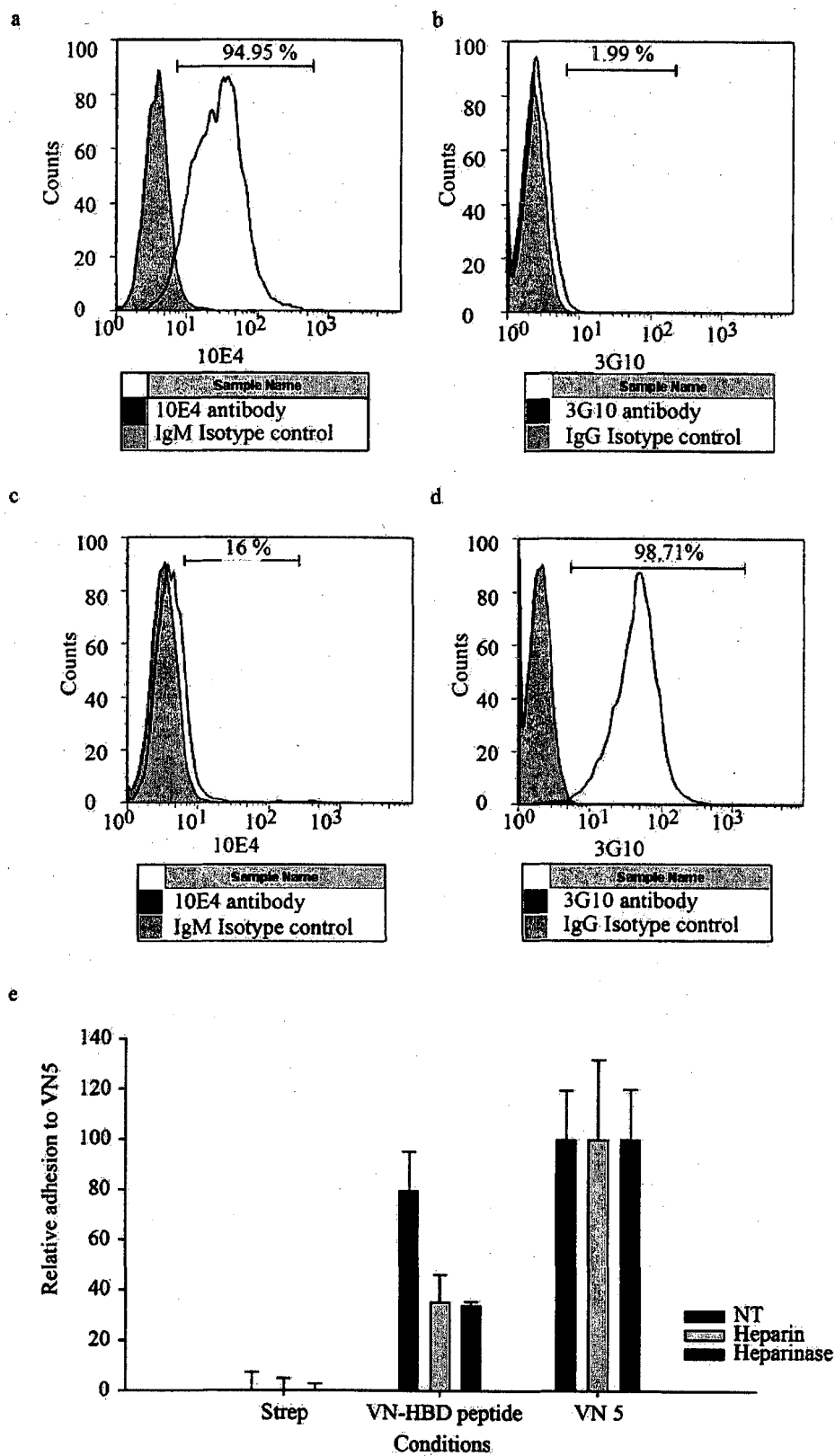
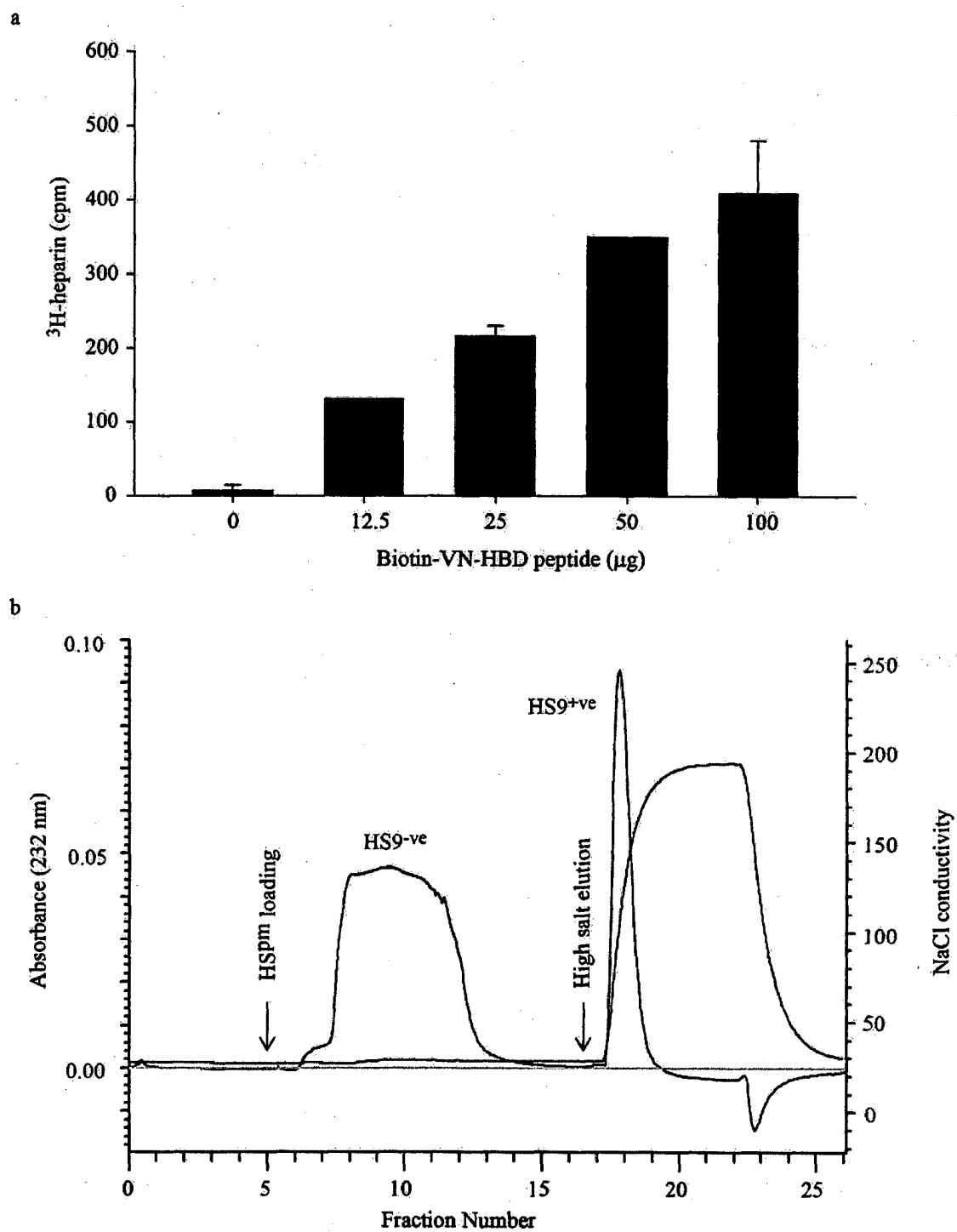


