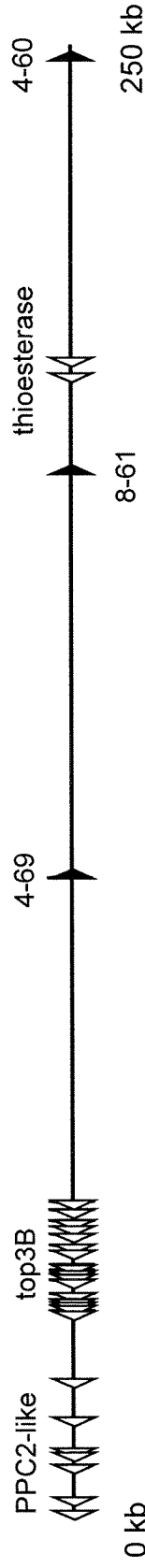


# Human $\lambda$ Light Chain Locus

## Cluster C



## Cluster C

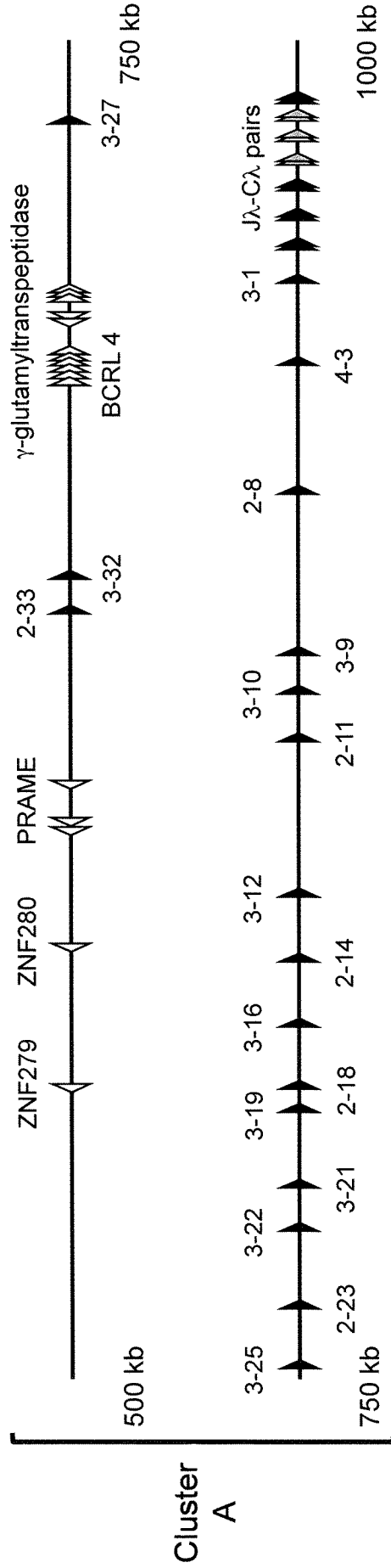
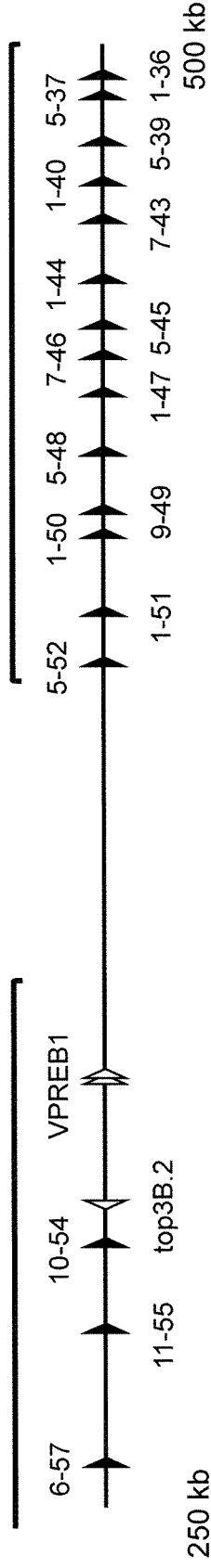


