ATGAATCCAAATCAAAAGATAATAGCACTTGGCTCTGTTTCTATAACTATTGCGACAATATG
TTTACTCATGCAGATTGCCATCTTAGCAACGACTATGACACTACATTTCAATGAATGTACCA
ACCCATCGAACAATCAAGCAGTGCCATGTGAACCAATCATAATAGAAAGGAACATAACAGAG
ATAGTGCATTTGAATAATACTACCATAGAGAAGGAAAGTTGTCCTAAAGTAGCAGAATACAA
GAATTGGTCAAAACCGCAATGTCAAATTACAGGGTTCGCCCCTTTCTCCAAGGACAACTCAA
TTAGGCTTTCTGCAGGCGGGGATATTTGGGTGACAAGAGAACCTTATGTATCGTGCGGTCTT
GGTAAATGTTACCAATTTGCACTTGGGCAGGGAACCACTTTGAACAACAAACACTCAAATGG
CACAATACATGATAGGAGTCCCCATAGAACCCTTTTAATGAACGAGTTGGGTGTTCCATTTC
ATTTGGGAACCAAACAAGTGTGCATAGCATGGTCCAGCTCAAGCTGCCATGATGGGAAGGCA
TGGTTACATGTTTGTGTCACTGGGGATGATAGAAATGCGACTGCTAGCATCATTTATGATGG
GATGCTTACCGACAGTATTGGTTCATGGTCTAAGAACATCCTCAGAACTCAGGAGTCAGAAT
GCGTTTGCATCAATGGAACTTGTACAGTAGTAATGACTGATGGAAGTGCATCAGGAAGGGCT
GATACTAAAATACTATTCATTAGAGAAGGGAAAATTGTCCACATTGGTCCACTGTCAGGAAG
TGCTCAGCATGTGGAGGAATGCTCCTGTTACCCCCGGTATCCAGAAGTTAGATGTGTTTGCA
GAGACAATTGGAAGGGCTCCAATAGACCCGTGCTATATATAAATGTGGCAGATTATAGTGTT
GATTCTAGTTATGTGTGCTCAGGACTTGTTGGCGACACACCAAGAAATGACGATAGCTCCAG
CAGCAGTAACTGCAGGGATCCTAATAACGAGAGAGGGGGCCCAGGAGTGAAAGGGTGGGCCT
TTGACAATGGAAATGATGTTTGGATGGGACGAACAATCAAGAAAGATTCGCGCTCTGGTTAT
GAGACTTTCAGGGTCGTTGGTGGTTGGACTACGGCTAATTCCAAGTCACAAATAAATAGGCA
AGTCATAGTTGACAGTGATAACTGGTCTGGGTATTCTGGTATATTCTCTGTTGAAGGAAAAA
CCTGCATCAACAGGTGTTTTTATGTGGAGTTGATAAGAGGGAGACCACAGGAGACCAGAGTA
TGGTGGACTTCAAATAGCATCATTGTATTTTGTGGAACTTCAGGTACCTATGGAACAGGCTC
ATGGCCCGATGGAGCGAATATCAATTTCATGTCTATA**TAA**