Figure 1



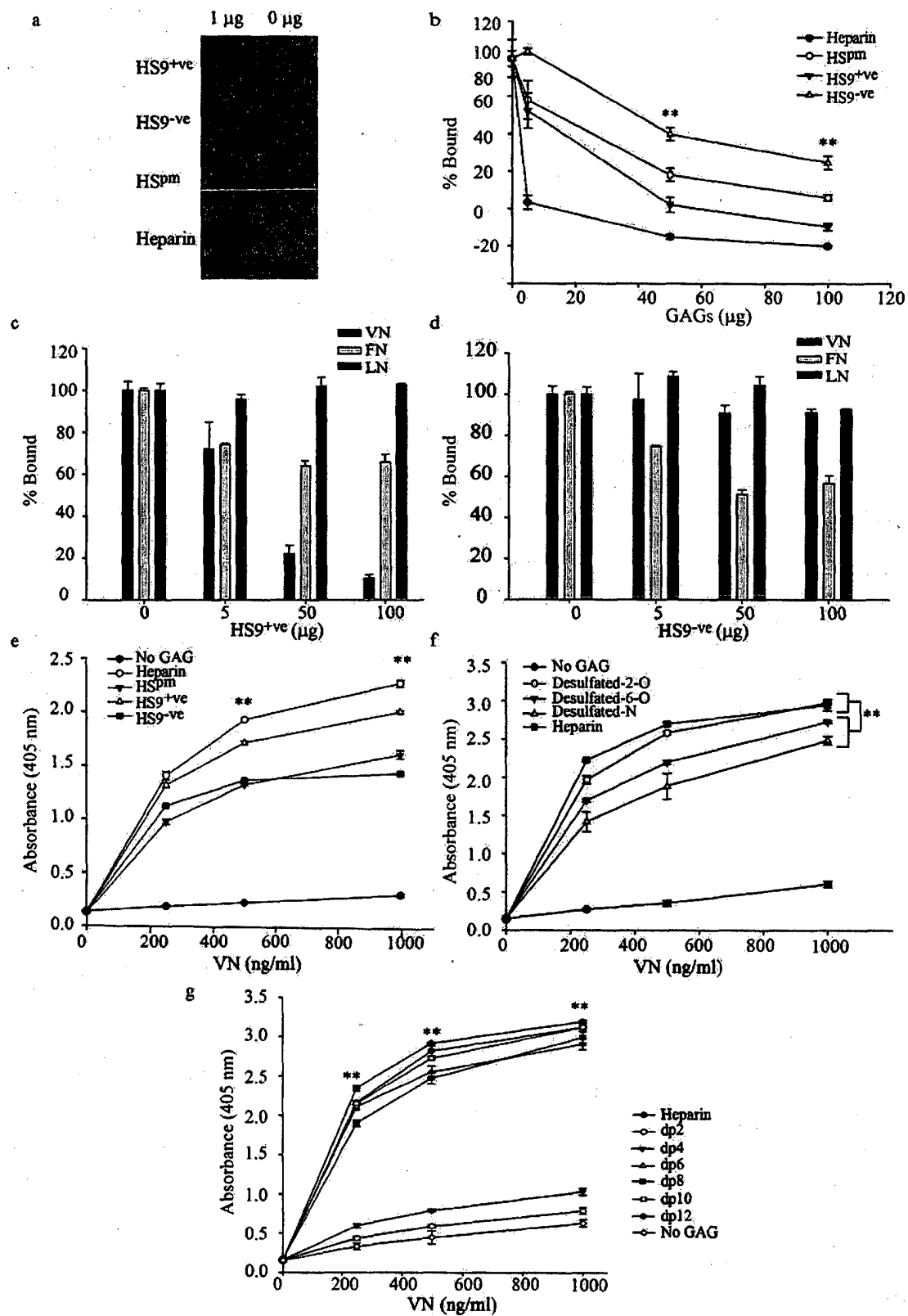


Figure 3

