SEQ ID NO: 1:

```
Ala Asn Ser Phe Leu Phe Trp Asn Lys Tyr Lys Asp Gly Asp Gln Cys
1               5                  10                  15
Glu Thr Ser Pro Cys Gln Asn Gln Gly Lys Cys Lys Asp Gly Leu Gly
            20                  25                  30
Glu Tyr Thr Cys Thr Cys Leu Glu Gly Phe Glu Gly Lys Asn Cys Glu
        35                  40                  45
Leu Phe Thr Arg Lys Leu Cys Ser Leu Asp Asn Gly Asp Cys Asp Gln
    50                  55                  60
Phe Cys His Glu Glu Gln Asn Ser Val Val Cys Ser Cys Ala Arg Gly
65                  70                  75                  80
Tyr Thr Leu Ala Asp Asn Gly Lys Ala Cys Ile Pro Thr Gly Pro Tyr
                85                  90                  95
Pro Cys Gly Lys Gln Thr Leu Glu Arg Arg Lys Arg Arg Lys Arg Ile
            100                 105                 110
Val Gly Gly Gln Glu Cys Lys Asp Gly Glu Cys Pro Trp Gln Ala Leu
        115                 120                 125
Leu Ile Asn Glu Glu Asn Glu Gly Phe Cys Gly Gly Thr Ile Leu Ser
    130                 135                 140
Glu Phe Tyr Ile Leu Thr Ala Ala His Cys Leu Tyr Gln Ala Lys Arg
145                 150                 155                 160
Phe Lys Val Arg Val Gly Asp Arg Asn Thr Glu Gln Glu Glu Gly Gly
                165                 170                 175
Glu Ala Val His Glu Val Glu Val Val Ile Lys His Asn Arg Phe Thr
            180                 185                 190
Lys Glu Thr Tyr Asp Phe Asp Ile Ala Val Leu Arg Leu Lys Thr Pro
        195                 200                 205
Ile Thr Phe Arg Met Asn Val Ala Pro Ala Cys Leu Pro Glu Arg Asp
    210                 215                 220
Trp Ala Glu Ser Thr Leu Met Thr Gln Lys Thr Gly Ile Val Ser Gly
225                 230                 235                 240
Phe Gly Arg Thr His Glu Lys Gly Arg Gln Ser Thr Arg Leu Lys Met
                245                 250                 255
Leu Glu Val Pro Tyr Val Asp Arg Asn Ser Cys Lys Leu Ser Ser Ser
            260                 265                 270
Phe Ile Ile Thr Gln Asn Met Phe Cys Ala Gly Tyr Asp Thr Lys Gln
        275                 280                 285
Glu Asp Ala Cys Gln Gly Asp Ala Gly Gly Pro His Val Thr Arg Phe
    290                 295                 300
Lys Asp Thr Tyr Phe Val Thr Gly Ile Val Ser Trp Gly Glu Gly Cys
305                 310                 315                 320
Ala Arg Lys Gly Lys Tyr Gly Ile Tyr Thr Lys Val Thr Ala Phe Leu
                325                 330                 335
Lys Trp Ile Asp Arg Ser Met Lys Thr Arg Gly Leu Pro Lys Ala Lys
            340                 345                 350
Ser His Ala Pro Glu Val Ile Thr Ser Ser Pro Leu Lys
        355                 360                 365
```

FIG. 1

SEQ ID NO: 2:

```
Ala Asn Ser Phe Leu Phe Trp Asn Lys Tyr Lys Asp Gly Asp Gln Cys
1               5                  10                  15
Glu Thr Ser Pro Cys Gln Asn Gln Gly Lys Cys Lys Asp Gly Leu Gly
            20                  25                  30
Glu Tyr Thr Cys Thr Cys Leu Glu Gly Phe Glu Gly Lys Asn Cys Glu
        35                  40                  45
Leu Phe Thr Arg Lys Leu Cys Ser Leu Asp Asn Gly Asp Cys Asp Gln
    50                  55                  60
Phe Cys His Glu Glu Gln Asn Ser Val Val Cys Ser Cys Ala Arg Gly
65                  70                  75                  80
Tyr Thr Leu Ala Asp Asn Gly Lys Ala Cys Ile Pro Thr Gly Pro Tyr
                85                  90                  95
Pro Cys Gly Lys Gln Thr Leu Glu Arg Ile Val Gly Gly Gln Glu Cys
            100                 105                 110
Lys Asp Gly Glu Cys Pro Trp Gln Ala Leu Leu Ile Asn Glu Glu Asn
        115                 120                 125
Glu Gly Phe Cys Gly Gly Thr Ile Leu Ser Glu Phe Tyr Ile Leu Thr
    130                 135                 140
Ala Ala His Cys Leu Tyr Gln Ala Lys Arg Phe Lys Val Arg Val Gly
145                 150                 155                 160
Asp Arg Asn Thr Glu Gln Glu Glu Gly Gly Glu Ala Val His Glu Val
                165                 170                 175
Glu Val Val Ile Lys His Asn Arg Phe Thr Lys Glu Thr Tyr Asp Phe
            180                 185                 190
Asp Ile Ala Val Leu Arg Leu Lys Thr Pro Ile Thr Phe Arg Met Asn
        195                 200                 205
Val Ala Pro Ala Cys Leu Pro Glu Arg Asp Trp Ala Glu Ser Thr Leu
    210                 215                 220
Met Thr Gln Lys Thr Gly Ile Val Ser Gly Phe Gly Arg Thr His Glu
225                 230                 235                 240
Lys Gly Arg Gln Ser Thr Arg Leu Lys Met Leu Glu Val Pro Tyr Val
                245                 250                 255
Asp Arg Asn Ser Cys Lys Leu Ser Ser Ser Phe Ile Ile Thr Gln Asn
            260                 265                 270
Met Phe Cys Ala Gly Tyr Asp Thr Lys Gln Glu Asp Ala Cys Gln Gly
        275                 280                 285
Asp Ala Gly Gly Pro His Val Thr Arg Phe Lys Asp Thr Tyr Phe Val
    290                 295                 300
Thr Gly Ile Val Ser Trp Gly Glu Gly Cys Ala Arg Lys Gly Lys Tyr
305                 310                 315                 320
Gly Ile Tyr Thr Lys Val Thr Ala Phe Leu Lys Trp Ile Asp Arg Ser
                325                 330                 335
Met Lys Thr Arg Gly Leu Pro Lys Ala Lys Ser His Ala Pro Glu Val
            340                 345                 350
Ile Thr Ser Ser Pro Leu Lys
        355
```