FIG. 1

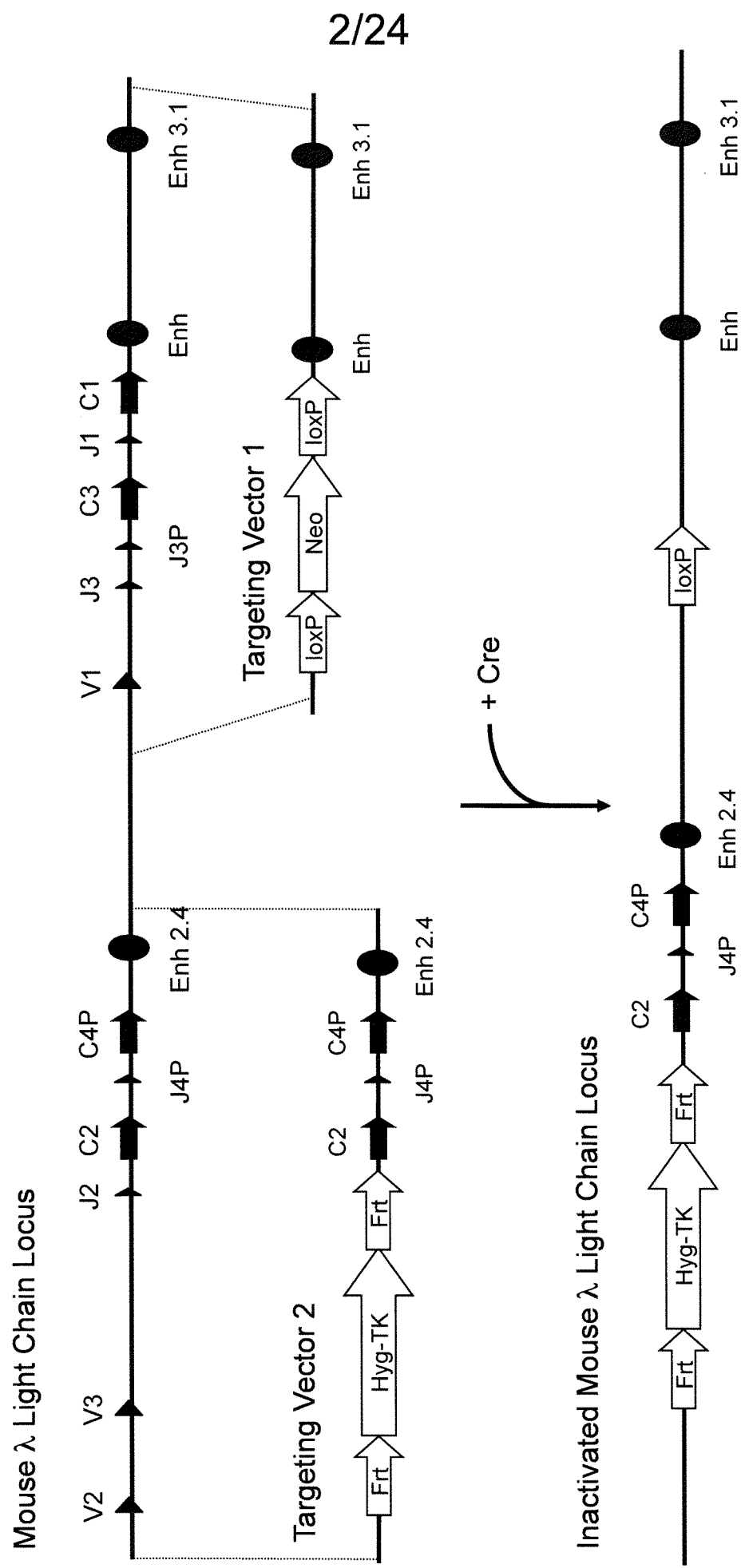


FIG. 2

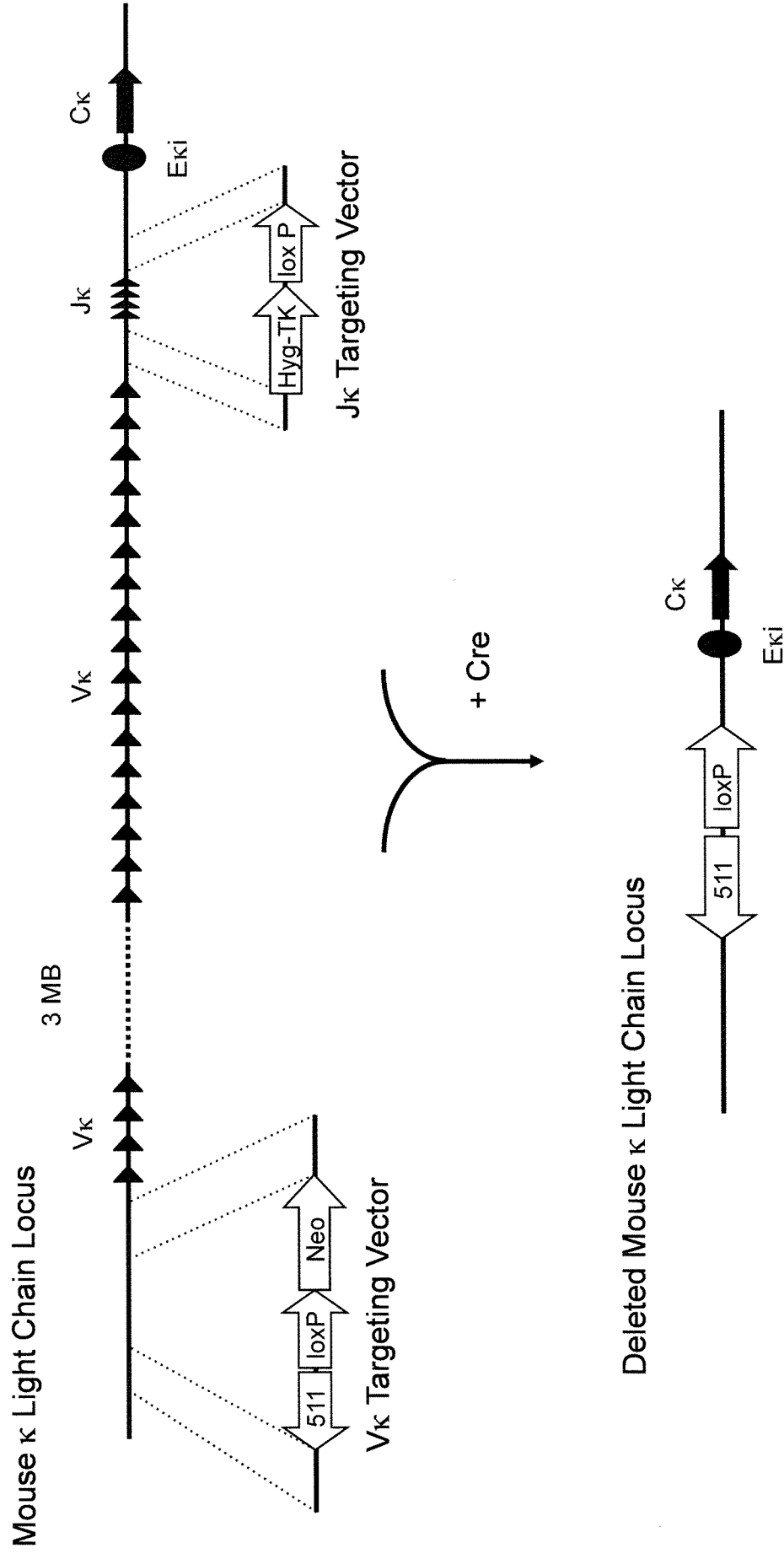


FIG. 3

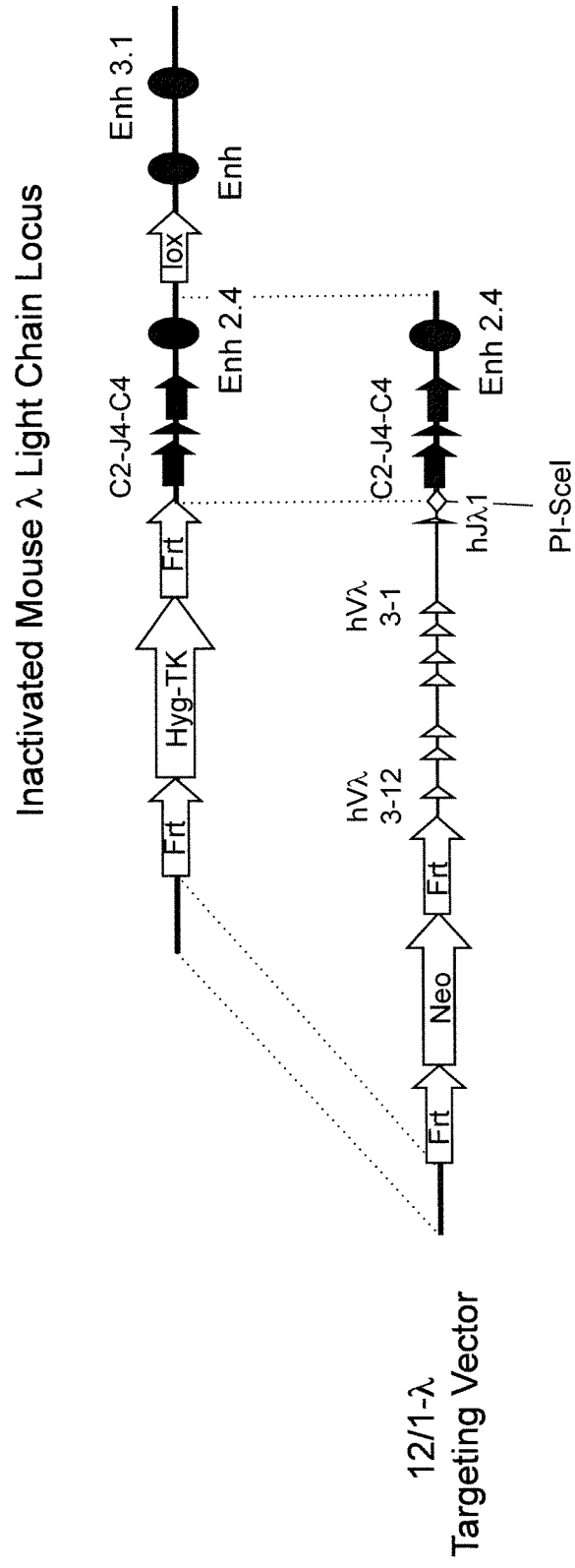


FIG. 4A

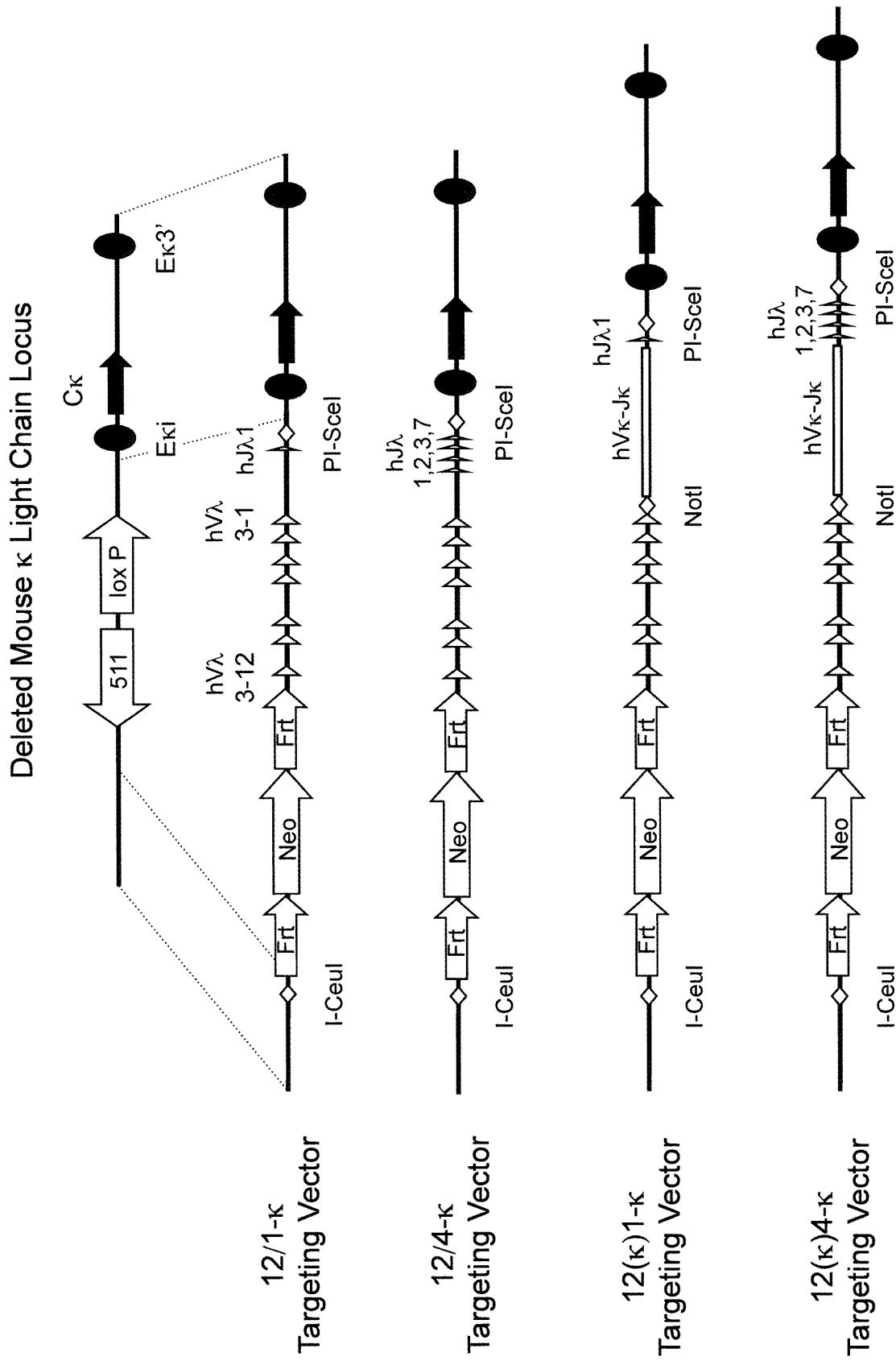


FIG. 4B

6/24