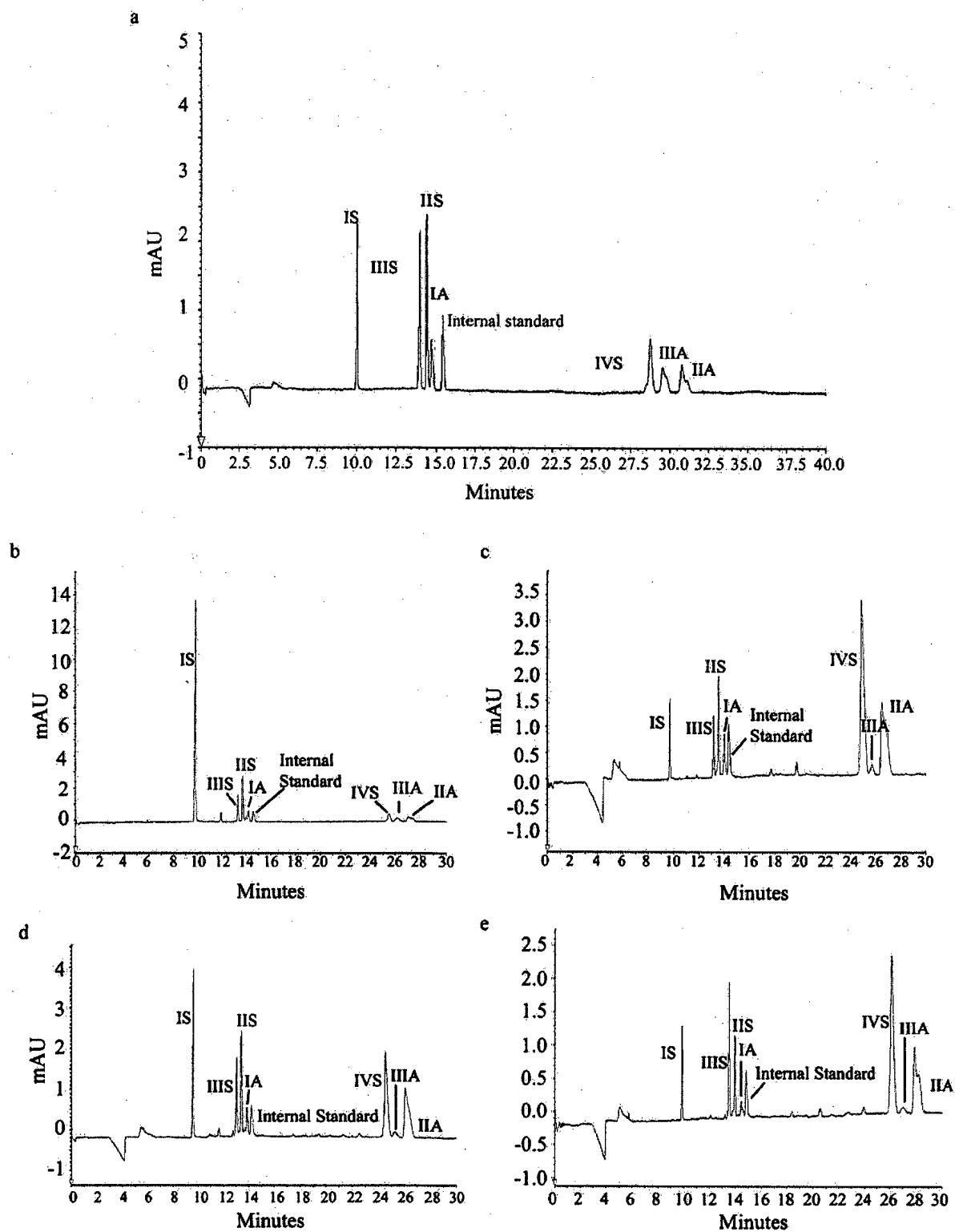


Figure 4

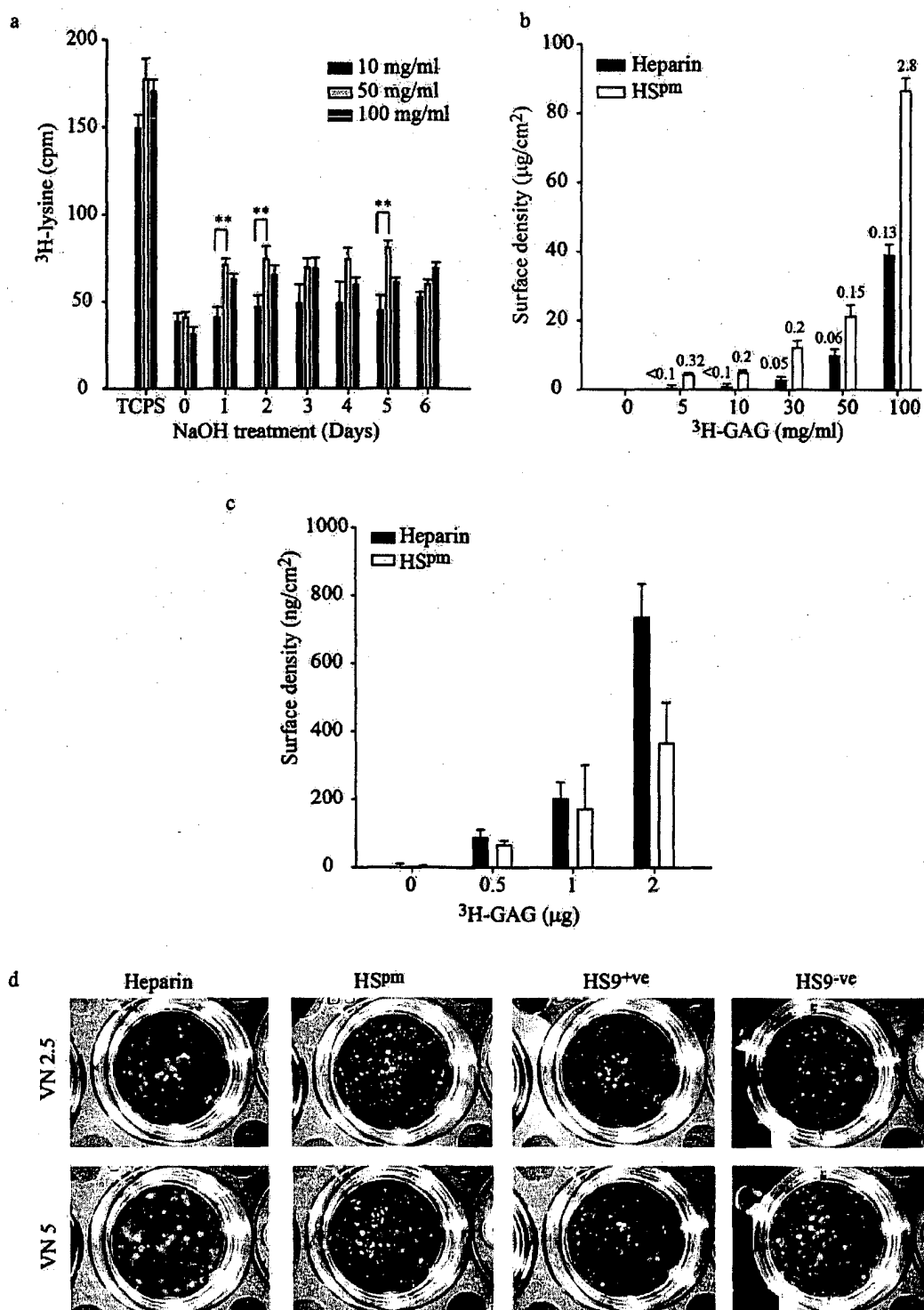


Figure 5