FIG. 2

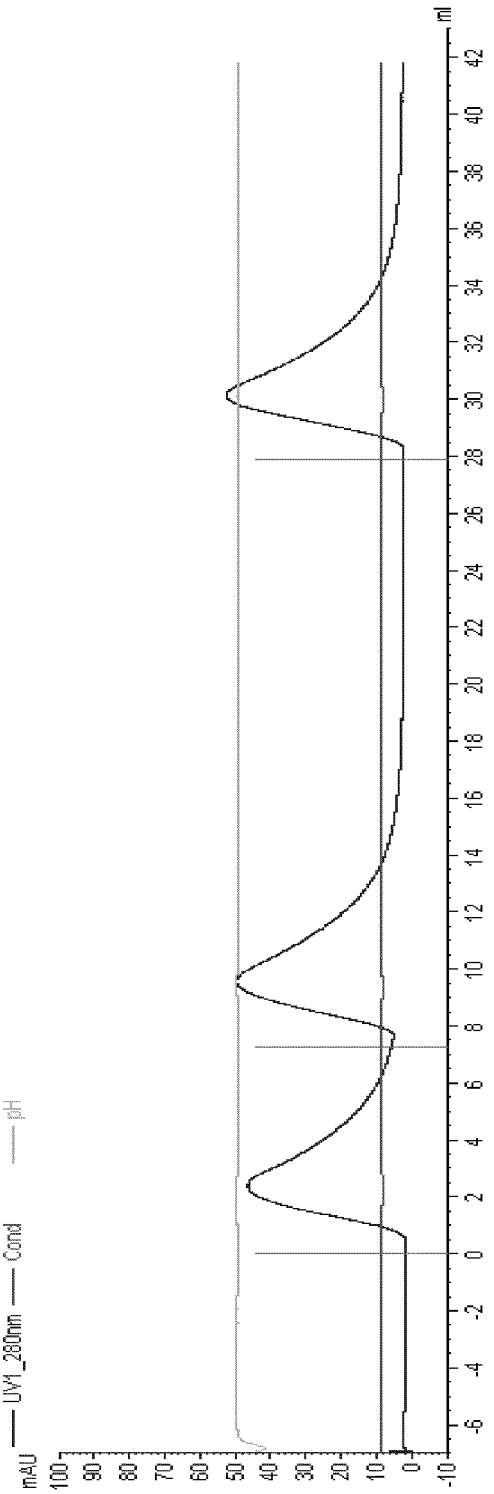


FIG. 3

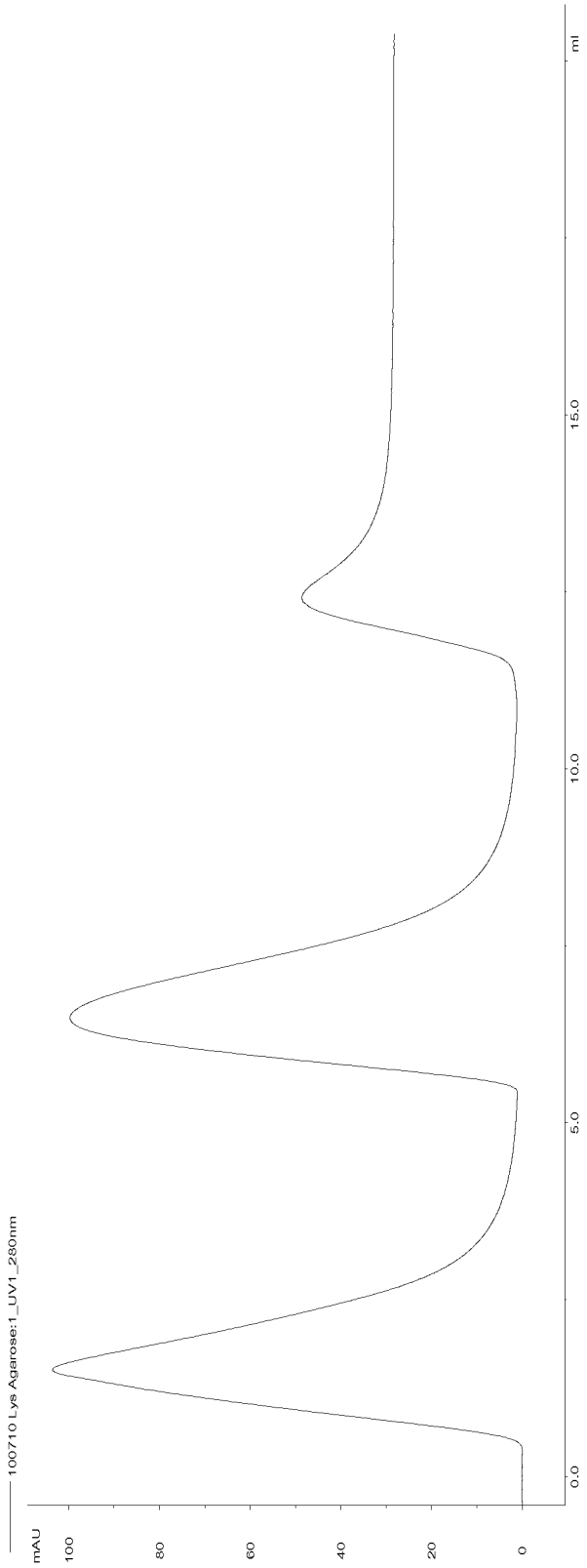

100710 Lys Agarose:1_UV1_280nm
mAU
100
80