FIGURE 1

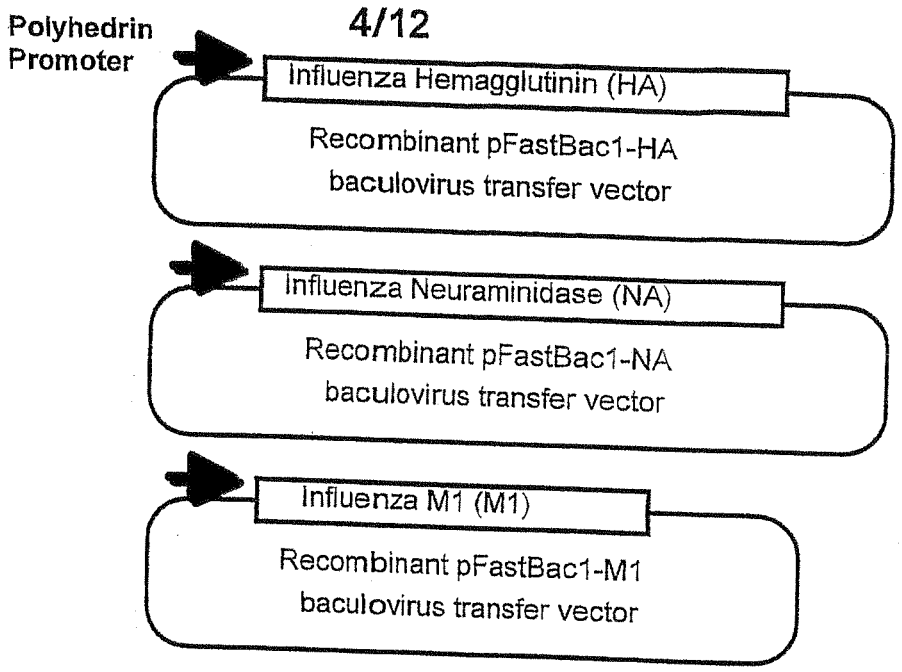
ATGGAAACAATATCACTAATAACTATACTACTAGTAGTAACAGCAAGCAATGCAGATAAAAT
CTGCATCGGCCACCAGTCAACAAACTCCACAGAAACTGTGGACACGCTAACAGAAACCAATG
TTCCTGTGACACATGCCAAAGAATTGCTCCACACAGAGCATAATGGAATGCTGTGTGCAACA
AGCCTGGGACATCCCCTCATTCTAGACACATGCACTATTGAAGGACTAGTCTATGGCAACCC
TTCTTGTGACCTGCTGTTGGGAGGAAGAGAATGGTCCTACATCGTCGAAAGATCATCAGCTG
TAAATGGAACGTGTTACCCTGGGAATGTAGAAAACCTAGAGGAACTCAGGACACTTTTTAGT
TCCGCTAGTTCCTACCAAAGAATCCAAATCTTCCCAGACACAACCTGGAATGTGACTTACAC
TGGAACAAGCAGAGCATGTTCAGGTTCATTCTACAGGAGTATGAGATGGCTGACTCAAAAGA
GCGGTTTTTACCCTGTTCAAGACGCCCAATACACAAATAACAGGGGAAAGAGCATTCTTTTC
GTGTGGGGCATACATCACCCACCCACCTATACCGAGCAAACAAATTTGTACATAAGAAACGA
CACAACAACAAGCGTGACAACAGAAGATTTGAATAGGACCTTCAAACCAGTGATAGGGCCAA
GGCCCCTTGTCAATGGTCTGCAGGGAAGAATTGATTATTATTGGTCGGTACTAAAACCAGGC
CAAACATTGCGAGTACGATCCAATGGGAATCTAATTGCTCCATGGTATGGACACGTTCTTTC
AGGAGGGAGCCATGGAAGAATCCTGAAGACTGATTTAAAAGGTGGTAATTGTGTAGTGCAAT
GTCAGACTGAAAAAGGTGGCTTAAACAGTACATTGCCATTCCACAATATCAGTAAATATGCA
TTTGGAACCTGCCCCAAATATGTAAGAGTTAATAGTCTCAAACTGGCAGTCGGTCTGAGGAA
CGTGCCTGCTAGATCAAGTAGAGGACTATTTGGAGCCATAGCTGGATTCATAGAAGGAGGTT
GGCCAGGACTAGTCGCTGGCTGGTATGGTTTCCAGCATTCAAATGATCAAGGGGTTGGTATG
GCTGCAGATAGGGATTCAACTCAAAAGGCAATTGATAAAATAACATCCAAGGTGAATAATAT
AGTCGACAAGATGAACAAGCAATATGAAATAATTGATCATGAATTCAGTGAGGTTGAAACTA
GACTCAATATGATCAATAATAAGATTGATGACCAAATACAAGACGTATGGGCATATAATGCA
GAATTGCTAGTACTACTTGAAAATCAAAAAACACTCGATGAGCATGATGCGAACGTGAACAA
TCTATATAACAAGGTGAAGAGGGCACTGGGCTCCAATGCTATGGAAGATGGGAAAGGCTGTT
TCGAGCTATACCATAAATGTGATGATCAGTGCATGGAAACAATTCGGAACGGGACCTATAAT
AGGAGAAAGTATAGAGAGGAATCAAGACTAGAAAGGCAGAAAATAGAGGGGGTTAAGCTGGA
ATCTGAGGGAACTTACAAAATCCTCACCATTTATTCGACTGTCGCCTCATCTCTTGTGCTTG
CAATGGGGTTTGCTGCCTTCCTGTTCTGGGCCATGTCCAATGGATCTTGCAGATGCAACATT
TGTATA**TAA**