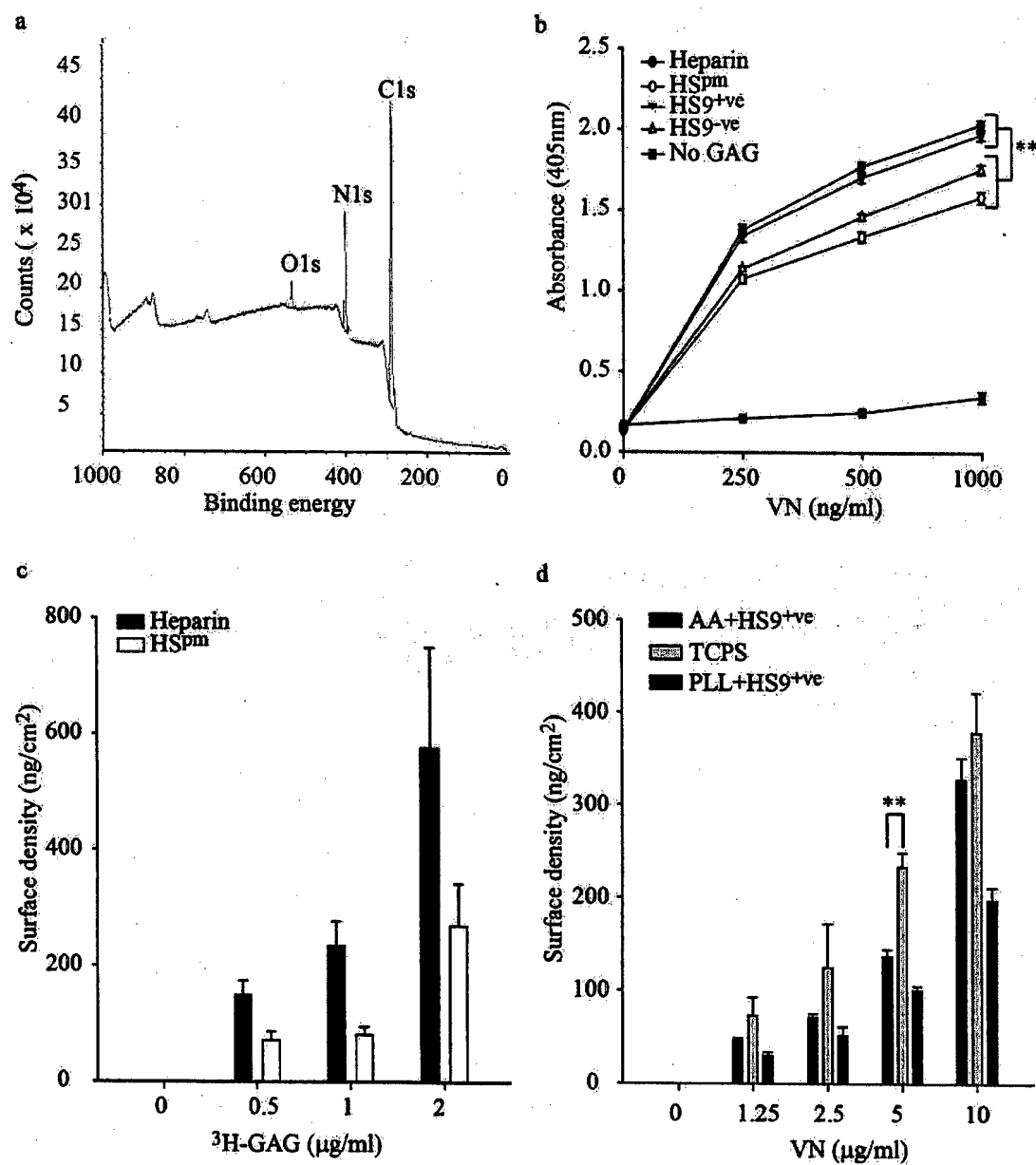
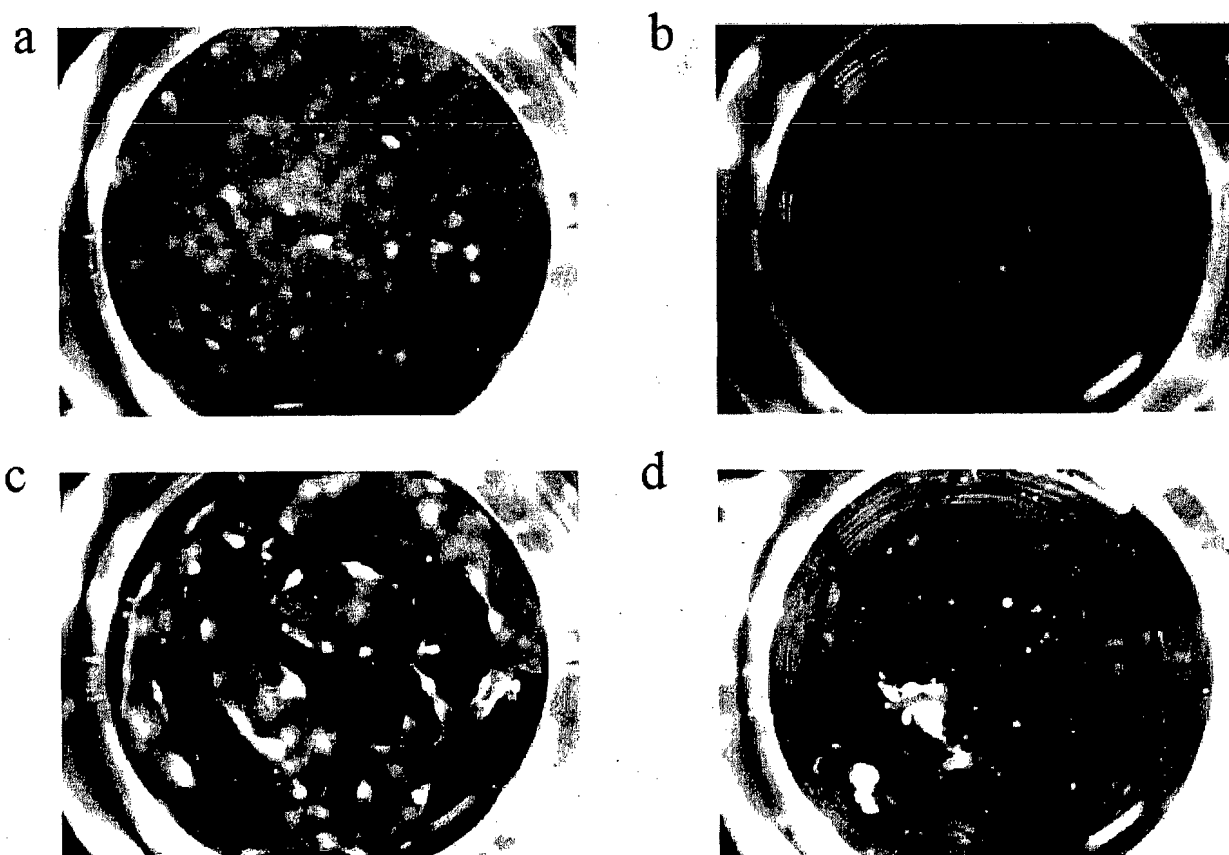