60
40
20
0
0.0
5.0
10.0
15.0
ml

FIG. 4

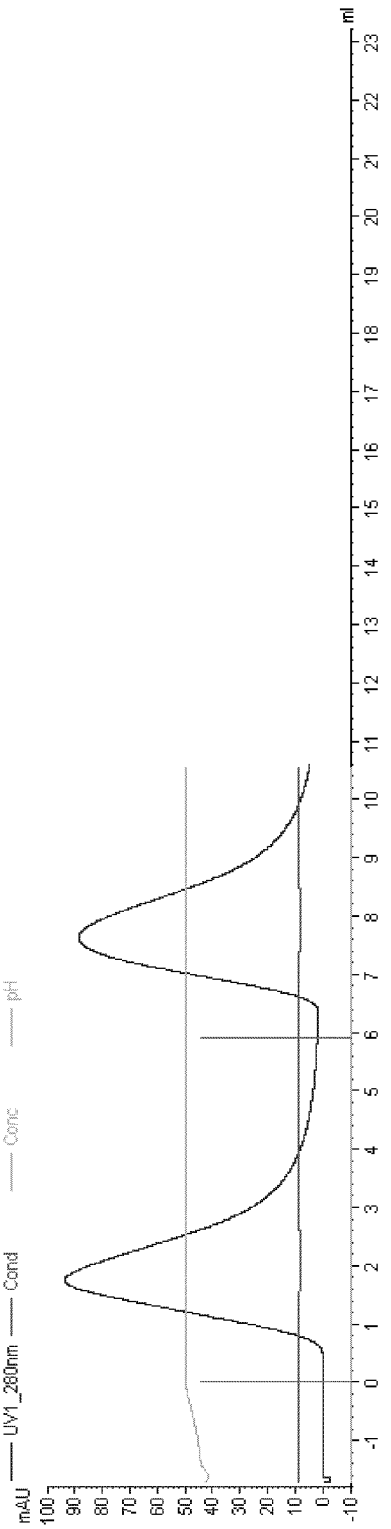


FIG. 5

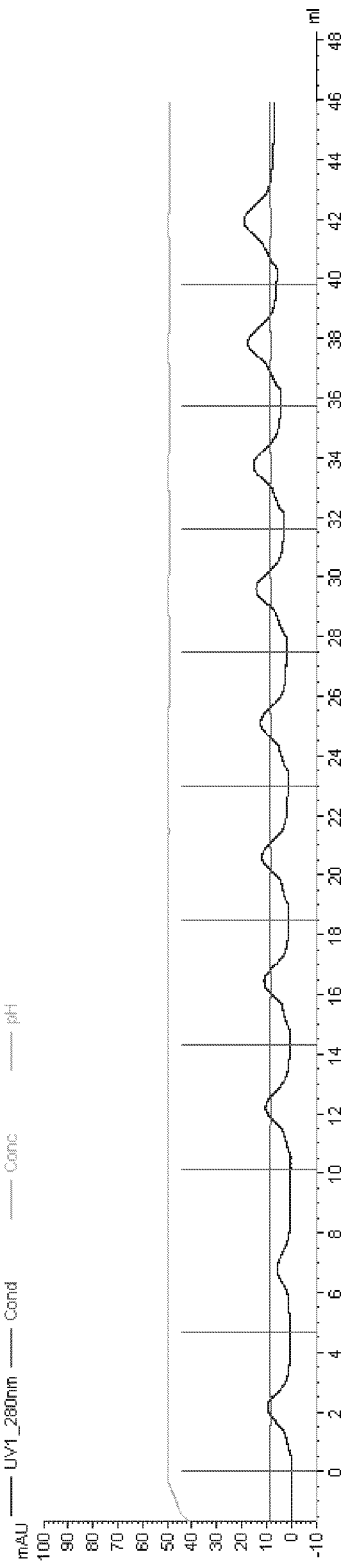


FIG. 6