FIGURE 2

ATGAGTCTTCTAACCGAGGTCGAAACGTACGTTCTCTCTATCATCCCATCAGGCCCCCTCAA
AGCCGAGATCGCGCAGAGACTTGAGGATGTTTTTGCAGGGAAGAACACAGATCTTGAGGCTC
TCATGGAATGGCTAAAGACAAGACCAATCCTGTCACCTCTGACTAAGGGGATTTTAGGGTTT
GTGTTCACGCTCACCGTGCCCAGTGAGCGAGGACTGCAGCGTAGACGATTTGTCCAAAATGC
CCTAAATGGGAATGGAGACCCAAACAACATGGACAGGGCAGTTAAACTATACAAGAAGCTGA
AGAGGGAAATGACATTCCATGGAGCAAAGGAAGTTGCACTCAGTTACTCAACTGGTGCGCTT
GCCAGTTGCATGGGTCTCATATACAACCGGATGGGAACAGTGACCACAGAAGTGGCTCTTGG
CCTAGTATGTGCCACTTGTGAACAGATTGCTGATGCCCAACATCGGTCCCACAGGCAGATGG
CGACTACCACCAACCCACTAATCAGGCATGAGAACAGAATGGTACTAGCCAGCACTACGGCT
AAGGCCATGGAGCAGATGGCTGGATCAAGTGAGCAGGCAGCAGAAGCCATGGAAGTCGCAAG
TCAGGCTAGGCAAATGGTGCAGGCTATGAGGACAATTGGGACTCACCCTAGTTCCAGTGCAG
GTCTAAAAGATGATCTTATTGAAAATTTGCAGGCTTACCAGAAACGGATGGGAGTGCAAATG
CAGAGATTCAAG**TGA**

FIGURE 3

(A)


Polyhedrin
Promoter
Influenza Hemagglutinin (HA)
Recombinant pFastBac1-HA
baculovirus transfer vector
Influenza Neuraminidase (NA)
Recombinant pFastBac1-NA
baculovirus transfer vector
Influenza M1 (M1)
Recombinant pFastBac1-M1
baculovirus transfer vector

(B)

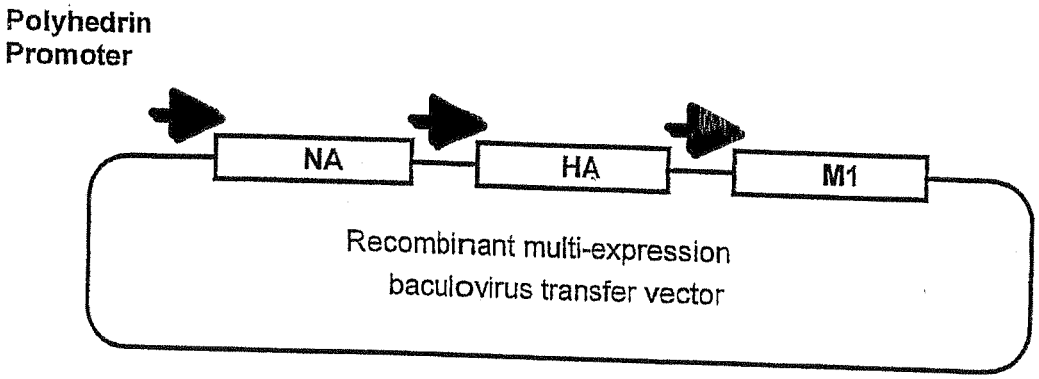

Polyhedrin
Promoter
NA
HA
M1
Recombinant multi-expression
baculovirus transfer vector