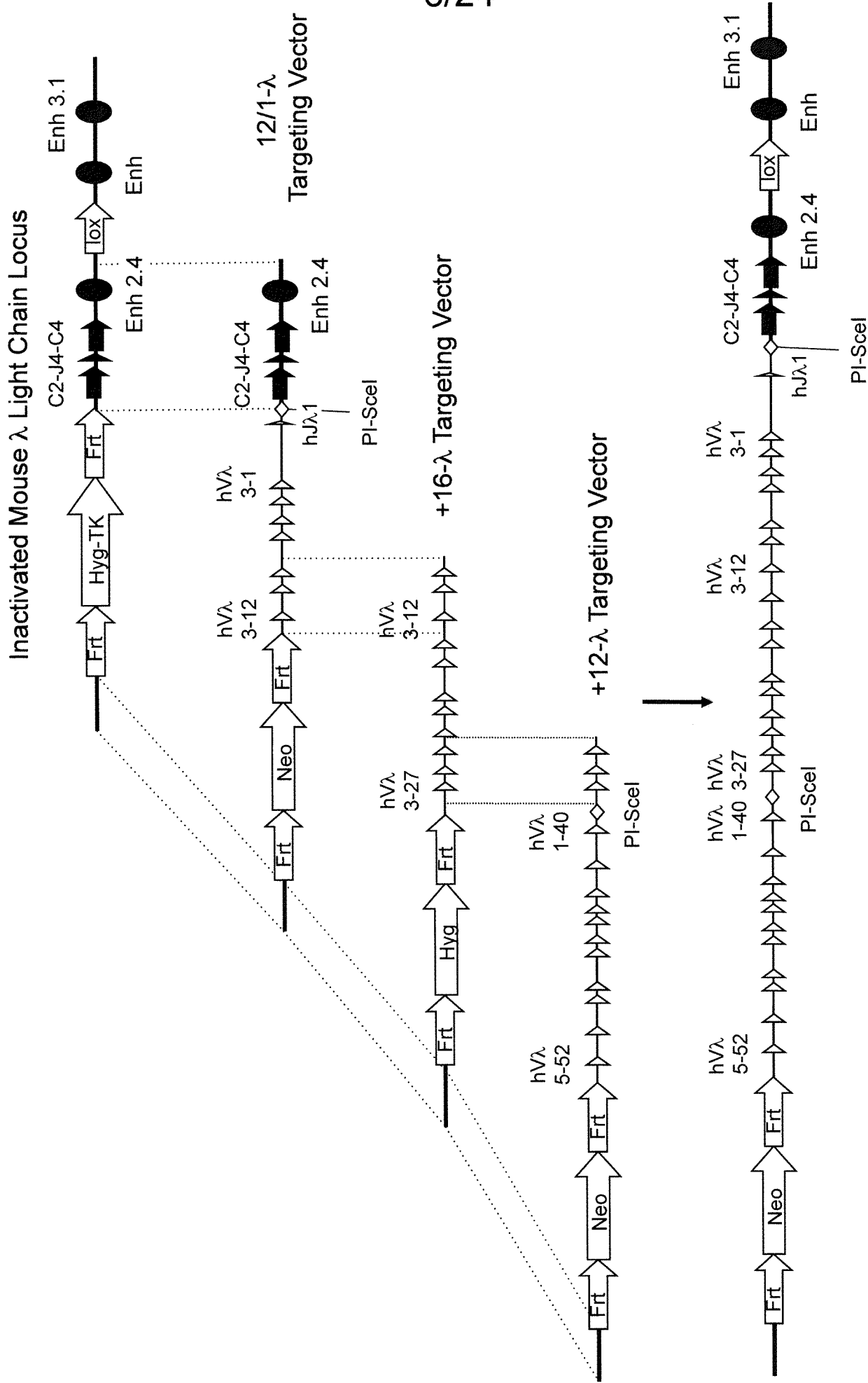


FIG. 5A

# Deleted Mouse $\kappa$ Light Chain Locus

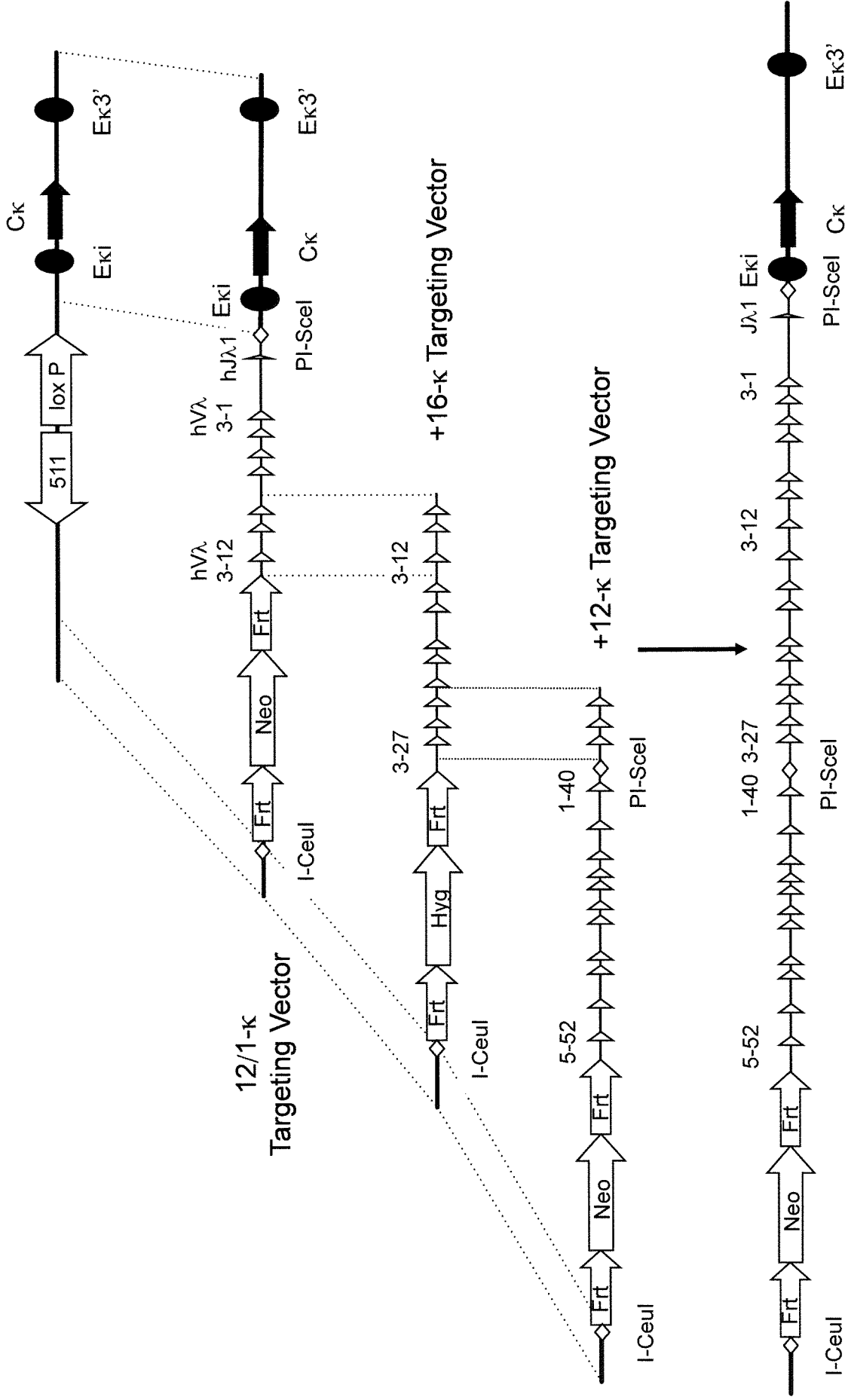


FIG. 5B

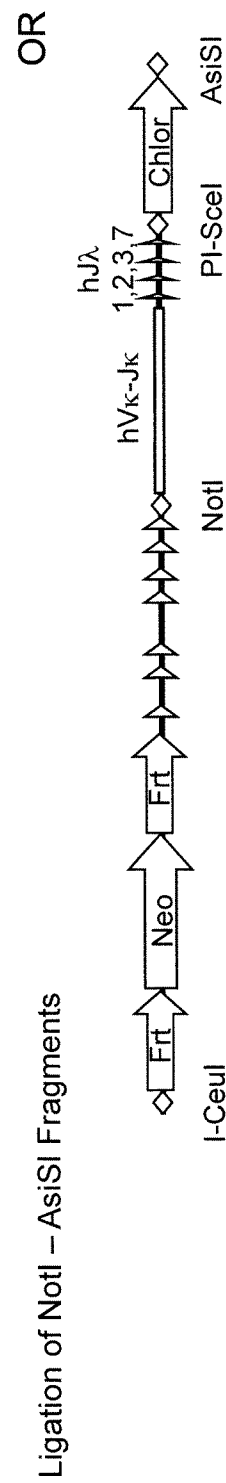
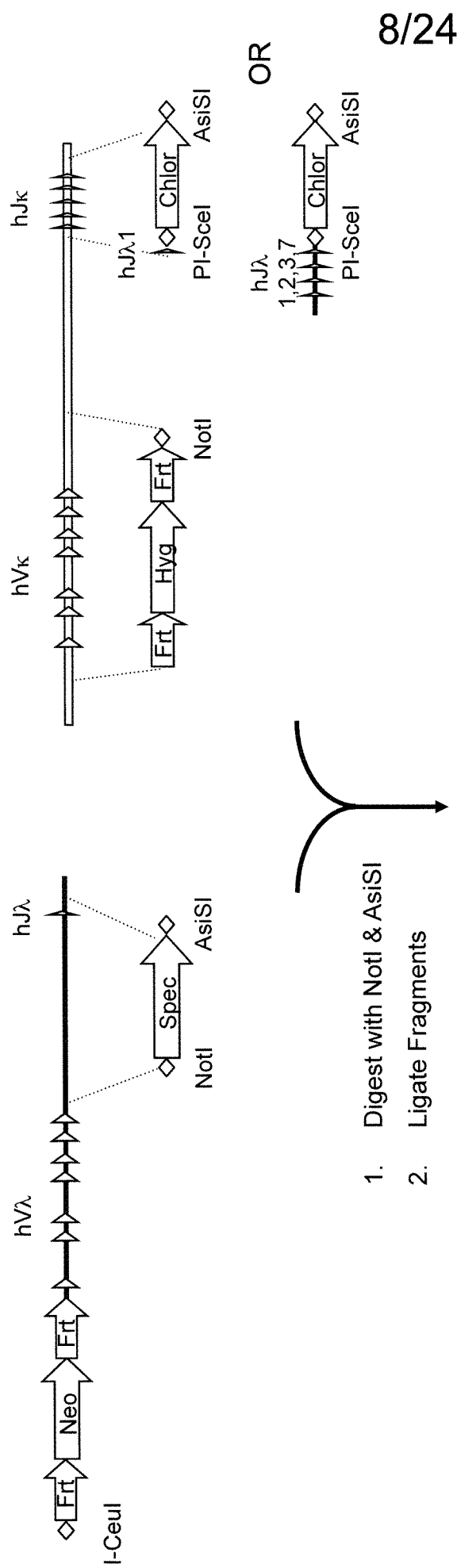