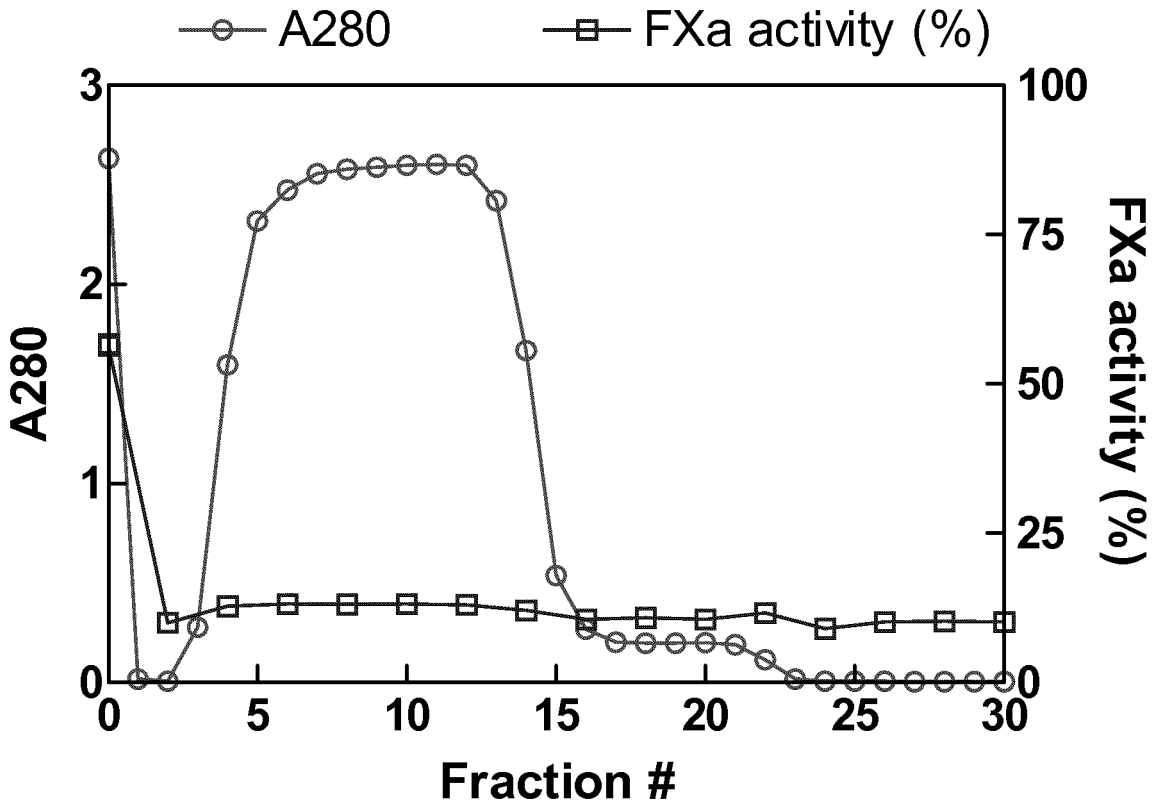

A280
FXa activity (%)
3
2
1
0
100
75
50
25
0
A280
FXa activity (%)
0
5
10
15
20
25
30
Fraction #