FIGURE 4

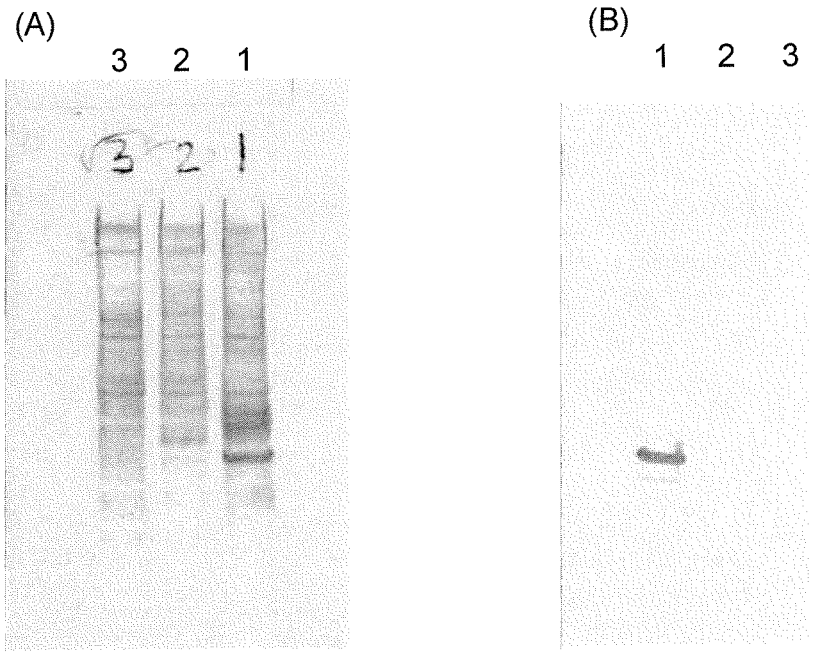


FIGURE 5

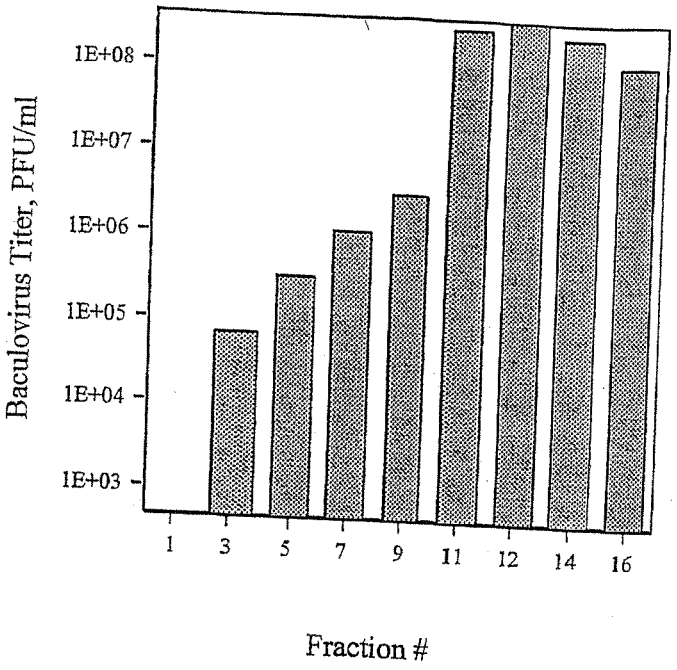

Baculovirus Titer, PFU/ml
1E+08
1E+07
1E+06
1E+05
1E+04
1E+03
1
3
5
7
9
11
12
14
16
Fraction #