FIG. 6

9/24

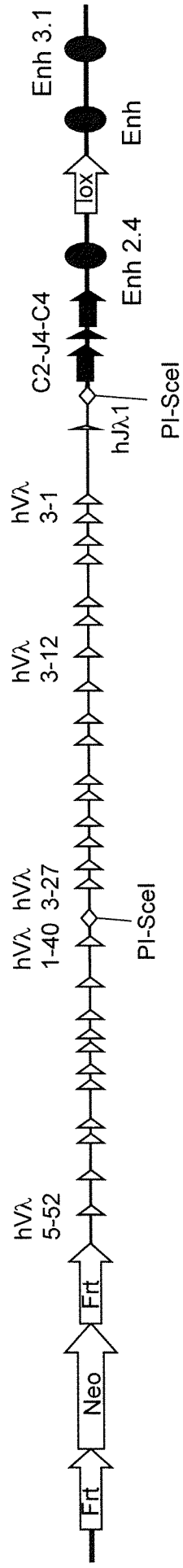


FIG. 7A

10/24

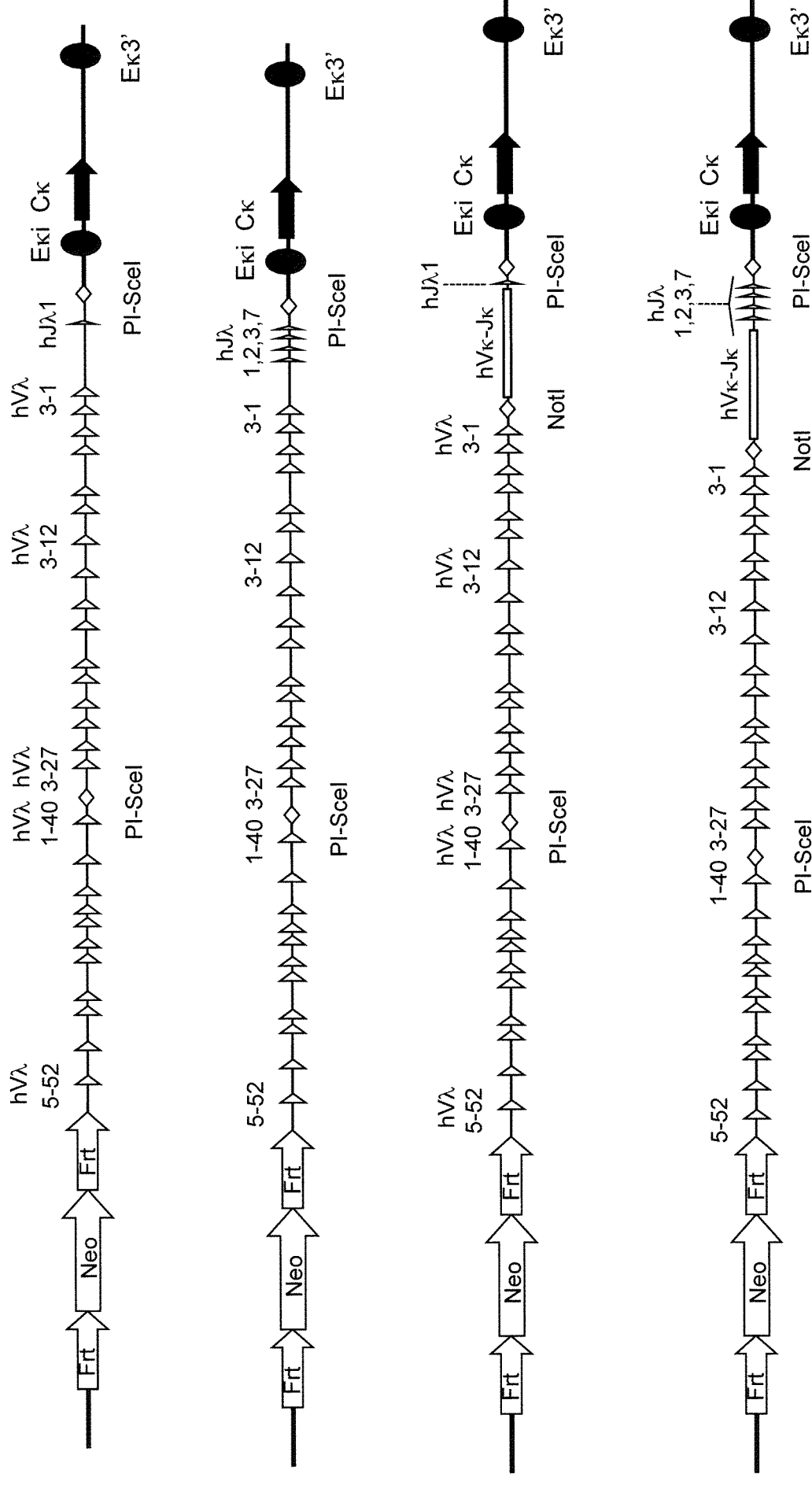


FIG. 7B

11/24

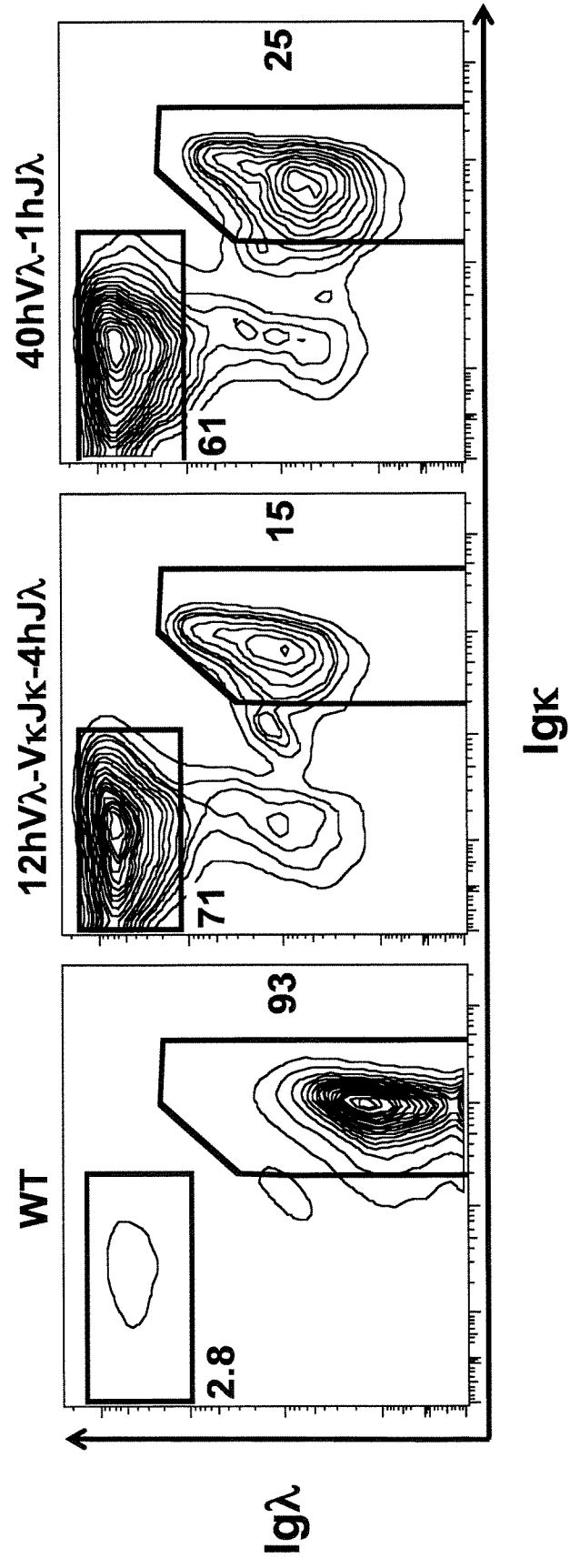


FIG. 8A

12/24

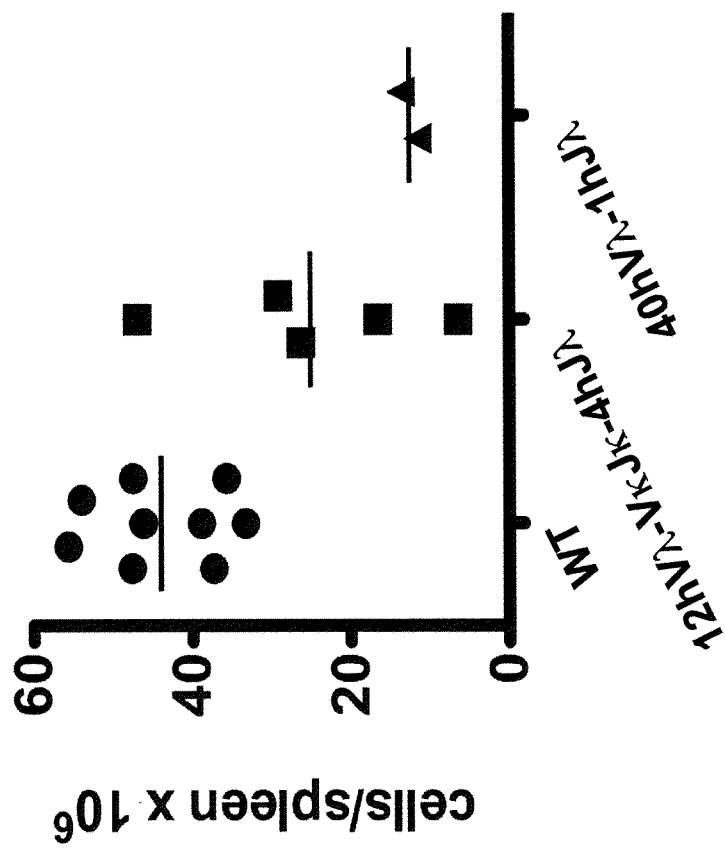


FIG. 8B

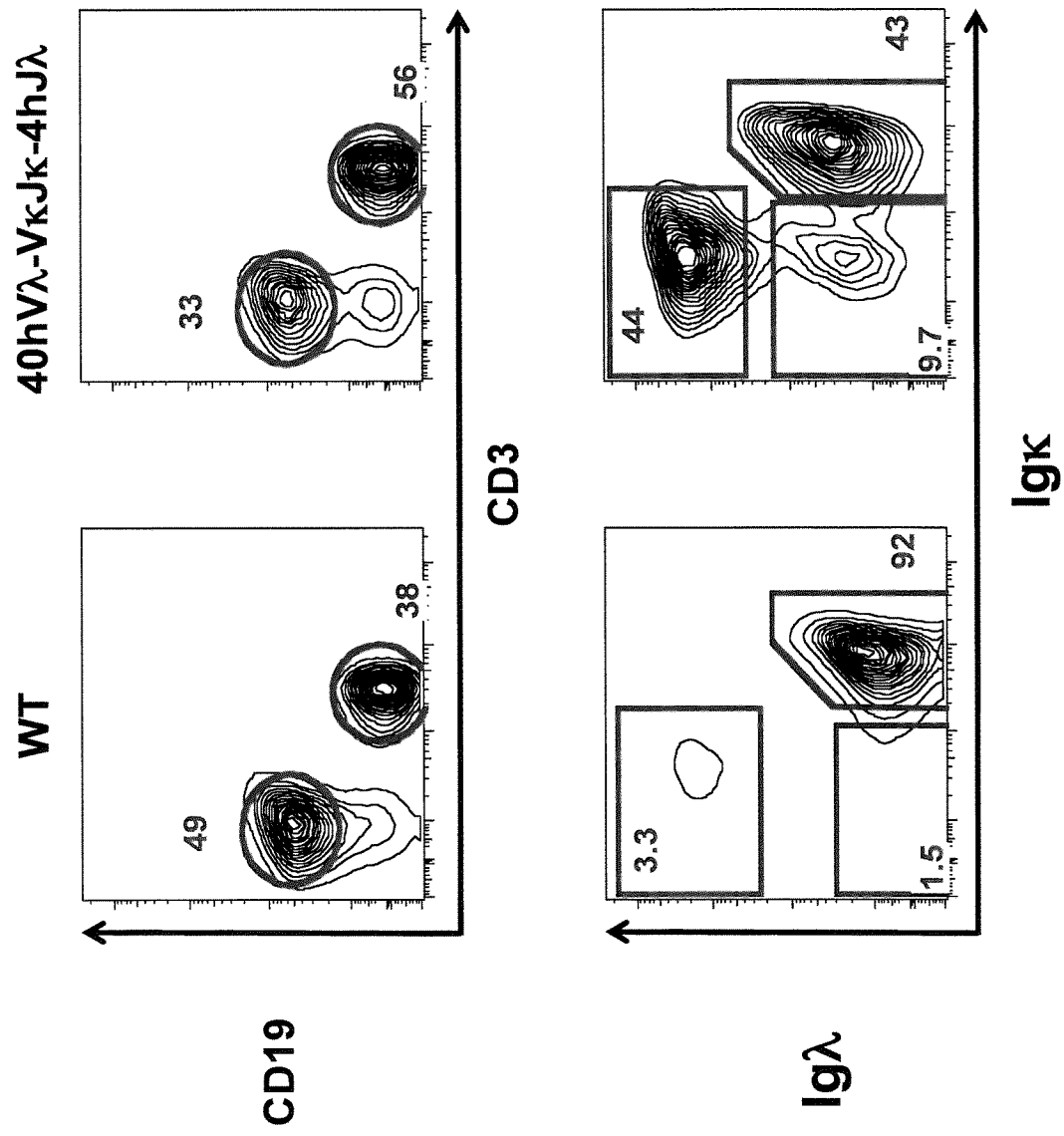


FIG. 9A

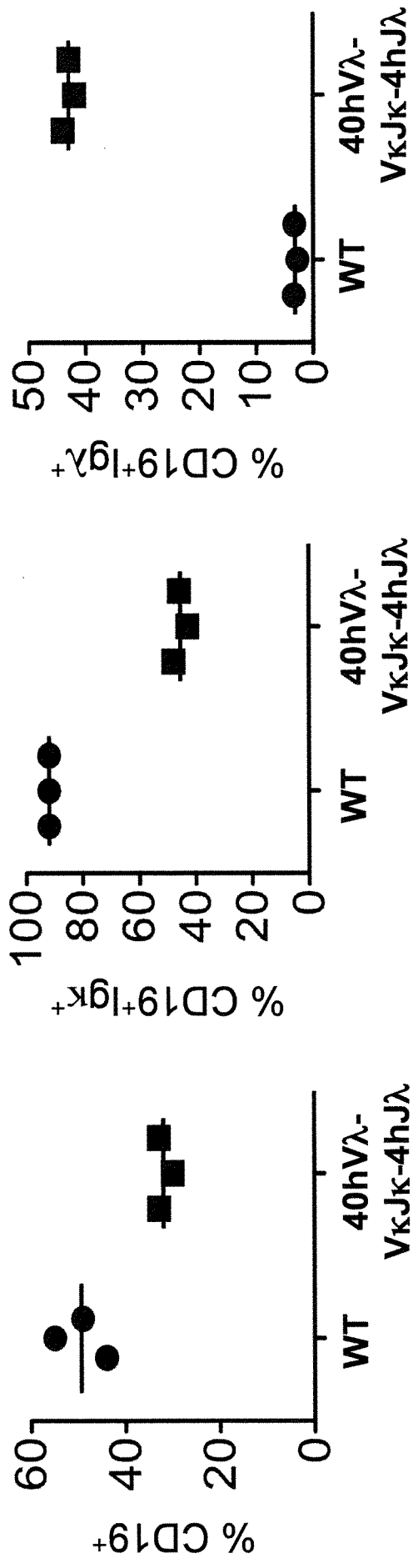


FIG. 9B

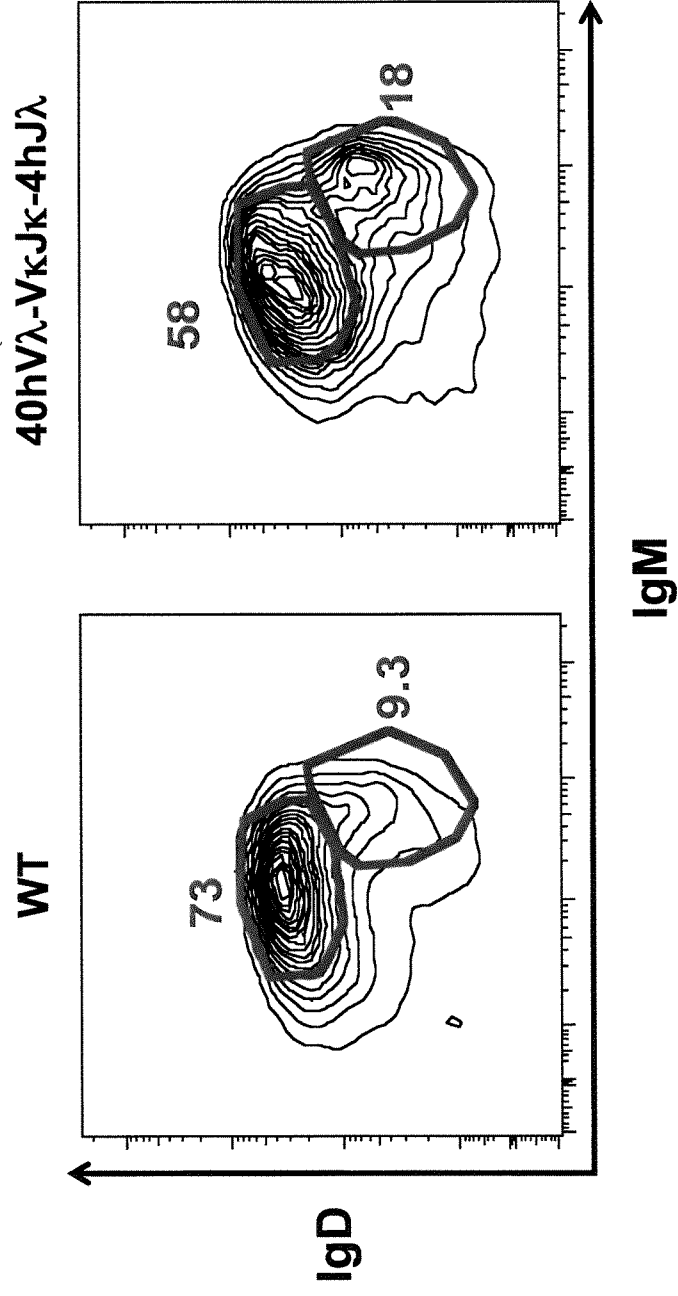


FIG. 9C

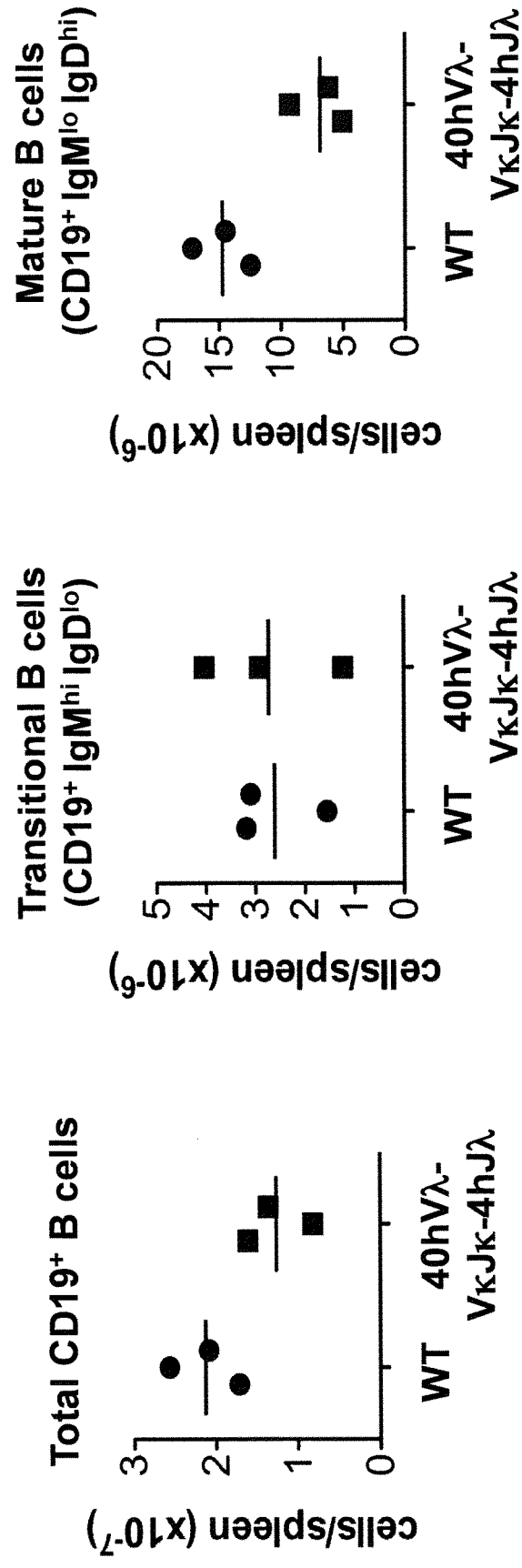


FIG. 9D

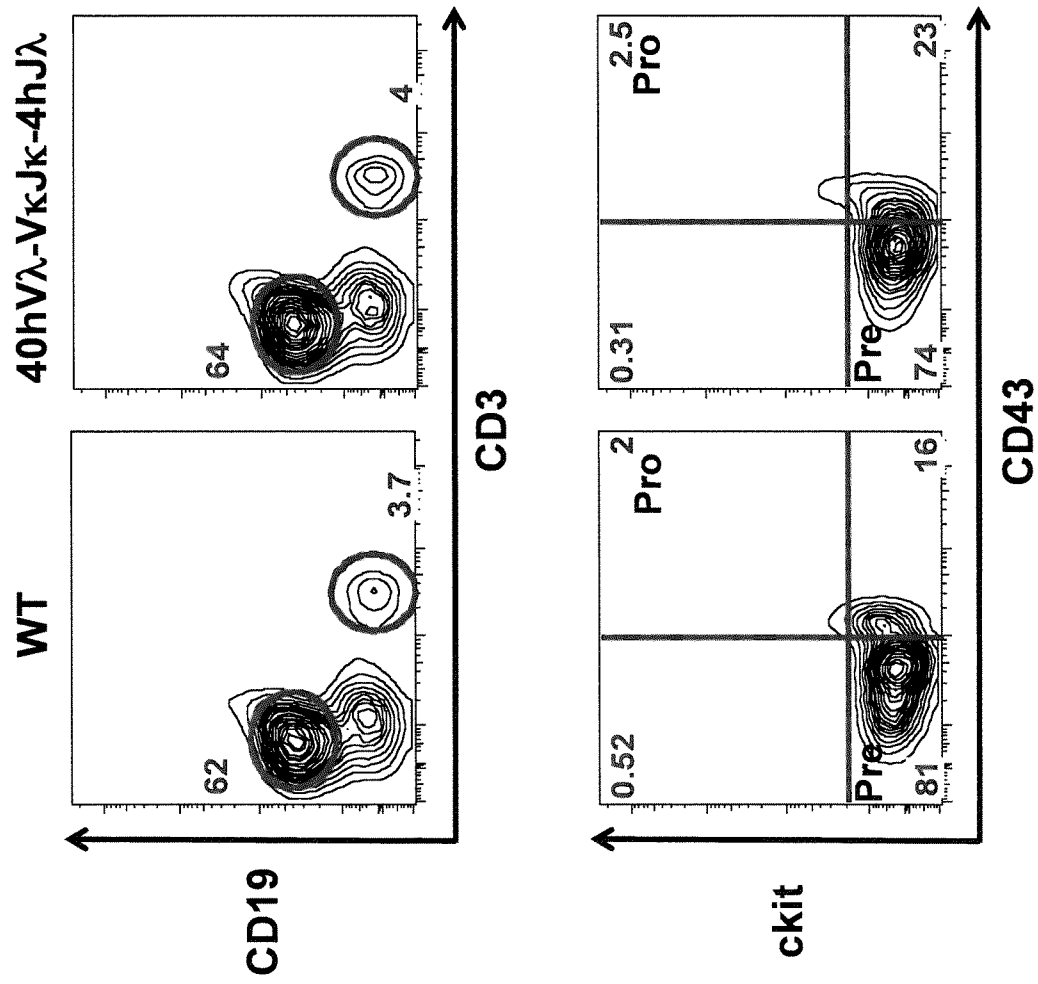


FIG. 10A

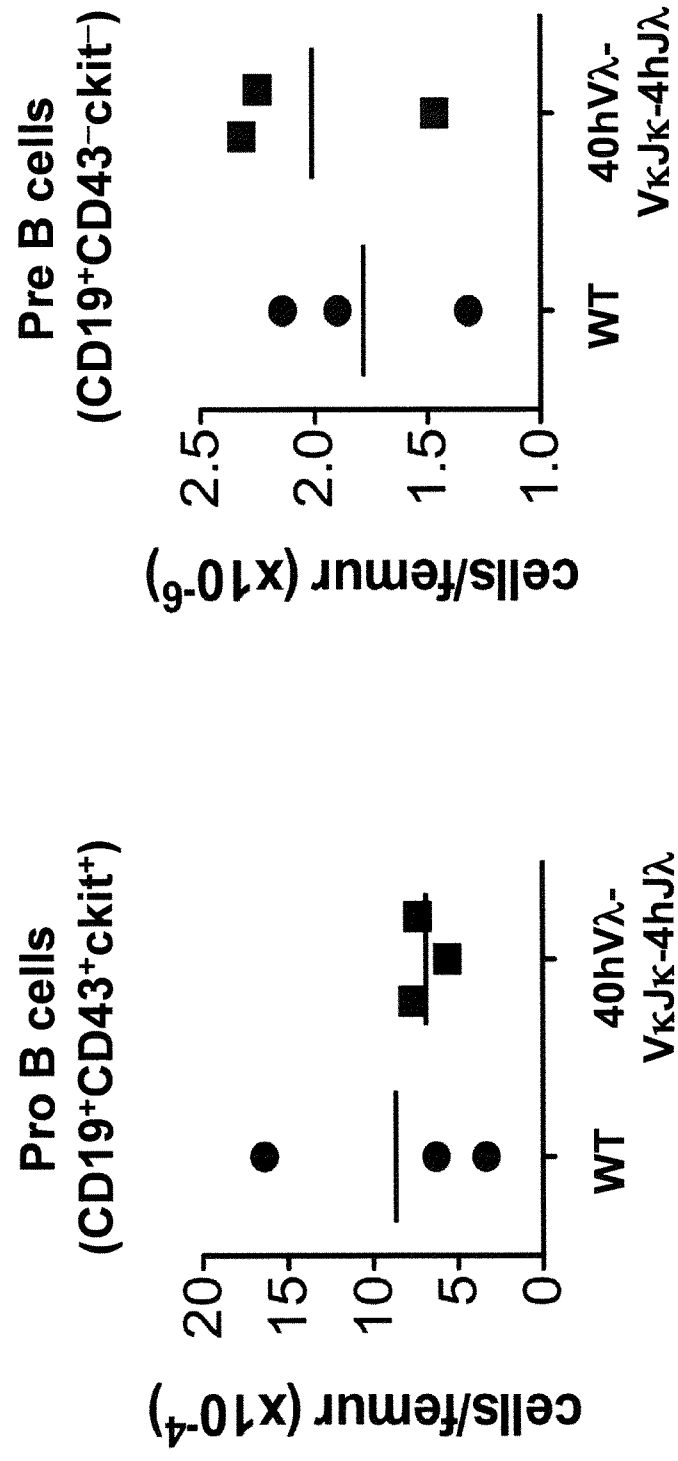


FIG. 10B

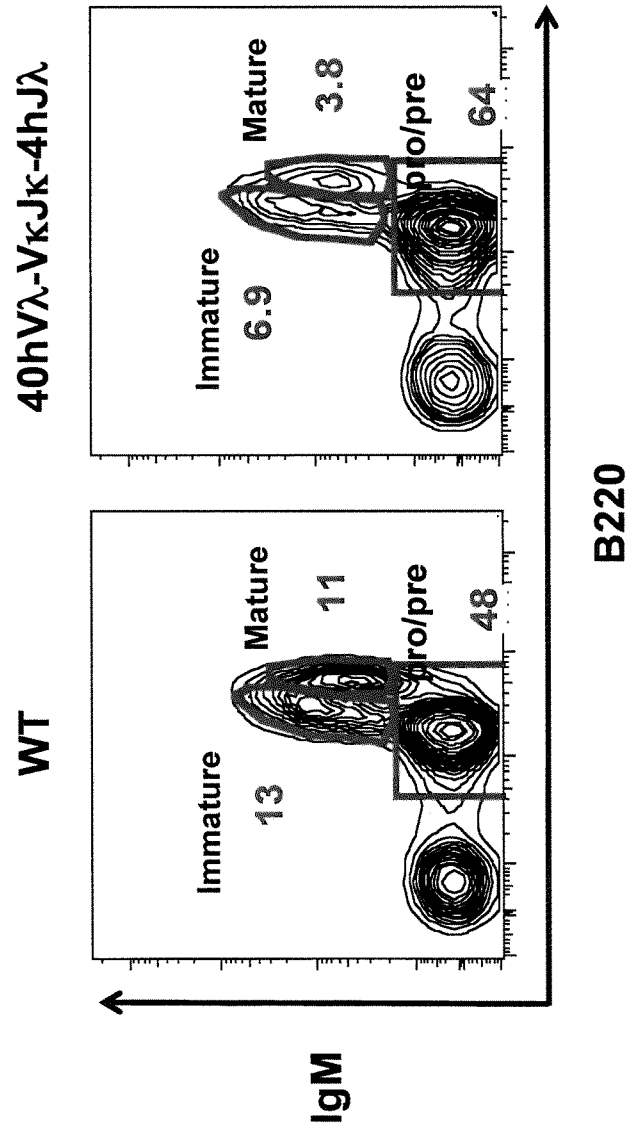


FIG. 10C

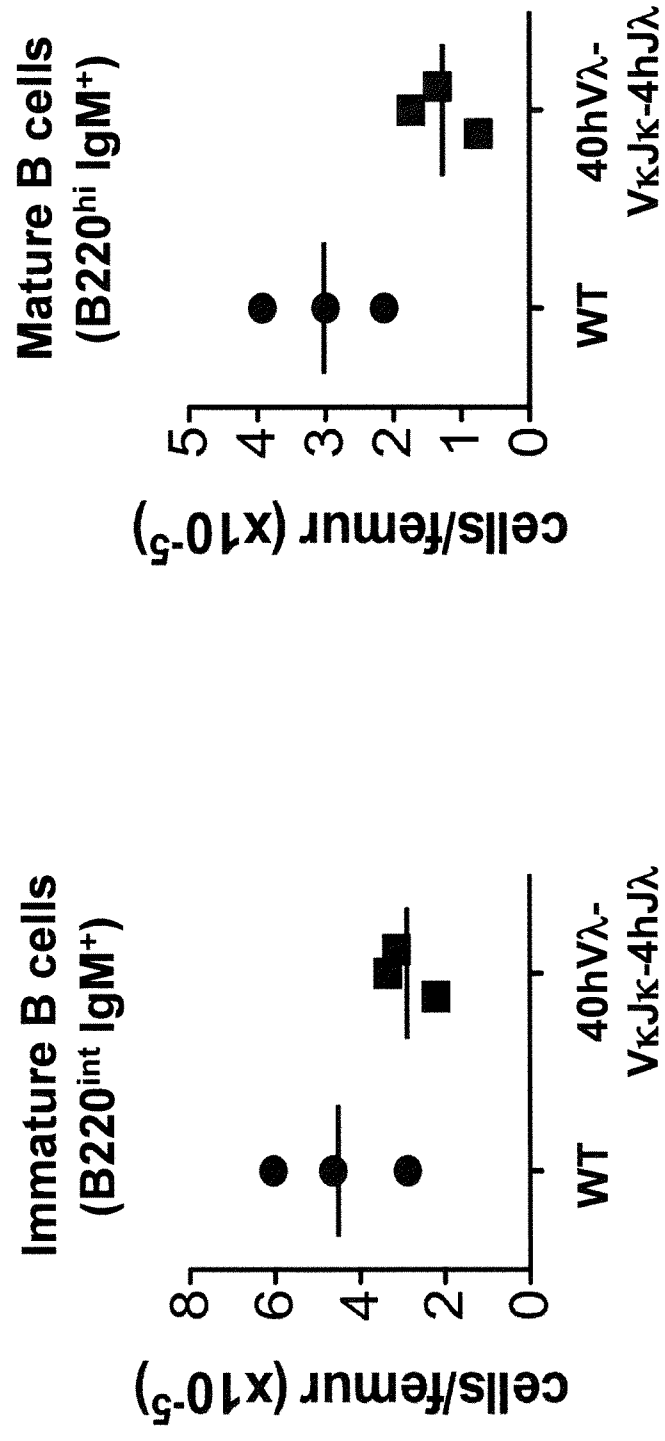


FIG. 10D

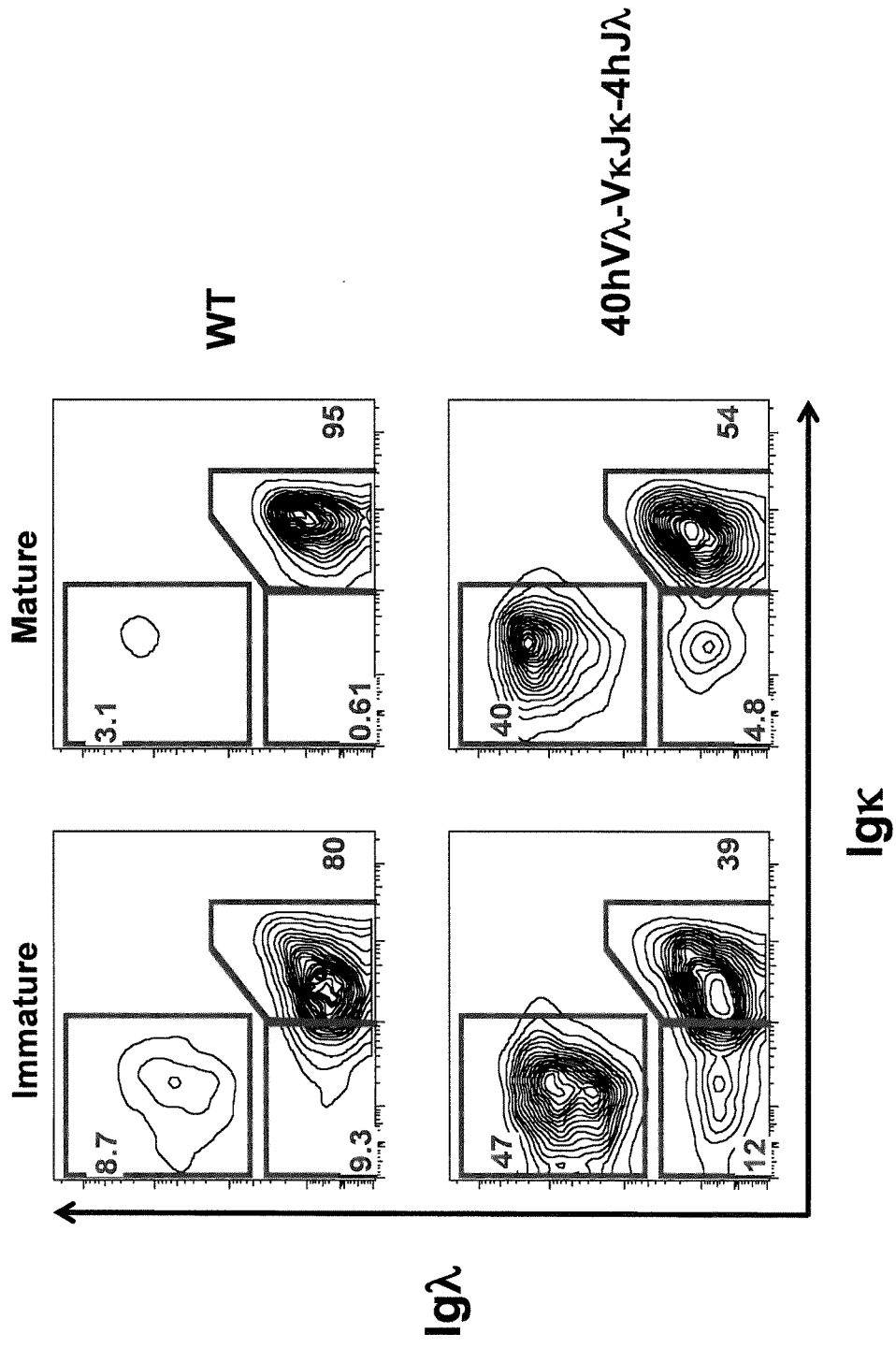


FIG. 10E

| 3' Human Vλ | Human Jλ1                                 | 5' Mouse Cκ                      |
|-------------|-------------------------------------------|----------------------------------|
| A6          | GCAACAAATT                                | GGGCTGATGCTGCACCAACTGTATCCATCTTC |
| B6          | GCAACAAATT                                | GGGCTGATGCTGCACCAACTGTATCCATCTTC |
| F6          | GCAACAAATT                                | GGGCTGATGCTGCACCAACTGTATCCATCTTC |
| B7          | GCAACAAATT                                | GGGCTGATGCTGCACCAACTGTATCCATCTTC |
| E7          | GCAACAAAT                                 | GGGCTGATGCTGCACCAACTGTATCCATCTTC |