FIG. 7

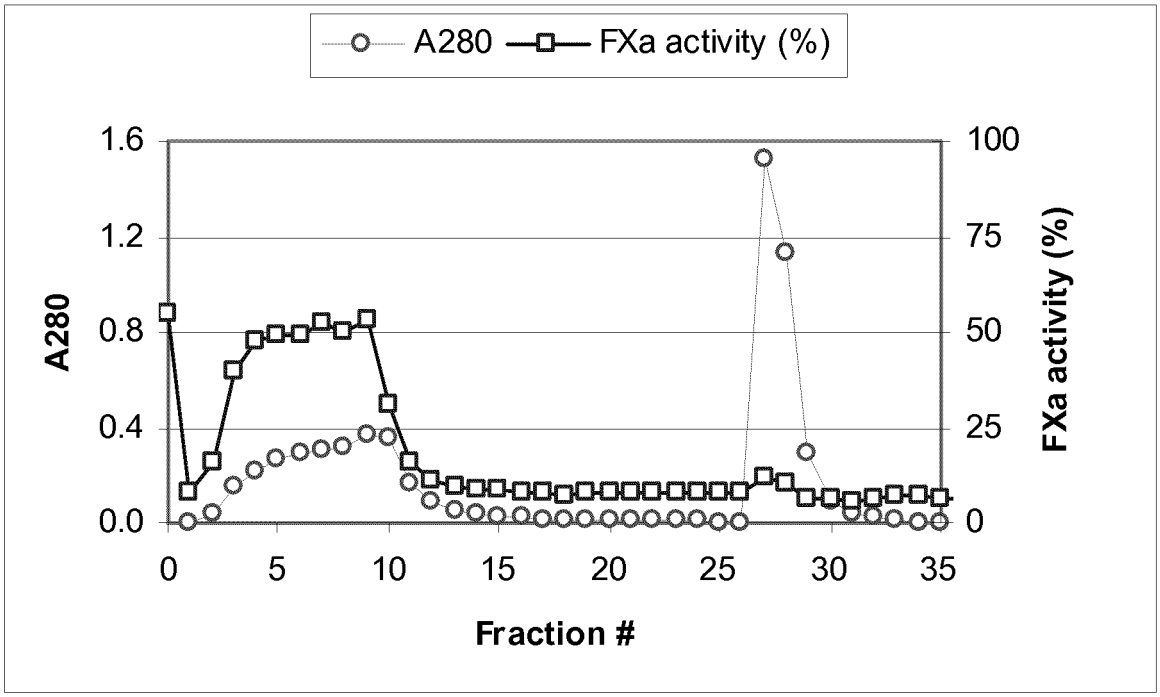

A280
FXa activity (%)
1.6
1.2
0.8
0.4
0.0
100
75
50
25
0
0
5
10
15
20
25
30
35
Fraction #

FIG. 8

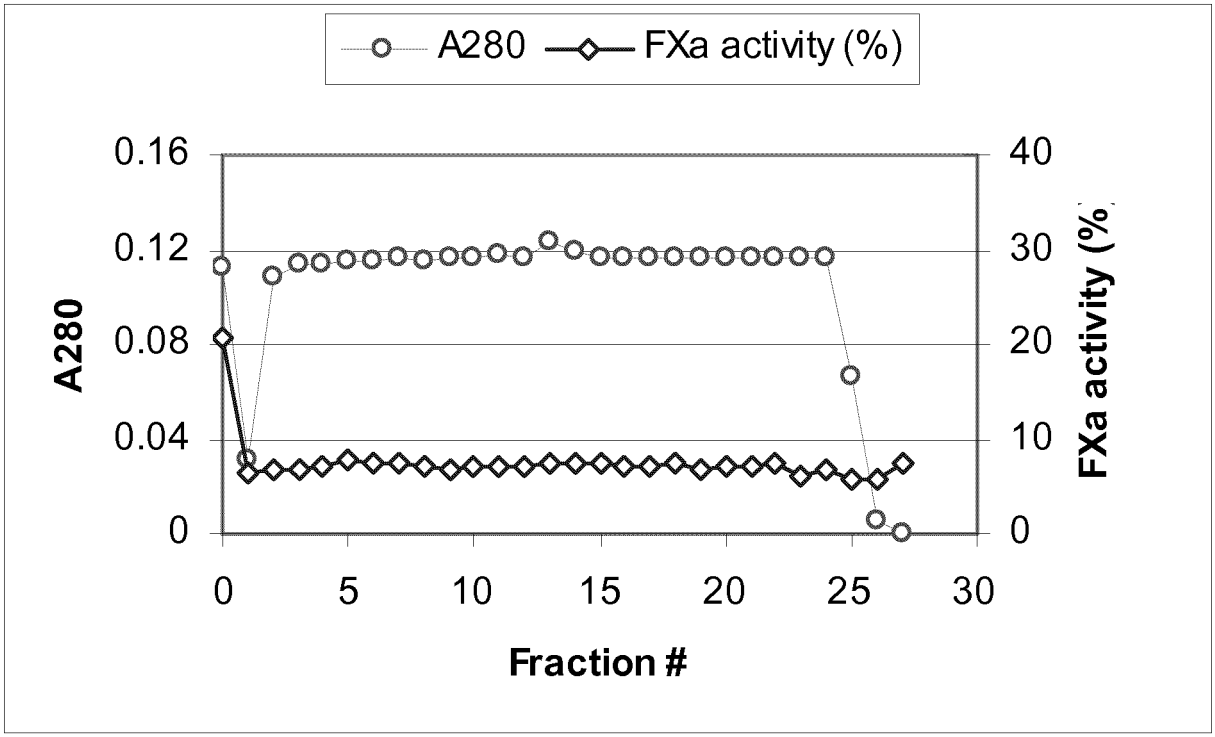

A280
FXa activity (%)
0.16
0.12
0.08
0.04
0
40
30
20
10
0
0
5
10
15
20
25
30
A280
FXa activity (%
Fraction #