Figure 6



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Figure 7

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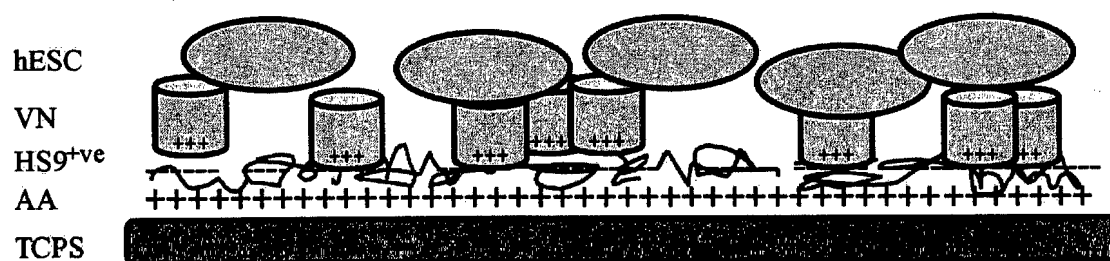


Figure 8

Disaccharides	Molar percentage (mol%)			
	Heparin	HSPm	HS9 ⁺ ve	HS9 ⁻ ve
IS	66.1	10.5	26.0	13.0
IIS	5.5	6.3	10.0	14.7
IIS	20.8	23.7	30.6	19.8
IA	1.1	2.1	1.75	1.1
IVS	2.6	36.8	18.0	33.3
IIIA	1.5	2.2	1.20	1.45
IIA	2.4	18.4	12.5	16.6

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Figure 9

Allylamine (%)	N: C
0	0
50	0.03 $\pm$ 0.02
80	0.12 $\pm$ 0.02
90	0.17 $\pm$ 0.02
100	0.20 $\pm$ 0.02

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Figure 10

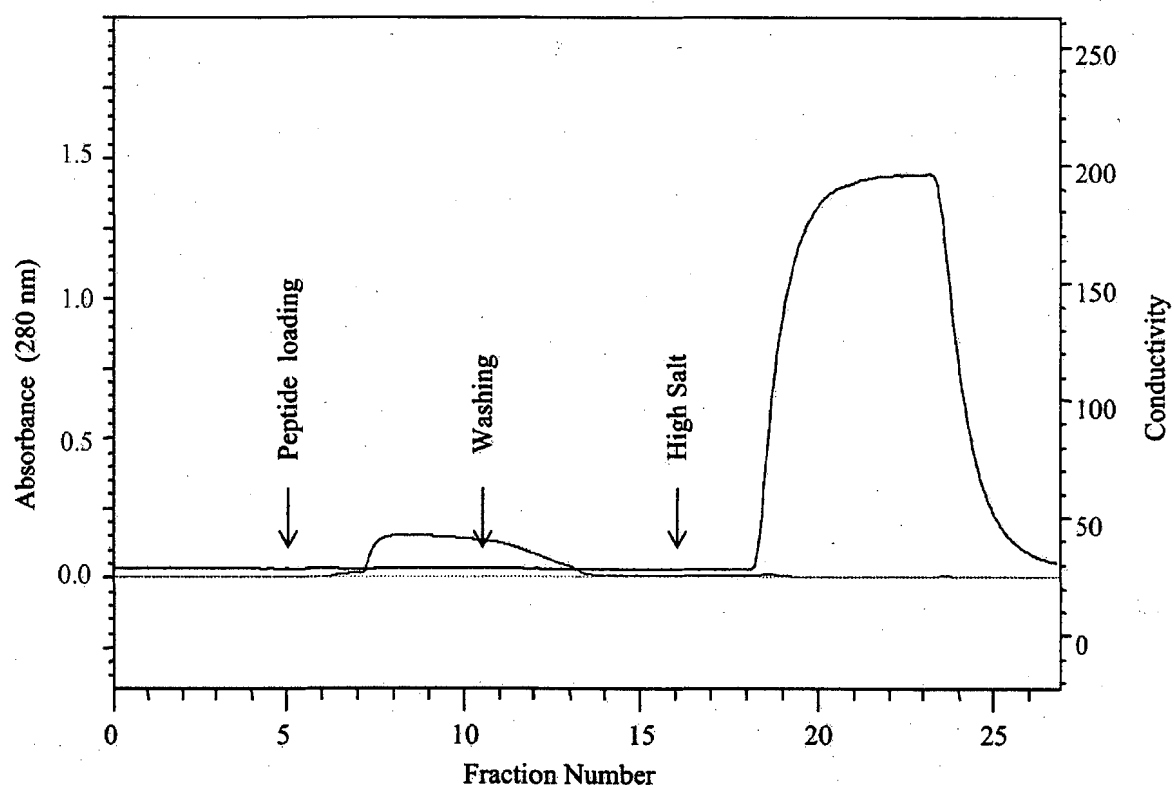
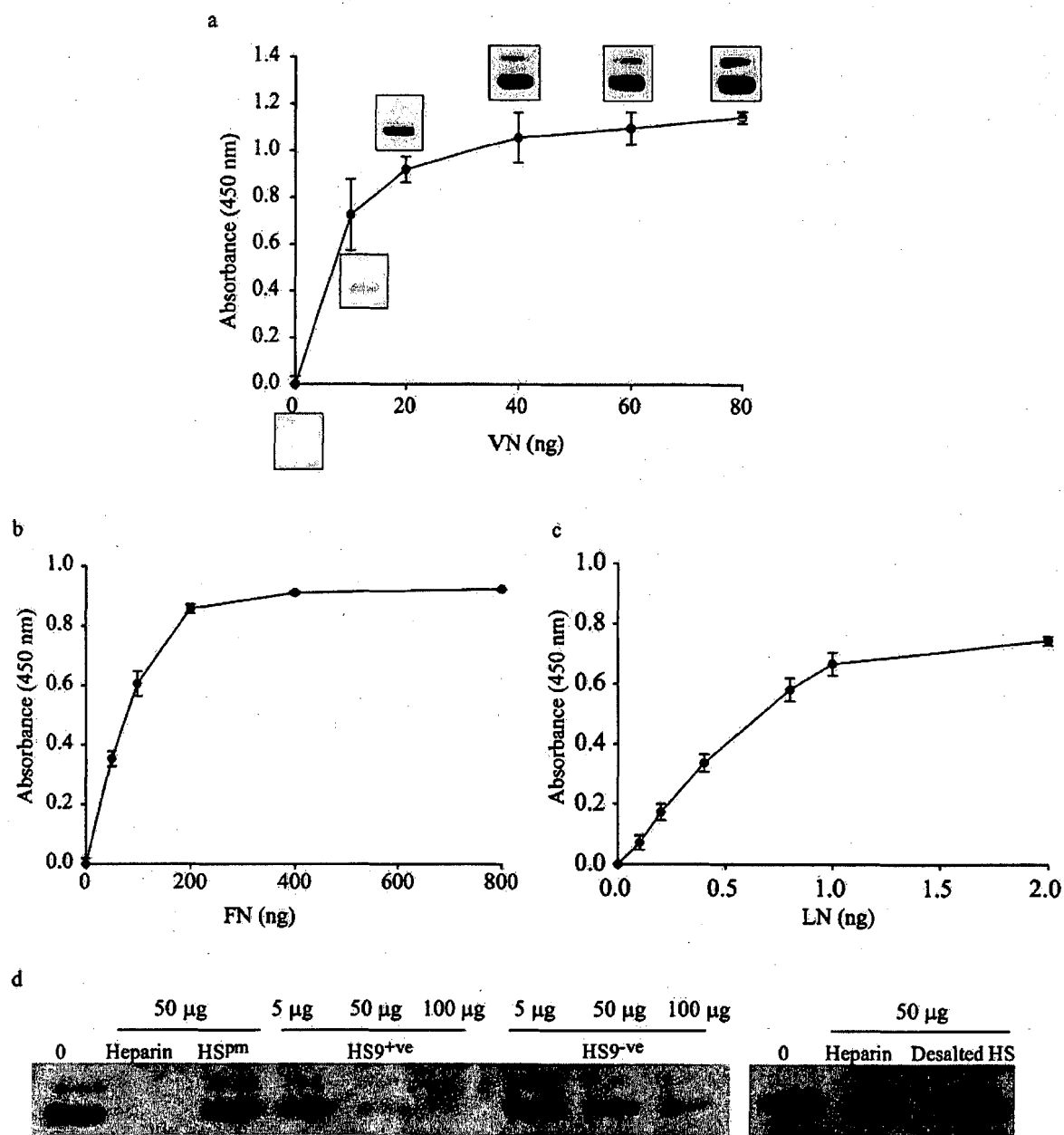