| F7          | GCAACAAATT                                | GGGCTGATGCTGCACCAACTGTATCCATCTTC |
| C8          | GCAACAAATT                                | GGGCTGATGCTGCACCAACTGTATCCATCTTC |
| E12         | CAAGTCGGTT                                | GGGCTGATGCTGCACCAACTGTATCCATCTTC |
| 1-4         | TGAGTGCT                                  | GGGCTGATGCTGCACCAACTGTATCCATCTTC |
| 1-20        | TGAGTGCg                                  | GGGCTGATGCTGCACCAACTGTATCCATCTTC |
| 3B43        | CTGAATGGT                                 | GGGCTGATGCTGCACCAACTGTATCCATCTTC |
| 5-8         | AGTGGTAAT                                 | GGGCTGATGCTGCACCAACTGTATCCATCTTC |
| 5-19        | AGTGGTGCT                                 | GGGCTGATGCTGCACCAACTGTATCCATCTTC |
| 1010        | AGCAGCACT                                 | GGGCTGATGCTGCACCAACTGTATCCATCTTC |
| 11A1        | AGCAGCGCT                                 | GGGCTGATGCTGCACCAACTGTA          |
| 7A8         | GGTGGTGCT                                 | GGGCTGATGCTGCACCAACTGTATCC       |
| 3A3         | AGTAGCACT                                 | GGGCTGATGCTGCACCAACTGTATCCATC    |
| 2-7         | AGCAGCACT                                 | GGGCTGATGCTGCACCA                |
| FWR4        | F G T G T K V T V L G A D A A P T V S I F |                                  |