FIG. 9

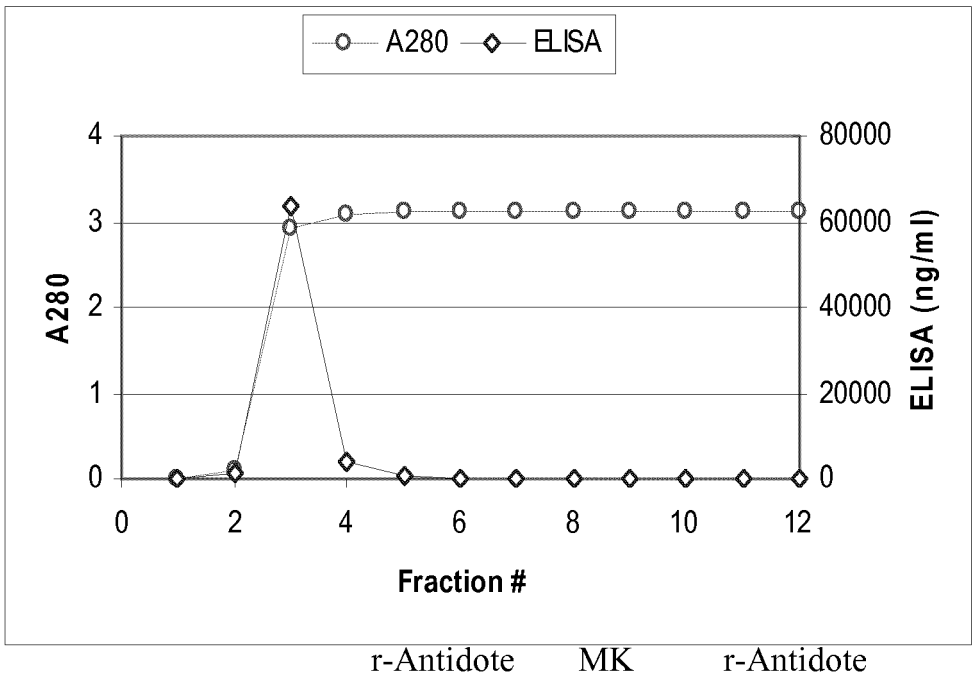


FIG. 10A

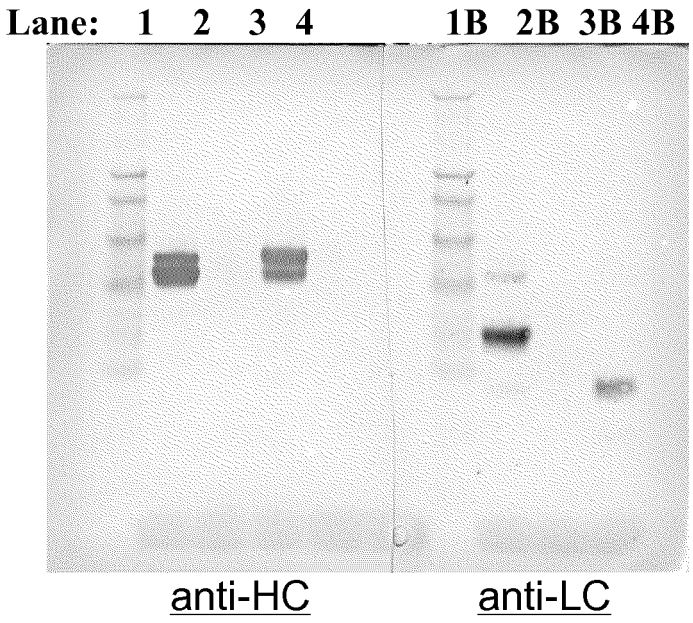


FIG. 10B

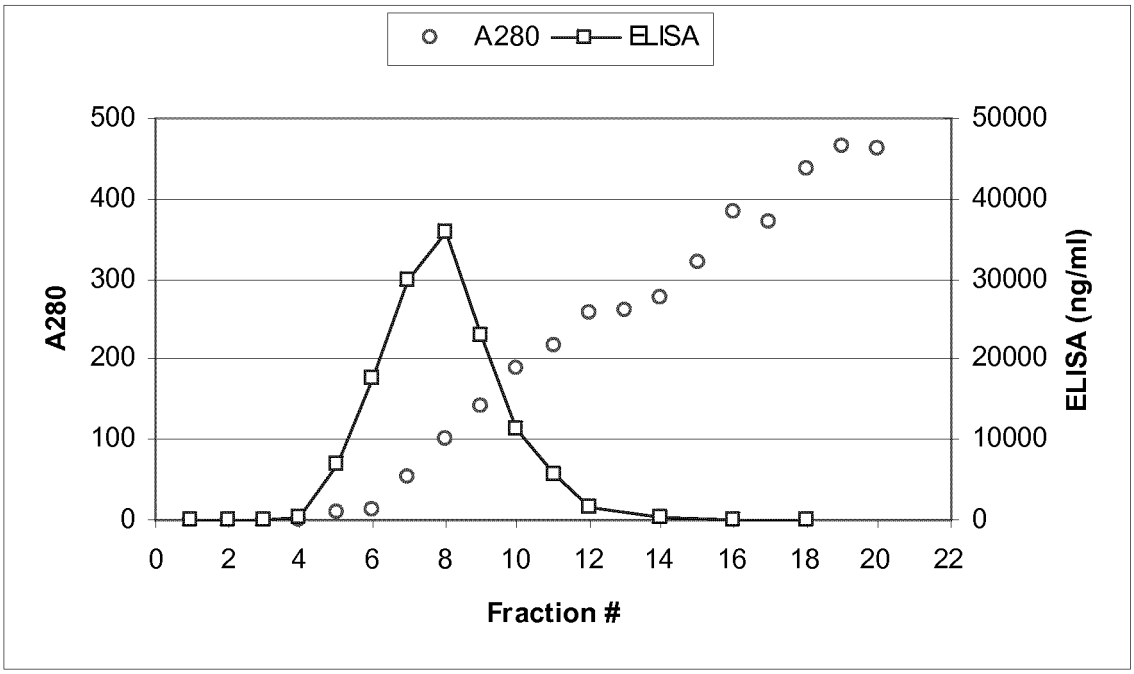

A280
ELISA
500
400
300
200
100
0
50000
40000
30000
20000
10000
0
A280
ELISA (ng/ml)
0 2 4 6 8 10 12 14 16 18 20 22
Fraction #