Figure 11



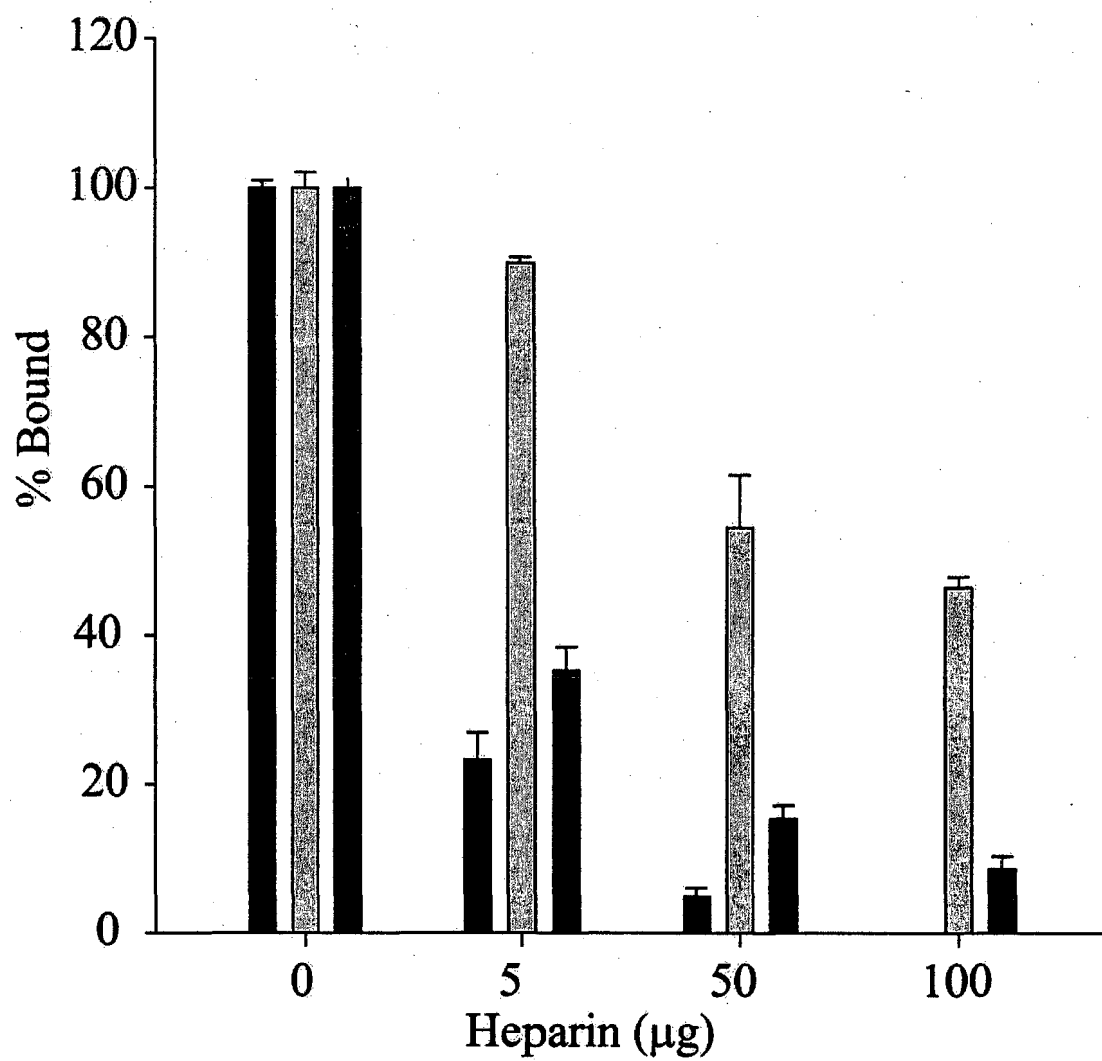


Figure 13

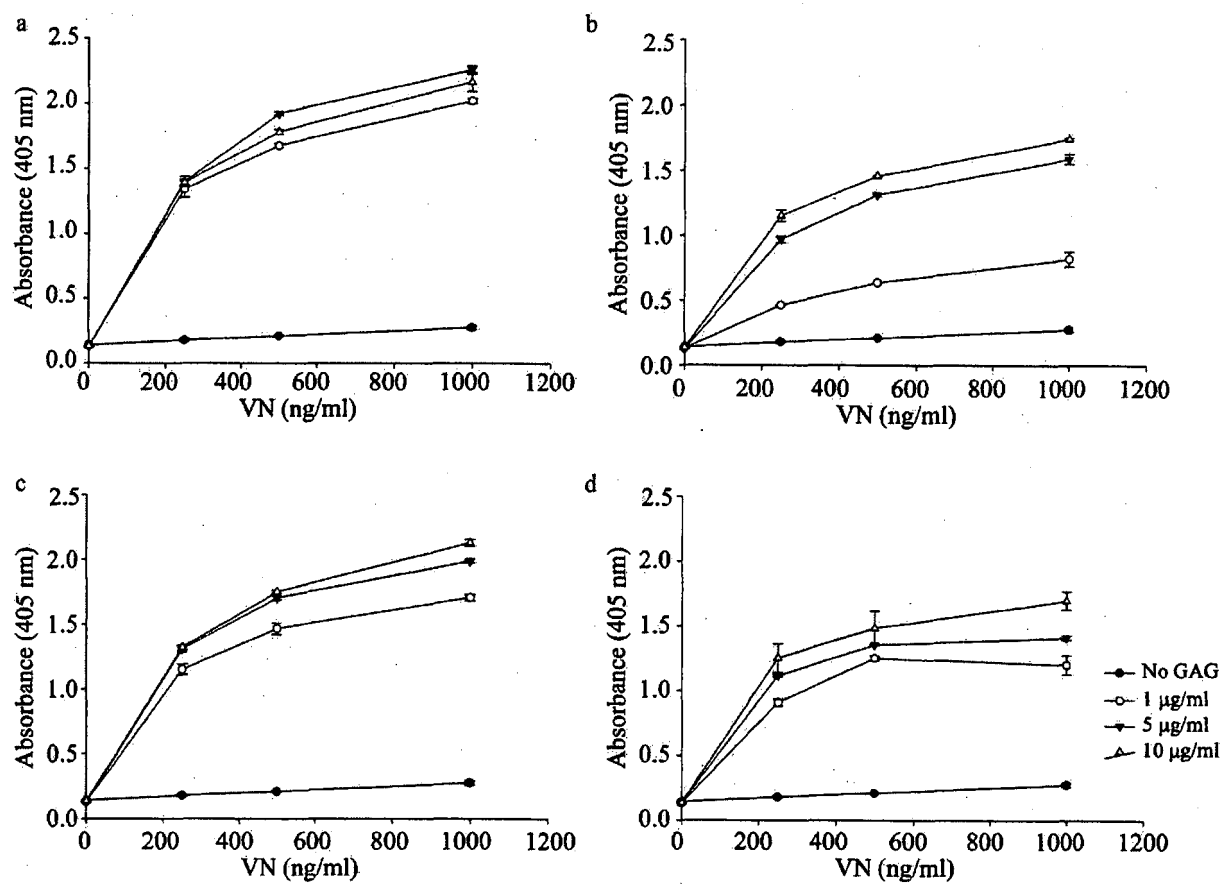


Figure 14

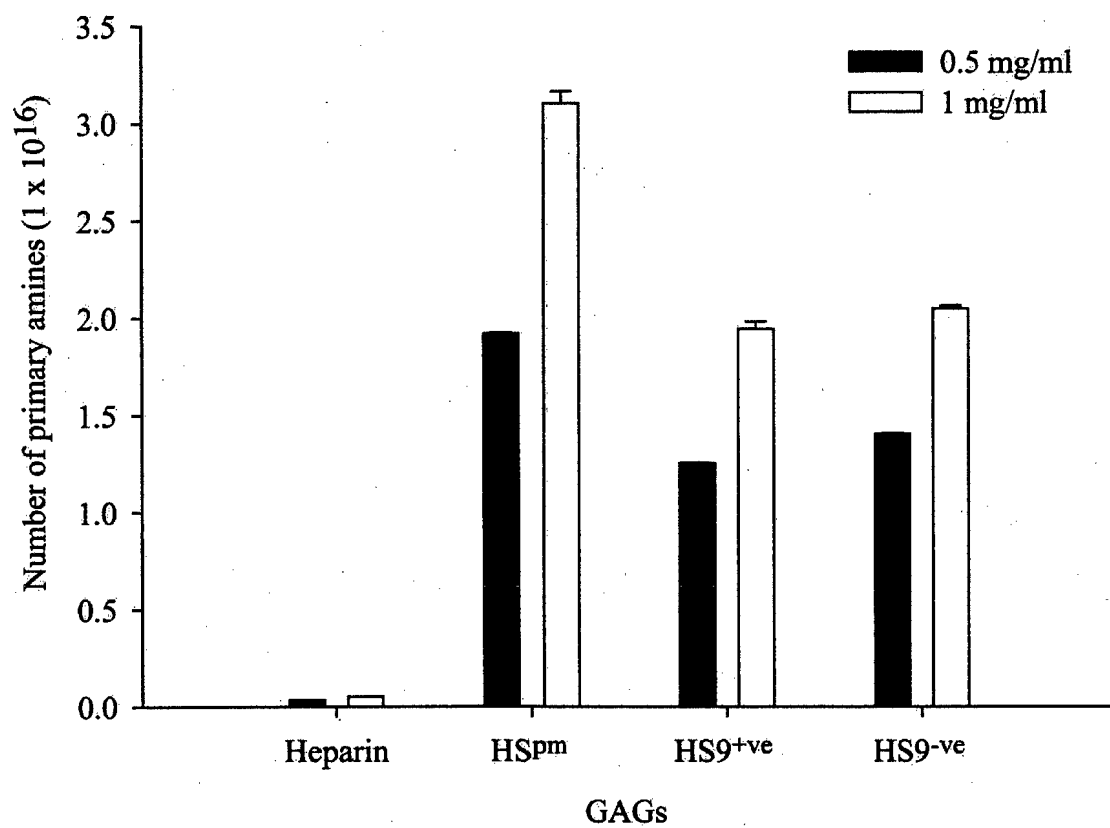


Figure 15