FIG. 11

|       | 3' Human Vλ         | Human Jλ                                | 5' Mouse Cκ                   |
|-------|---------------------|-----------------------------------------|-------------------------------|
| 5-2   | CAGCCTGAGTGGTTC     | TGTGTTTCGGAGGAGGCACCCGGCTGACCGCCCTCG    | GGGCTGATGCTGCACCAACTGTATCCATC |
| 2-5   | CAGCCTGAGTGGTT      | ATGTCCTTCGGAACCTGGGACCAAGGTCAACCGTCCTAG | GGGCTGATGCTGCACCAACTGTATCCATC |
| 1-3   | CAGCCTGAATGGT       | GCTGTGTTTCGGAGGAGGCACCCAGCTGACCGCCCTCG  | GGGCTGATGCTGCACCAACTGTATCCATC |
| 4B-1  | CAGCCTGAGTGGTC      | GGGTGTTTCGGCGGAGGGACCAAGCTGACCGTCCTAG   | GGGCTGATGCTGCACCAACTGTATCCATC |
| 3B-5  | CAGCAGCACTGC        | TGTGTTTCGGAGGAGGCACCCAGCTGACCGCCCTCG    | GGGCTGATGCTGCACCAACTGTATCCATC |
| 7A-1  | CAGCAGTGGTAAT       | GCTGTGTTTCGGAGGAGGCACCCAGCTGACCGCCCTCG  | GGGCTGATGCTGCACCAACTGTATCCATC |
| 5-1   | CAGCAGTGGTAATCATAG  | GGTGTTCGGCGGAGGGACCAAGCTGACCGTCCTAG     | GGGCTGATGCTGCACCAACTGTATCCATC |
| 4A-1  | CAGCCTGAGTGGTT      | ATGTCCTTCGGAACTGGGACCAAGGTCACCGTCCTAG   | GGGCTGATGCTGCACCAACTGTATCCATC |
| 11A-1 | CAGCAGCGCT          | GTGGTATTCGGCGGAGGGACCAAGCTGACCGTCCTAG   | GGGCTGATGCTGCACCAACTGTATCCATC |
| 5-7   | CTACTATGGTGGTGCTC   | GGGTGTTTCGGCGGAGGGACCAAGCTGACCGTCCTAG   | GGGCTGATGCTGCACCAACTGTATCCATC |
| 5-4   | CTCCTATAGTGGTGCTCGa | GTATTCGGCGGAGGGACCAAGCTGACCGTCCTAG      | GGGCTGATGCTGCACCAACTGTATCCATC |
| 2-3   | GAGCAACTTCGTGT      | CTGTGTTTCGGAGGAGGCACCCAGCTGACCGCCCTCG   | GGGCTGATGCTGCACCAACTGTATCCATC |
| FWR4  |                     | F G G G T K L T V L G A D A A P T V S I |                               |

FIG. 12

|             | 3' Human Vλ        | Human Jλ1                                    | 5' Mouse Cλ2                 |
|-------------|--------------------|----------------------------------------------|------------------------------|
| 2D1         | GCAGGCAGCAACAATTa  | aGTCTTCGGAACTGGGACCAAGGTCACCGTCCTAG          | GTCAGCCCCAAGTCCACTCCCACCTCTC |
| 2D9         | GACAGCAGTGGTAATCAT | TATGTCTTCGGAACTGGGACCAAGGTCACCGTCCTAG        | GTCAGCCCCAAGTCCACTCCCACCTCTC |
| 3E15        | GACAGCAGCACTGCC    | GTCTTCGGAACTGGGACCAAGGTCACCGTCCTAG           | GTCAGCCCCAAGTCCACTCCCACCTCTC |
| <b>FWR4</b> |                    | <b>F G T G T K V T V L G Q P K S T P T L</b> |                              |

FIG. 13

# SEQUENCE LISTING

<110> Macdonald, Lynn  
 Stevens, Sean  
 Gurer, Cagan  
 Murphy, Andrew J.  
 Hosiawa, Karolina A.

<120> HUMAN LAMBDA LIGHT CHAIN MICE

<130> 796A-WO

<140> To be assigned  
 <141>

<150> 61/357,314  
 <151> 2010-06-22

<150> 61/357,317  
 <151> 2010-06-22

<160> 105

<170> FastSEQ for Windows Version 4.0

<210> 1  
 <211> 219  
 <212> DNA  
 <213> artificial sequence

<220>  
 <223> synthetic

<400> 1  
 actttcagaa tgttcttgaa cagtctctga gaaacacgga agacggccgc ataacttcgt 60  
 atagtataca ttatacgaag ttattctaga cccccgggct cgataactat aacggtccta 120  
 aggtagcgac tcgagataac ttcgtataat gtatgctata cgaagttatc catggtaagc 180  
 ttacgtggca tacagtgtca gattttctgt ttatcaagc 219

<210> 2  
 <211> 21  
 <212> DNA  
 <213> artificial sequence

<220>  
 <223> synthetic

<400> 2  
 agctgaatgg aaacaaggca a 21

<210> 3  
 <211> 19  
 <212> DNA  
 <213> artificial sequence

<220>  
 <223> synthetic

<400> 3

|                           |    |
|---------------------------|----|
| ggagacaatg cccagtgga      | 19 |
| <210> 4                   |    |
| <211> 21                  |    |
| <212> DNA                 |    |
| <213> artificial sequence |    |
| <220>                     |    |
| <223> synthetic           |    |
| <400> 4                   |    |
| tcccataggg ctaggatttc c   | 21 |
| <210> 5                   |    |
| <211> 19                  |    |
| <212> DNA                 |    |
| <213> artificial sequence |    |
| <220>                     |    |
| <223> synthetic           |    |
| <400> 5                   |    |
| tcccctcaca ctgttcccc      | 19 |
| <210> 6                   |    |
| <211> 19                  |    |
| <212> DNA                 |    |
| <213> artificial sequence |    |
| <220>                     |    |
| <223> synthetic           |    |
| <400> 6                   |    |
| ggtggagagg ctattcggc      | 19 |
| <210> 7                   |    |
| <211> 17                  |    |
| <212> DNA                 |    |
| <213> artificial sequence |    |
| <220>                     |    |
| <223> synthetic           |    |
| <400> 7                   |    |
| gaacacggcg gcatcag        | 17 |
| <210> 8                   |    |
| <211> 21                  |    |
| <212> DNA                 |    |
| <213> artificial sequence |    |
| <220>                     |    |
| <223> synthetic           |    |
| <400> 8                   |    |
| tcaacctttc ccagcctgtc t   | 21 |
| <210> 9                   |    |
| <211> 24                  |    |
| <212> DNA                 |    |
| <213> artificial sequence |    |

<220>  
 <223> synthetic  
  
 <400> 9  
 ccccagagag agaaaacaga tttt 24  
  
 <210> 10  
 <211> 20  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 10  
 ccctgggtgaa gcatgtttgc 20  
  
 <210> 11  
 <211> 20  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 11  
 tgtggcctgt ctgccttacg 20  
  
 <210> 12  
 <211> 21  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 12  
 cacacctaga ccccggaagt c 21  
  
 <210> 13  
 <211> 21  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 13  
 tcgctttgcc agttgattct c 21  
  
 <210> 14  
 <211> 17  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 14  
 tgcggccgat cttagcc 17

|                              |    |
|------------------------------|----|
| <210> 15                     |    |
| <211> 18                     |    |
| <212> DNA                    |    |
| <213> artificial sequence    |    |
| <220>                        |    |
| <223> synthetic              |    |
| <400> 15                     |    |
| ttgaccgatt ccttgcg           | 18 |
| <210> 16                     |    |
| <211> 20                     |    |
| <212> DNA                    |    |
| <213> artificial sequence    |    |
| <220>                        |    |
| <223> synthetic              |    |
| <400> 16                     |    |
| gcaaaca aaa accactggcc       | 20 |
| <210> 17                     |    |
| <211> 19                     |    |
| <212> DNA                    |    |
| <213> artificial sequence    |    |
| <220>                        |    |
| <223> synthetic              |    |
| <400> 17                     |    |
| ggccacattc catgggttc         | 19 |
| <210> 18                     |    |
| <211> 22                     |    |
| <212> DNA                    |    |
| <213> artificial sequence    |    |
| <220>                        |    |
| <223> synthetic              |    |
| <400> 18                     |    |
| ccatgactgg gcctctgtag ac     | 22 |
| <210> 19                     |    |
| <211> 25                     |    |
| <212> DNA                    |    |
| <213> artificial sequence    |    |
| <220>                        |    |
| <223> synthetic              |    |
| <400> 19                     |    |
| caagtcaggg tgcta atgct gtatc | 25 |
| <210> 20                     |    |
| <211> 19                     |    |
| <212> DNA                    |    |
| <213> artificial sequence    |    |

<220>  
 <223> synthetic  
  
 <400> 20  
 cacagcttgt gcagcctcc 19  
  
 <210> 21  
 <211> 22  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 21  
 gggcactgga tacgatgtat gg 22  
  
 <210> 22  
 <211> 21  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 22  
 tcataggtag gtotcagttt g 21  
  
 <210> 23  
 <211> 21  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 23  
 tgatctgcgc tgtttcatcc t 21  
  
 <210> 24  
 <211> 31  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 24  
 tgacatgaac catctgtttc tctctcgaca a 31  
  
 <210> 25  
 <211> 29  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 25  
 agagacgctc cgaggtaag gtgctctag 29

|                              |    |
|------------------------------|----|
| <210> 26                     |    |
| <211> 23                     |    |
| <212> DNA                    |    |
| <213> artificial sequence    |    |
| <220>                        |    |
| <223> synthetic              |    |
| <400> 26                     |    |
| tgggcacaac agacaatcgg ctg    | 23 |
| <210> 27                     |    |
| <211> 16                     |    |
| <212> DNA                    |    |
| <213> artificial sequence    |    |
| <220>                        |    |
| <223> synthetic              |    |
| <400> 27                     |    |
| accctctgct gtccct            | 16 |
| <210> 28                     |    |
| <211> 26                     |    |
| <212> DNA                    |    |
| <213> artificial sequence    |    |
| <220>                        |    |
| <223> synthetic              |    |
| <400> 28                     |    |
| ccaagcagga ggtgctcagt tcccaa | 26 |
| <210> 29                     |    |
| <211> 24                     |    |
| <212> DNA                    |    |
| <213> artificial sequence    |    |
| <220>                        |    |
| <223> synthetic              |    |
| <400> 29                     |    |
| tccacactgt cggctgggag ctca   | 24 |
| <210> 30                     |    |
| <211> 21                     |    |
| <212> DNA                    |    |
| <213> artificial sequence    |    |
| <220>                        |    |
| <223> synthetic              |    |
| <400> 30                     |    |
| acgagcgggt tcggcccatt c      | 21 |
| <210> 31                     |    |
| <211> 37                     |    |
| <212> DNA                    |    |
| <213> artificial sequence    |    |
| <220>                        |    |

<223> synthetic  
  
 <400> 31  
 ctgttcctct aaaactggac tccacagtaa atggaaa 37  
  
 <210> 32  
 <211> 27  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 32  
 tgccgcttat acaacactgc catctgc 27  
  
 <210> 33  
 <211> 37  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 33  
 agaagaagcc tgtactacag catccgtttt acagtca 37  
  
 <210> 34  
 <211> 21  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 34  
 gggctacttg aggaccttgc t 21  
  
 <210> 35  
 <211> 23  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 35  
 gacagccctt acagagtttg gaa 23  
  
 <210> 36  
 <211> 23  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 36  
 aagaccagga gctctgccta agt 23  
  
 <210> 37

<211> 22  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 37  
 cccatcacga actgaagttg ag 22  
  
 <210> 38  
 <211> 20  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 38  
 cagggcctcc atcccaggca 20  
  
 <210> 39  
 <211> 28  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 39  
 ccccagtg tgatcactc taccctcc 28  
  
 <210> 40  
 <211> 20  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 40  
 cctctcctcc tcaccctcct 20  
  
 <210> 41  
 <211> 20  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <221> variation  
 <222> (4)...(4)  
 <223> r=a or g  
  
 <220>  
 <221> variation  
 <222> (9)...(9)  
 <223> s=c or g  
  
 <220>  
 <221> variation  
 <222> 11, 12, 13

<223> y=c or t  
  
 <400> 41  
 atgrccdgst yyyctctcct 20  
  
 <210> 42  
 <211> 18  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 42  
 ctcttcactc agggcaca 18  
  
 <210> 43  
 <211> 20  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <221> variation  
 <222> (18)...(18)  
 <223> s=c or g  
  
 <400> 43  
 atggcctggg ctctgctset 20  
  
 <210> 44  
 <211> 19  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <221> variation  
 <222> (11)...(11)  
 <223> y=c or t  
  
 <220>  
 <221> variation  
 <222> (13)...(13)  
 <223> s=c or g  
  
 <400> 44  
 atggcctgga ycsctctcc 19  
  
 <210> 45  
 <211> 23  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <221> variation  
 <222> 11, 16, 18, 21  
 <223> y=c or t  
  
 <220>  
 <221> variation  
 <222> (15)...(15)  
 <223> r=a or g

<220>  
 <221> variation  
 <222> (20)...(20)  
 <223> m=a or c  
  
 <400> 45  
 tcaccatggc ytggrycycm ytc 23  
  
 <210> 46  
 <211> 22  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 46  
 tcaccatggc ctgggtctcc tt 22  
  
 <210> 47  
 <211> 22  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <221> variation  
 <222> (16)...(16)  
 <223> m=a or c  
  
 <220>  
 <221> variation  
 <222> (19)...(19)  
 <223> y=c or t  
  
 <400> 47  
 tcaccatggc ctggamtcyt ct 22  
  
 <210> 48  
 <211> 26  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 48  
 tcaccatggc ctgggctcca ctactt 26  
  
 <210> 49  
 <211> 20  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 49  
 tcaccatggc ctggactcct 20  
  
 <210> 50

<211> 23  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 50  
 tcaccatggc ctggatgatg ctt 23  
  