FIG. 11

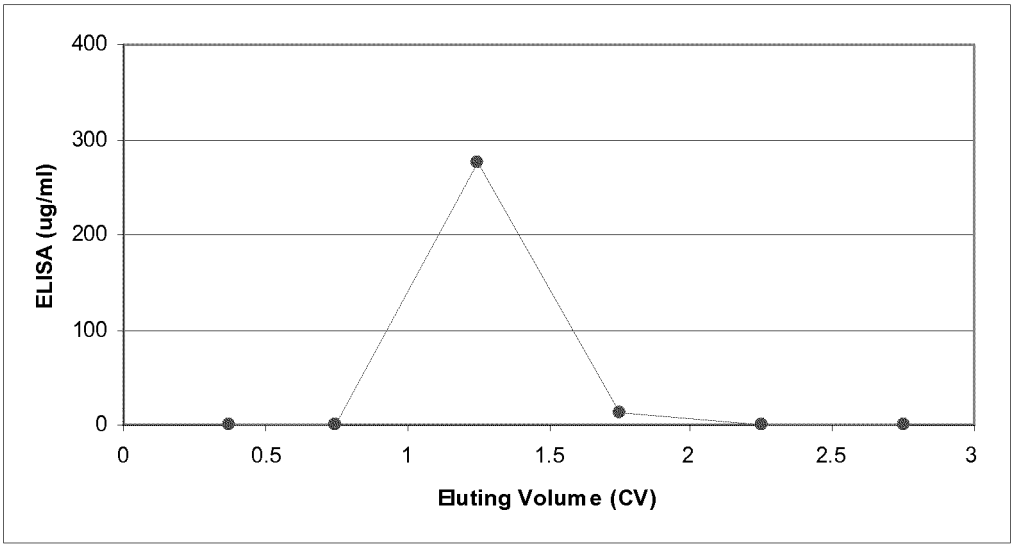


FIG. 12

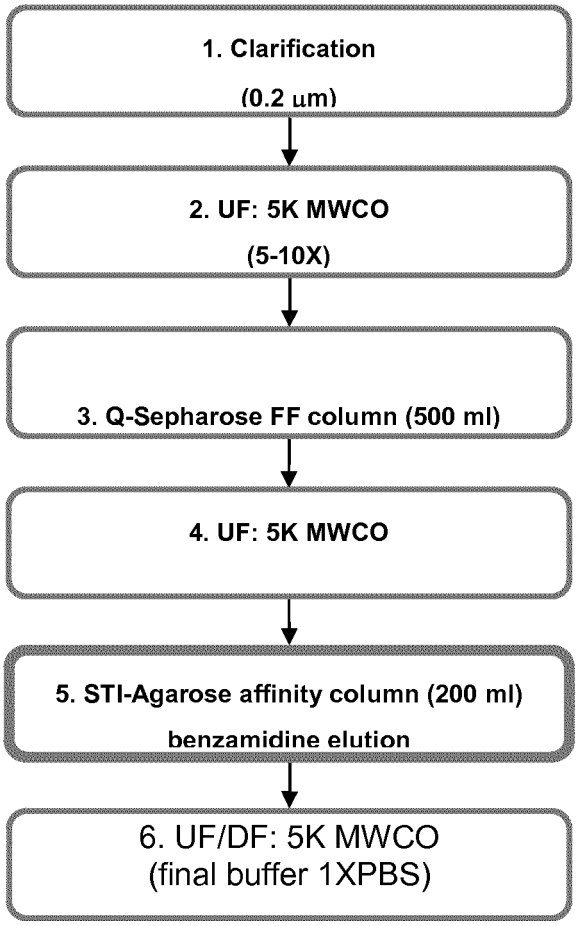

1. Clarification
(0.2 µm)
2. UF: 5K MWCO
(5-10X)
3. Q-Sepharose FF column (500 ml)
4. UF: 5K MWCO
5. STI-Agarose affinity column (200 ml)
benzamidine elution
6. UF/DF: 5K MWCO
(final buffer 1XPBS)