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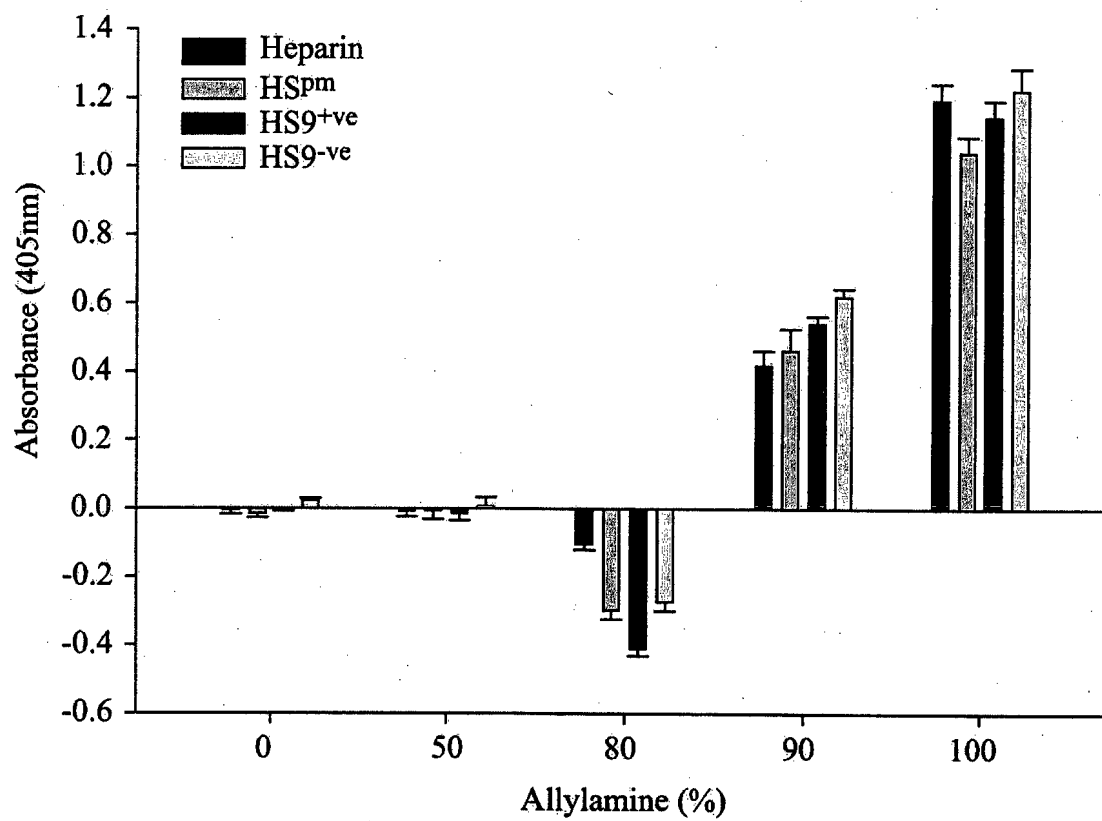
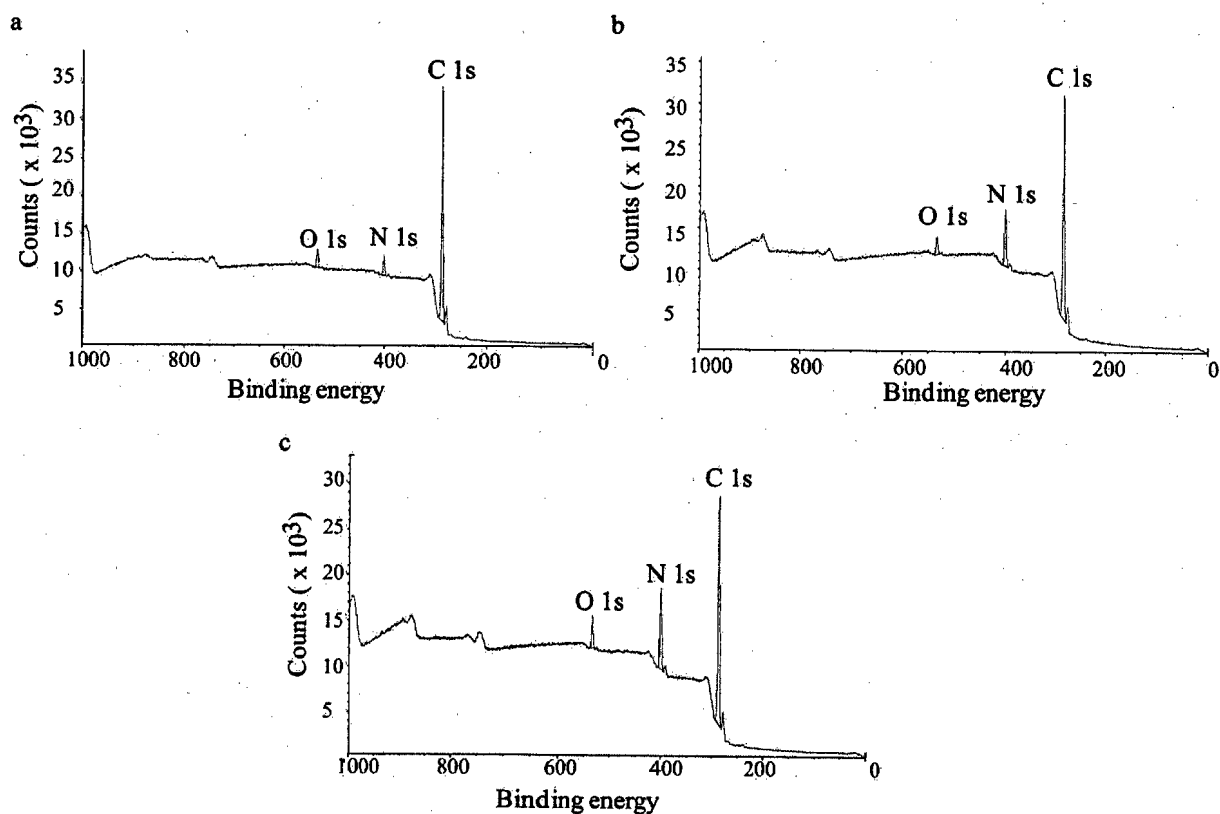


Figure 16

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Figure 17

Δ -disaccharide	RSD (%)	
	Area	RT
IS	2.2	0.4
IIIS	2.3	0.4
IA	2.2	0.5
IIS	2.3	0.4
IVS	2.2	0.5
IIIA	3.2	0.5
IIA	2.1	0.5
Internal	2.2	0.5

Figure 18