 <210> 51  
 <211> 22  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 51  
 taaatatggc ctgggctcct ct 22  
  
 <210> 52  
 <211> 22  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 52  
 tcaccatgcc ctgggctctg ct 22  
  
 <210> 53  
 <211> 22  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 53  
 tcaccatggc cctgactcct ct 22  
  
 <210> 54  
 <211> 30  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 54  
 cccaagctta ctggatggtg ggaagatgga 30  
  
 <210> 55  
 <211> 16  
 <212> DNA  
 <213> artificial sequence  
  
 <220>  
 <223> synthetic

<400> 55  
 gtaaaacgac ggccag 16

<210> 56  
 <211> 17  
 <212> DNA  
 <213> artificial sequence

<220>  
 <223> synthetic

<400> 56  
 caggaaacag ctatgac 17

<210> 57  
 <211> 440  
 <212> DNA  
 <213> artificial sequence

<220>  
 <223> synthetic

<400> 57  
 gggcctgggc tctgctgctc ctcaccctcc tcactcaggg cacaggggtc tggggcccag 60  
 ctgccctgac tcagcctccc tccgcgtccg ggtctcctgg acagtcagtc accatctcct 120  
 gcactggaac cagcagtgac gttggtggtt ataactatgt ctcttggtac caacagcacc 180  
 caggcaaagc ccccaaactc atgatttatg aggtcagtaa gcggccctca ggggtccctg 240  
 atcgcttctc tggctccaag tctggcaaca cggcctccct gaccgtctct gggctccagg 300  
 ctgaggatga ggctgattat tactgcagct catatgcagg cagcaacaat ttcgtcttcg 360  
 gaactgggac caaggtcacc gtcctagggg ctgatgctgc accaactgta tccatcttcc 420  
 caccatccag taagcttggg 440

<210> 58  
 <211> 441  
 <212> DNA  
 <213> artificial sequence

<220>  
 <223> synthetic

<400> 58  
 atggcctggg ctctgctgct cctcaccctc tcactcaggg gcacaggggtc ctggggcccag 60  
 tctgccctga ctcagcctcc ctccgcgtcc ggggtctcctg gacagtcagt caccatctcc 120  
 tgactggaa ccagcagtga cgttggtggt tataactatg tctcctggta ccaacagcac 180  
 ccaggcaaag ccccaaact catgatttat gaggtcacta agcgccctc aggggtccct 240  
 gatcgcttct ctggctccaa gtctggcaac acggcctccc tgaccgtctc tgggctccag 300  
 gctgaggatg aggctgatta ttactgcagc tcatatgcag gcagcaacaa ttatgtcttc 360  
 ggaactggga ccaaggtcac cgtcctaggg gctgatgctg caccaactgt atccatcttc 420  
 ccaccatcca gtaagcttgg g 441

<210> 59  
 <211> 441  
 <212> DNA  
 <213> artificial sequence

<220>  
 <223> synthetic

<400> 59  
 atggcctggg ctctgctgct cctcaccctc tcactcaggg gcacaggggtc ctggggcccag 60

|            |            |            |            |            |            |     |
|------------|------------|------------|------------|------------|------------|-----|
| tctgccctga | ctcagcctcc | ctccgcgtcc | gggtctcctg | gacagtcagt | caccatctcc | 120 |
| tgactggaa  | ccagcagtga | cgttggtggt | tataactatg | tctcctggta | ccaacagcac | 180 |
| ccaggcaaag | cccccaaact | catgatttat | gaggtcagta | agcggccctc | aggggtccct | 240 |
| gatcgcttct | ctggctccaa | gtctggcaac | acggcctccc | tgaccgtctc | tgggctccag | 300 |
| gctgaggatg | aggctgatta | ttactgcagc | tcatatgcag | gcagcaacaa | ttatgtcttc | 360 |
| ggaactggga | ccaaggtcac | cgtcctaggg | gctgatgctg | caccaactgt | atccatcttc | 420 |
| ccaccatcca | gtaagcttgg | g          |            |            |            | 441 |

<210> 60

<211> 438

<212> DNA

<213> artificial sequence

<220>

<223> synthetic

<400> 60

|            |            |            |            |             |            |     |
|------------|------------|------------|------------|-------------|------------|-----|
| atggcctggg | ctctgctcct | caccctcctc | actcagggca | cagggctcctg | ggcccagtct | 60  |
| gccctgaetc | agcctccctc | cgcgctccgg | tctcctggac | agtcagtcac  | catctcctgc | 120 |
| actggaacca | gcagtgaagt | tggtggttat | aactatgtct | cctgggtacca | acagcaccca | 180 |
| ggcaaagccc | ccaaactcat | gatttatgag | gtcagtaagc | ggccctcagg  | ggtccctgat | 240 |
| cgcttctctg | gtcctcaagt | tggaacacg  | gcctccctga | ccgtctcttg  | gctccagggt | 300 |
| gaggatgagg | ctgattatta | ctgcagctca | tatgcaggca | gcaacaatta  | tgtcttcgga | 360 |
| actgggacca | aggtcaccgt | cctaggggct | gatgctgcac | caactgtatc  | catcttccca | 420 |
| ccatccagta | agcttggg   |            |            |             |            | 438 |

<210> 61

<211> 438

<212> DNA

<213> artificial sequence

<220>

<223> synthetic

<400> 61

|            |            |             |            |            |            |     |
|------------|------------|-------------|------------|------------|------------|-----|
| atggcctggg | ctctgctgct | cctcacccctc | ctcactcagg | gcacaggggc | ctgggcccag | 60  |
| tctgccctga | ctcagcctcc | ctccgcgtcc  | gggtctcctg | gacagtcagt | caccatctcc | 120 |
| tgactggaa  | ccagcagtga | cgttggtggt  | tataactatg | tctcctggta | ccaacagcac | 180 |
| ccaggcaaag | cccccaaact | catgatttat  | gaggtcagta | agcggccctc | aggggtccct | 240 |
| gatcgcttct | ctggctccaa | gtctggcaac  | acggcctccc | tgaccgtctc | tgggctccag | 300 |
| gctgaggatg | aggctgatta | ttactgcagc  | tcatatgcag | gcagcaacaa | tgtcttcgga | 360 |
| actgggacca | aggtcaccgt | cctaggggct  | gatgctgcac | caactgtatc | catcttccca | 420 |
| ccatccagta | agcttggg   |             |            |            |            | 438 |

<210> 62

<211> 441

<212> DNA

<213> artificial sequence

<220>

<223> synthetic

<400> 62

|            |            |             |            |            |            |     |
|------------|------------|-------------|------------|------------|------------|-----|
| atggcctggg | ctctgctcct | cctcacccctc | ctcactcagg | gcacaggggc | ctgggcccag | 60  |
| tctgccctga | ctcagcctcc | ctccgcgtcc  | gggtctcctg | gacagtcagt | caccatctcc | 120 |
| tgactggaa  | ccagcagtga | cgttggtggt  | tataactatg | tctcctggta | ccaacagcac | 180 |
| ccaggcaaag | cccccaaact | catgatttat  | gaggtcagta | agcggccctc | aggggtccct | 240 |
| gatcgcttct | ctggctccaa | gtctggcaac  | acggcctccc | tgaccgtctc | tgggctccag | 300 |
| gctgaggatg | aggctgatta | ttactgcagc  | tcatatgcag | gcagcaacaa | ttatgtcttc | 360 |
| ggaactggga | ccaaggtcac | cgtcctaggg  | gctgatgctg | caccaactgt | atccatcttc | 420 |
| ccaccatcca | gtaagcttgg | g           |            |            |            | 441 |

<210> 63  
 <211> 442  
 <212> DNA  
 <213> artificial sequence

<220>  
 <223> synthetic

<400> 63  
 atggcctggg ctctgctgct cctcaccctc ctcaactcagg gcacaggggc ctgggcccag 60  
 tctgccctga ctccagcctcc ctccgcgtcc gggctctcctg gacagtcagt caccatctcc 120  
 tgacttgga ccagcagtgga cgttggtggt tataactatg tctcctggta ccaacagcac 180  
 ccaggcaaag ccccaaaact catgatttat gaggtcagta agcggccctc aggggtccct 240  
 gatcgcttct ctggctccaa gtctggcaac acggcctccc tgaccgtctc tgggctccag 300  
 gctgaggatg aggtgatta ttactgcagc tcatatgcag gcagcaacaa tttatgtctt 360  
 cggaactggg accaaggtca ccgtcctagg ggctgatgct gcaccaactg tatccatctt 420  
 cccaccatcc agtaagcttg gg 442

<210> 64  
 <211> 428  
 <212> DNA  
 <213> artificial sequence

<220>  
 <223> synthetic

<400> 64  
 ccttcatttt ctccacaggt ctctgtgctc tgctgtgct gactcagccc ccgtctgcat 60  
 ctgccttgct gggagcctcg atcaagctca cctgcaccct aagcagtgag cacagcacct 120  
 acaccatcga atggtatcaa cagagaccag ggaggtcccc ccagtatata atgaaggcta 180  
 agagtgatgg cagccacagc aagggggacg ggatccccga tcgcttcagt ggctccagtt 240  
 ctggggctga ccgctacctc accttctcca acctccagtc tgacgatgag gctgagtatc 300  
 actgtggaga gagccacacg attgatggcc aagtcgggtt tgtcttcgga actgggacca 360  
 aggtcaccgt cctaggggct gatgctgcac caactgtatc catcttccca ccatccagta 420  
 agcttggg 428

<210> 65  
 <211> 441  
 <212> DNA  
 <213> artificial sequence

<220>  
 <223> synthetic

<400> 65  
 atgacctgct cccctctcct cctcaccctt ctcaattcact gcacaggggc ctgggcccag 60  
 tctgtgttga cgcagccgcc ctcaagtgtc gcgccccag gacagaaggt caccatctcc 120  
 tgctctggaa gcagctccaa cattgggaat aattatgtat cctggtacca gcagctccca 180  
 ggaacagccc ccaaactcct catttatgac aataataagc gaccctcagg gattcctgac 240  
 cgattctctg gctccaagtc tggcacgtca gccaccctgg gcatcaccgg actccagact 300  
 ggggacgagg ccgattatta ctgcggaaca tgggatagca gcctgagtgc ttatgtcttc 360  
 ggaactggga ccaaggtcac cgtcctaggg gctgatgctg caccaactgt atccatcttc 420  
 ccaccatcca gtgagcagtt a 441

<210> 66  
 <211> 441  
 <212> DNA  
 <213> artificial sequence

<220>

<223> synthetic

<400> 66

```
atgacctgct cccctctcct cctcaccctt ctcatctact gcacagggtc ctgggcccag 60
tctgtgttga cgcagccgcc ctcaagtgtc gcgggcccag gacagaaggt caccatctcc 120
tgctctggaa gcagctccaa cattgggaat aattatgtat cctggtagca gcagctccca 180
ggaacagccc ccaaaactcct catttatgac aataataagc gaccctcagg gattcctgac 240
cgattctctg gctccaagtc tggcacgtca gccaccctgg gcatcacagg actccagact 300
ggggacgagg ccgattatta ctgcggaaca tgggatagca gcctgagtgc ggcttttttt 360
ggaactggga ccaaggtcac cgtcctaggg gctgatgctg caccaactgt atccatcttc 420
ccaccatcca gtgagcagtt a 441
```

<210> 67

<211> 345

<212> DNA

<213> artificial sequence

<220>

<223> synthetic

<400> 67

```
cccgggcaga gggtcacat ctcttgttct ggaagcagct ccaacatcgg aagtaatact 60
gtaaactggg accagcagct cccaggaacg gccccaaac tcctcatcta tagtaataat 120
cagcggcctc caggggtccc tgaccgattc tctggctcca agtctggcac ctcagcctcc 180
ctggccatca gtgggctcca gtctgaggat gaggctgatt attactgtgc agcatgggat 240
gacagcctga atgggttatgt cttcggaact gggaccaagg tcaccgtcct aggggctgat 300
gctgcaccaa ctgtatccat ctccccacca tccagtgagc agtta 345
```

<210> 68

<211> 432

<212> DNA

<213> artificial sequence

<220>

<223> synthetic

<400> 68

```
atggcctgga cccctctcct gctccccctc ctcaacttct gcacagtctc tgaggcctcc 60
tatgagctga cacagccacc ctcggtgtca gtgtccccag gacaaacggc caggatcacc 120
tgctctggag atgcattgcc aaaaaaatat gcttattggg accagcagaa gtcaggccag 180
gcccctgtgc tggtcattcta tgaggacagc aaacgaccct ccgggatccc tgagagattc 240
tctggctcca gctcagggaac aatggccacc ttgactatca gtggggccca ggtggaggat 300
gaagctgact actactgtta ctcaacagac tacagtggta atcatgtctt cggaactggg 360
accaaggtca ccgtcctagg ggctgatgct gcaccaactg tatccatctt cccaccatcc 420
agtgagcagt ta 432
```

<210> 69

<211> 426

<212> DNA

<213> artificial sequence

<220>

<223> synthetic

<400> 69

```
atggcctgga ctctctctct tctgttcctc ctcaacttct gccagggtc caattcccag 60
gctgtgggtga ctcaggagcc ctcaactgact gtgtccccag gagggacagt cactctcacc 120
tgtggctcca gcactggagc tgtcaccagt ggtcattatc cctactgggt ccagcagaag 180
cctggccaag cccccaggac actgatttat gatacaagca acaaacactc ctggacacct 240
gcccgtttct caggctccct ccttgggggc aaagctgccc tgacccttct gggtgctgag 300
cctgaggatg aggtgagta ttactgcttg ctctcctata gtggtgctta tgtcttcgga 360
```

actgggacca aggtcaccgt cctaggggct gatgctgcac caactgtatc catcttccca 420  
ccatcc 426