FIGURE 6

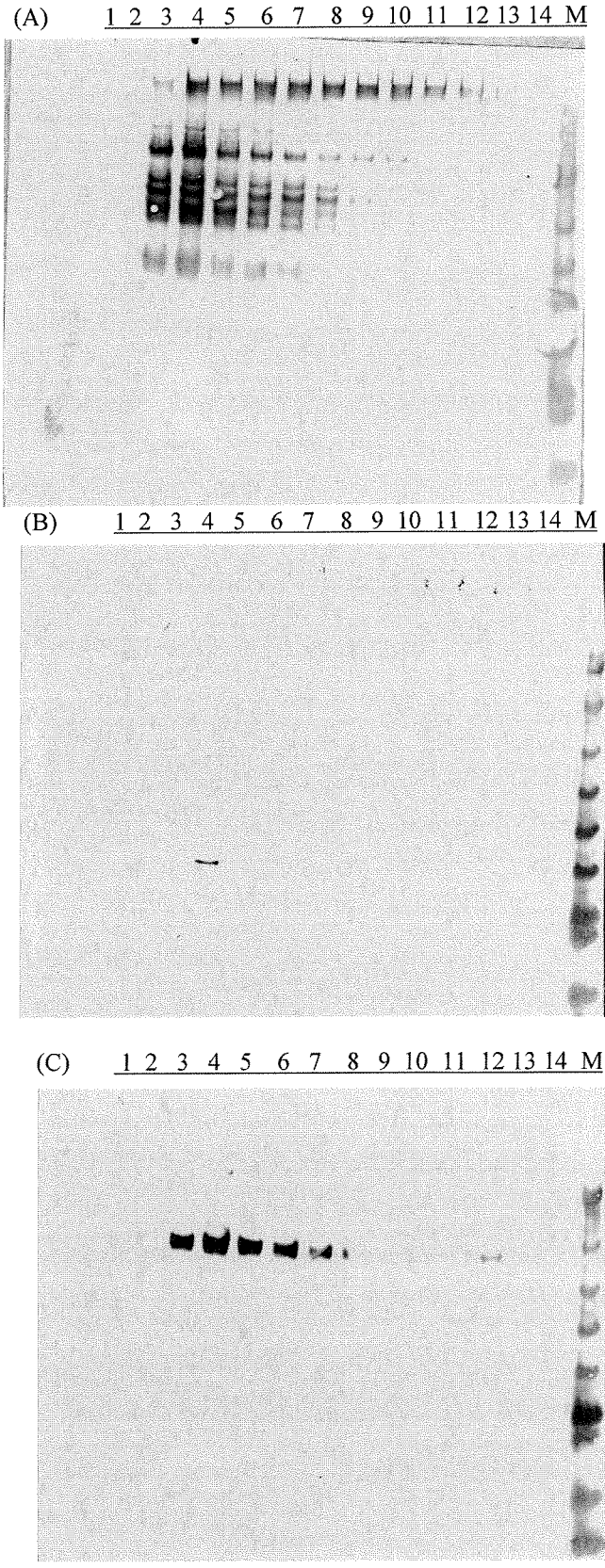

(A) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 M
(B) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 M
(C) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 M