FIG. 13

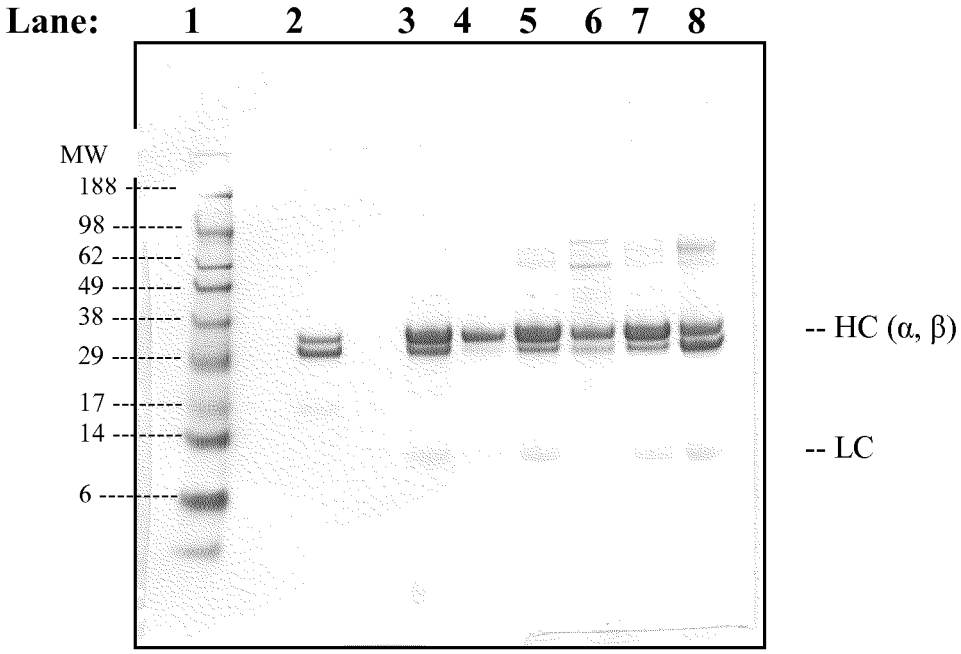


FIG. 14

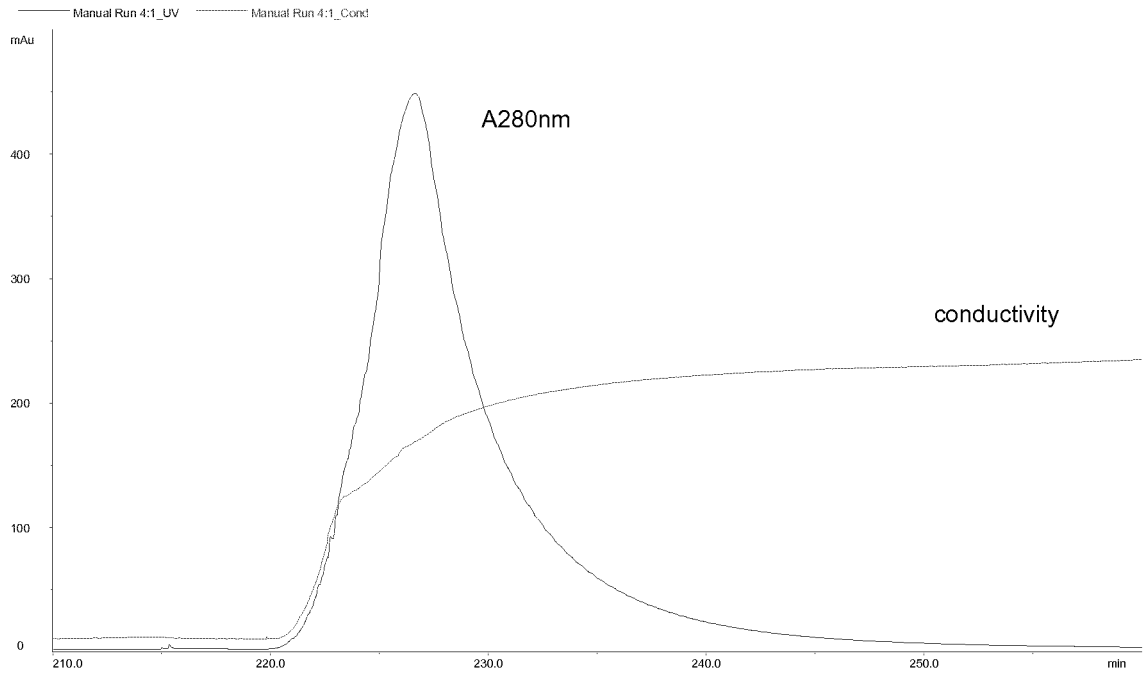

Manual Run 4:1_UV
Manual Run 4:1_Cond
mAu
400
300
200
100
0
A280nm
conductivity
210.0
220.0
230.0
240.0
250.0
min

FIG. 15

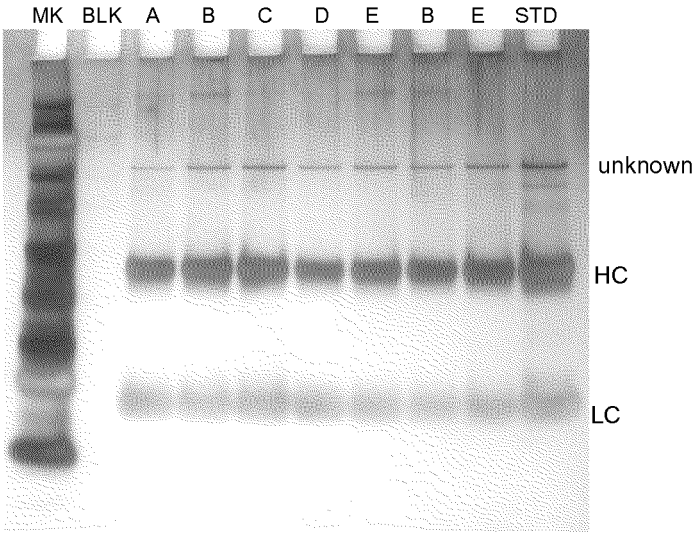


FIG. 16