FIGURE 7

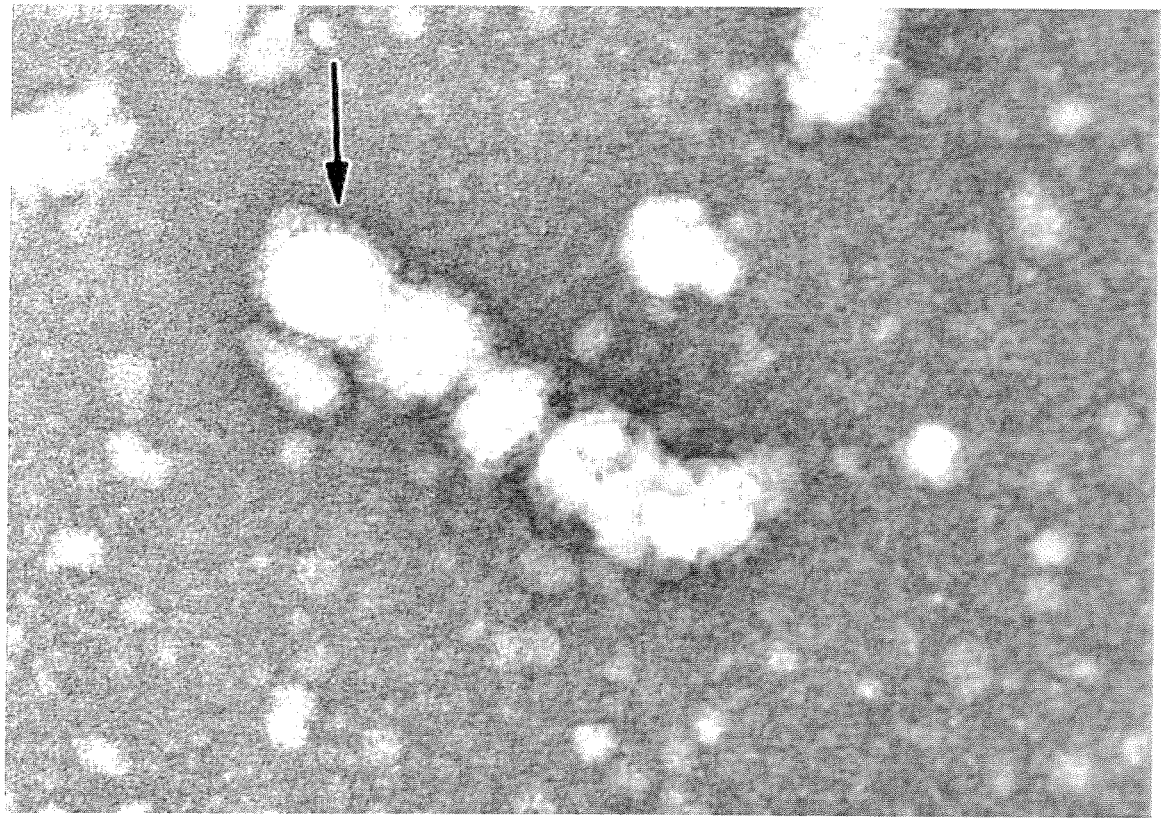


FIGURE 8

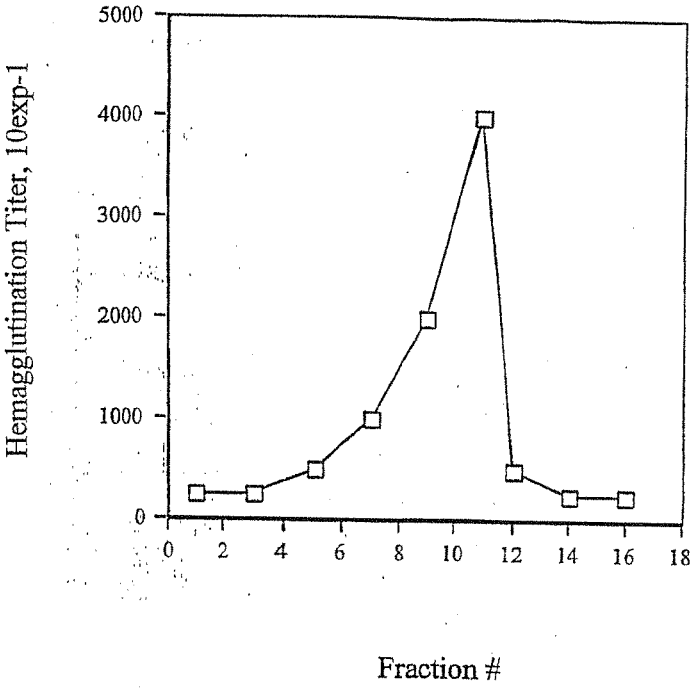

Hemagglutination Titer, 10exp-1
5000
4000
3000
2000
1000
0
0
2
4
6
8
10
12
14
16
18
Fraction #

FIGURE 9

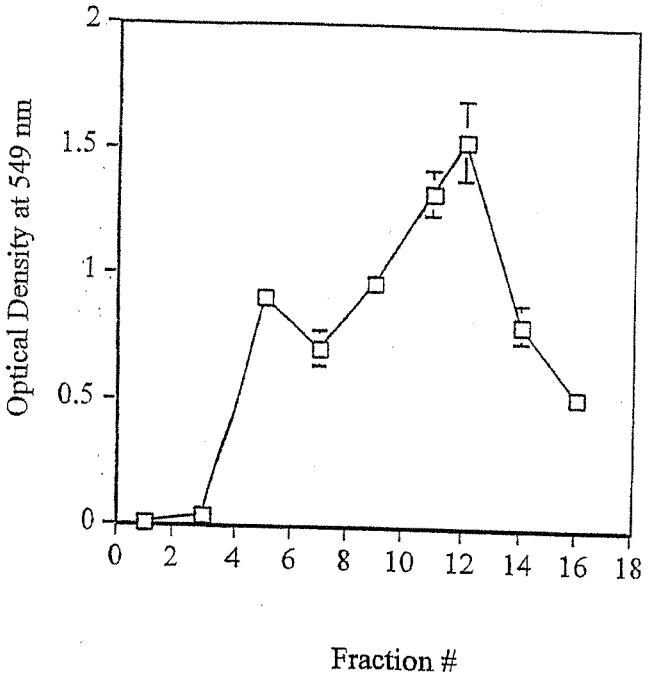

Optical Density at 549 nm
2
1.5
1
0.5
0
0
2
4
6
8
10
12
14
16
18
Fraction #

FIGURE 10

Study Day	-1	0	27	28	54
	Pre-bleed	Primary Immunization	Primary Bleed	Booster Immunization	Secondary Bleed

FIGURE 11

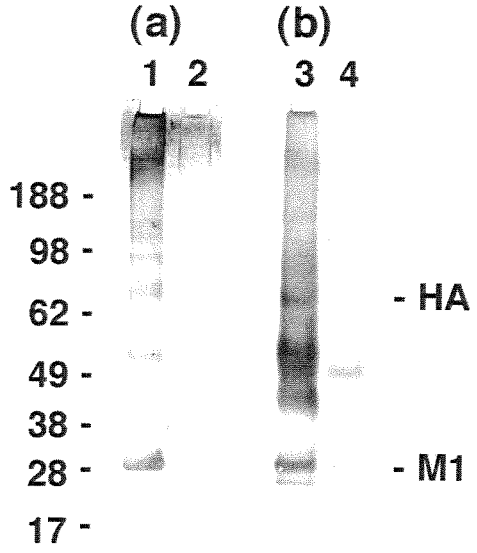


FIGURE 12