<210> 70

<211> 331

<212> DNA

<213> artificial sequence

<220>

<223> synthetic

<400> 70

agtggctcctg ggacagacgg ccaggattac ctgtggggga aacaacattg gaagtaaaaa 60  
tgtgcactgg taccagcaga agccaggcca ggcccctgtg ctggatcatc atagggataa 120  
caaccggccc tctgggatcc ctgagcgatt ctctggctcc aactcgggga acacggccac 180  
cctgaccatc agcagagccc aagccgggga tgaggctgac tattactgtc aggtgtggga 240  
cagcagcact tatgtcttcg gaactgggac caaggtcacc gtcctagggg ctgatgctgc 300  
accaactgta tccatcttcc caccatccag t 331

<210> 71

<211> 417

<212> DNA

<213> artificial sequence

<220>

<223> synthetic

<400> 71

actcctctcc tcctcctgtt cctctctcac tgcacagggt cctctctgca ggctgtgctg 60  
actcagccgt cttccctctc tgcctctcct ggagcatcag ccagtctcac ctgcaccttg 120  
cgagtgaggc tcaatgttgg tacctacagg atatactggg accagcagaa gccagggagt 180  
cctccccagt atctcctgag gtacaaatca gactcagata agcagcaggg ctctggagtc 240  
cccagccgct tctctggatc caaagatgct tcggccaatg cagggatttt actcatctct 300  
gggctccagt ctgaggatga ggctgactat tactgtatga tttggcacag cagcgcttat 360  
gtcttcggaa ctgggaccaa ggtcaccgtc ctaggggctg atgctgcacc aactgta 417

<210> 72

<211> 393

<212> DNA

<213> artificial sequence

<220>

<223> synthetic

<400> 72

tttctgttcc tcctcacttg ctgcccaggg tccaattctc agactgtggg gactcaggag 60  
ccctcactga ctgtgtcccc aggagggaca gtcactctca cctgtgcttc cagcactgga 120  
gcagtcacca gtggttacta tccaaactgg ttccagcaga aacctggaca agcaccagg 180  
gcactgattt atagtacaag caacaaacgc tcctggaccc ctgcccgggt ctgaggctcc 240  
ctccttgggg gcaaagctgc cctgacactg tcaggtgtgc agcctgagga cgaggctgag 300  
tattactgcc tgctctacta tggtggtgct tatgtcttcg gaactgggac caaggtcacc 360  
gtcctagggg ctgatgctgc accaactgta tcc 393

<210> 73

<211> 417

<212> DNA

<213> artificial sequence

<220>

<223> synthetic

<400> 73  
atggcctggg ctctgctgct cctcactctc ctactcagg acacagggtc ctgggcccag 60  
tctgccctga ctacgcctgc ctccgtgtct gggctctcctg gacagtcgat caccatctcc 120  
tgcactggaa ccagcagtga tgttgggagt tataaccttg tctcctggta ccaacagcac 180  
ccaggcaaaag cccccaact catgatttat gagggcagta agcggccctc aggggtttct 240  
aatcgcttct ctggctccaa gtctggcaac acggcctccc tgacaatctc tgggctccag 300  
gctgaggacg aggcctgatta ttactgctgc tcatatgcag gtagtagcac ttatgtcttc 360  
ggaactggga ccaaggtcac cgtcctaggg gctgatgctg caccaactgt atccatc 417

<210> 74

<211> 348

<212> DNA

<213> artificial sequence

<220>

<223> synthetic

<400> 74  
cagtctgccc tgactcagcc tgcctccgtg tctgggtctc ctggacagtc gatcaccatc 60  
tcctgcactg gaaccagcag tgacgttggg ggttataact atgtctcctg gtaccaacag 120  
caccaggca aagccccaa actcatgatt tatgaggtca gtaatcggcc ctcaggggtt 180  
tctaatoctt tctctggctc caagtctggc aacacggcct ccctgaccat ctctgggctc 240  
caggctgagg acgaggctga ttattactgc agctcatata caagcagcag cacttatgtc 300  
ttcggaaactg ggaccaaggt caccggcctg ggggctgatg ctgcacca 348

<210> 75

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 75

aacaaccgag ctccaggtgt 20

<210> 76

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 76

agggcagcct tgtctccaa 19

<210> 77

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 77

cctgccagat tctcaggctc 20

<210> 78

<211> 20

<212> DNA

<213> Artificial Sequence  
 <220>  
 <223> synthetic  
 <400> 78  
 catcacaggg gcacagactg 20  
 <210> 79  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> synthetic  
 <400> 79  
 gatttgctga gggcaggg 19  
 <210> 80  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> synthetic  
 <400> 80  
 cccaagtct gatccttct t 21  
 <210> 81  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> synthetic  
 <400> 81  
 gctgaccaac gatcgacctaa 20  
 <210> 82  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> synthetic  
 <400> 82  
 taagcgccac actgcacct 19  
 <210> 83  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> synthetic  
 <400> 83

cctgccagat tctcaggctc cctg 24

<210> 84  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 84  
 ctgattggag acaaggctgc cct 23

<210> 85  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 85  
 ccttcatact cttgcatcct cccttctcca 30

<210> 86  
 <211> 35  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 86  
 ttccttctct tctgtgactc aattatttgt ggaca 35

<210> 87  
 <211> 159  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 87  
 tctggcacct cagcctccct ggccatcact gggctccagg ctgaggatga ggctgattat 60  
 tactgccagt cctatgacag cagcctgagt ggttctgtgt tcggaggagg cacccggtg 120  
 accgccctcg gggctgatgc tgcaccaact gtatccatc 159

<210> 88  
 <211> 159  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> synthetic

<400> 88  
 tctggcacct cagcctccct ggccatcact gggctccagg ctgaggatga ggctgattat 60  
 tactgccagt cctatgacag cagcctgagt ggttatgtct tcggaactgg gaccaaggctc 120  
 accgtcctag gggctgatgc tgcaccaact gtatccatc 159

<210> 89  
 <211> 159  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 89  
 tctggcacct cagcctccct ggccatcagt gggctccagt ctgaggatga ggctgattat 60  
 tactgtgcag catgggatga cagcctgaat ggtgctgtgt tcggaggagg caccagctg 120  
 accgccctcg gggctgatgc tgcaccaact gtatccatc 159  
  
 <210> 90  
 <211> 159  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 90  
 tctggcacct cagcctccct ggccatcagt gggctccggt ccgaggatga ggctgattat 60  
 tactgtgcag catgggatga cagcctgagt ggtcgggtgt tcggcggagg gaccaagctg 120  
 accgtcctag gggctgatgc tgcaccaact gtatccatc 159  
  
 <210> 91  
 <211> 153  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 91  
 tcggggaaca cggccaccct gaccatcagc agagcccaag ccggggatga ggctgactat 60  
 tactgtcagg tgtgggacag cagcactgct gtgttcggag gaggcaccca gctgaccgcc 120  
 ctcggggctg atgtgcacc aactgtatcc atc 153  
  
 <210> 92  
 <211> 156  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 92  
 tcagggacaa tggccacctt gactatcagt ggggccccagg tggaggatga agctgactac 60  
 tactgttact caacagacag cagtggtaat gctgtgttcg gaggaggcac ccagctgacc 120  
 gccctcgggg ctgatgctgc accaactgta tccatc 156  
  
 <210> 93  
 <211> 159  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 93

```

tcagggacaa tggccacctt gactatcagt ggggccagg tggaggatga agctgactac 60
tactgttact caacagacag cagtggtaat cataggggtgt tcggcggagg gaccaagctg 120
accgtcctag gggctgatgc tgcaccaact gtatccatc 159

```

```

<210> 94
<211> 159
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> synthetic

```

```

<400> 94
tctggcacct cagcctccct ggccatcact gggctccagg ctgaggatga ggctgattat 60
tactgccagt cctatgacag cagcctgagt ggttatgtct tcggaactgg gaccaaggctc 120
accgtcctag gggctgatgc tgcaccaact gtatccatc 159

```

```

<210> 95
<211> 159
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> synthetic

```

```

<400> 95
gatgcttcgg ccaatgcagg gatttttactc atctctgggc tccagtctga ggatgaggct 60
gactattact gtatgatttg gcacagcagc gctgtggat tcggcggagg gaccaagctg 120
accgtcctag gggctgatgc tgcaccaact gtatccatc 159

```

```

<210> 96
<211> 153
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> synthetic

```

```

<400> 96
cttgggggca aagctgccct gacactgtca ggtgtgcagc ctgaggacga ggctgagtat 60
tactgcctgc tctactatgg tggctgctcg gtgttcggcg gagggaccaa gctgaccgtc 120
ctaggggctg atgctgcacc aactgtatcc atc 153

```

```

<210> 97
<211> 153
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> synthetic

```

```

<400> 97
cttgggggca aagctgccct gaccctttcg ggtgcgcagc ctgaggatga ggctgagtat 60
tactgcttgc tctcctatag tggctgctga gtattcggcg gagggaccaa gctgaccgtc 120
ctaggggctg atgctgcacc aactgtatcc atc 153

```

```

<210> 98
<211> 165
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> synthetic

<400> 98
tcaggcctga atcggtacct gaccatcaag aacatccagg aagaggatga gagtgactac 60
cactgtgggg cagaccatgg cagtgggagc aacttcgtgt ctgtgttcgg aggaggcacc 120
cagctgaccg ccctcggggc tgatgctgca ccaactgtat ccac 165

<210> 99
<211> 164
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 99
tctggcacgt cagccaccct gggcatcacc ggactccaga ctggggacga ggccgattat 60
tactgcgga catgggatag cagcctgagt gctggccccg ggtgttcggc ggagggacca 120
agctgaccgt cctaggggct gatgctgcac caactgtatc catc 164

<210> 100
<211> 22800
<212> DNA
<213> Artificial Sequence

<220>
<223> synthetic

<400> 100
aagctctaaa actacaaact gctgaaagat ctaatgacta ggacagccta gtaattttca 60
taggggcata aatgtgaaac gccttgtgca tcgtagaaga aagcagaaga gaaagcattc 120
ccaatttctt aactgccttt tacctatatt aatcagtaat atactggctt ttacctctgt 180
taatcataat aaacaaattc tcaataaatt ttatcgatac tcttcaatgc ctgctcagca 240
acattttccg aaggcagctc aagatattaa ataactcata agggccaacc tcctattgca 300
gcattctttg ggatttaacc agtttcccaa gactcttttc acaatgtaa gatgttagaa 360
atagatccaa aactagggtga tatatcccct agtaaaaactg tgaggtcaaa cttgtctggc 420
taatgcttcc atttaaaaaat ttctctttct tgatccttca ttgtatgtac acaataaatc 480
aggggaaaaac tttaactgag tgaatcaaag tattctcatt attataatag gagcttcaca 540
cacacacaaa aaaatcaatt ctattactct cagcctcagt tcctaaagcc aagttaaagt 600
cctgttctaa gatcattgtt gcatgaccat atgtattcca ggtctaattc aaactgtgga 660
taaatcccag caggacatta gagatttttg tgagagtaag catataggat tcagggttta 720
tgagcttttag atttttcttg tcaaaaatgaa tgagagtgc catatctaaa aattattccc 780
agataaataa aattcactac ctagaattaa tttatgcata taagtagaaa tgctatctcc 840
ctttttacca tccaaagtgg aaagcctcat ggaactagaa attaatatta gaaaaatcag 900
ttaataaaaag tatgtcattt catcaattca ataagttata atagcaaaaa accataataa 960
attatcactt aaatgtcaat acatttataa actatgggtac ataaatagga tattgaatag 1020
ccattgatgc tcctgatgaa aattagcagg cagtataaaa tgataaatat gaagcacatg 1080
tcaataaata aaataagttt tatgtaatat aggagaaaat ggtgataatg acacaaaatg 1140
tgaattatgg atgcatctat aaaattcttt gtacatttgt gaattgtaaa ttttatctt 1200
agagacatta ttactttgta tatgttccat ttgctcacct atatgtccca gtctccttac 1260
aaatgctatg gccaaagaaa taggcataca tacatccttt gcaggctgag gcaggaaaaa 1320
gatcttacgg aattttccag tctatccttt atctgtataa gcaacttaag aggccatgtg 1380
ctccaaatgg tgcaaatata agatggtaga gcctctgtct gcctggatcc ttgagtggct 1440
gcatggagca gagcaccttt ctggccctgg tgaagattgt agcatgagca agatataagc 1500
atttgtttga gctaggccat gagatttggg gcagtgggtat aacctaccct attatggaaa 1560
atataaatac acaaaacaga aaagagagag agaagtgaga gaagactgtg agagaagtgc 1620
atgagagaag actgtgtttt gttcatttcc tataatccta tatcaccatg ggtcctgtg 1680
ccttctggtg atcaaaactaa tgttctacag ctccaaaagaa gaatgctcgc ctaacgtctc 1740
cattccaatg acctagagac taaaagccaa aaagaacctt agaaattatc tattgcattc 1800
tttgatgtaa ggaaatatct tagagggcac agatagaaat atcttaaccc aggtcactta 1860

```

|             |             |             |            |             |             |      |
|-------------|-------------|-------------|------------|-------------|-------------|------|
| gttcgtggca  | gagctgagggc | taaaaccagg  | ccttttgact | cctaattttg  | tgctctttac  | 1920 |
| accttctcac  | atcacttctc  | caacccaaag  | tctagcagaa | aaggctaaaa  | taagatatat  | 1980 |
| gcatagat    | gctattataa  | gtccatgtac  | ttcctcagac | gctttaagat  | ggggcttctc  | 2040 |
| atgggttcaca | ataagcagca  | gaggggaagt  | aataactatc | ttcgtctccc  | ctactgctat  | 2100 |
| ttgtgcagtt  | tgaagcttat  | ctcttaaatc  | atgttttctt | ctcgtagtaa  | atactacaac  | 2160 |
| ttgtgccttt  | tatgtgtgta  | taaattttaa  | tataattttt | ttccatgaac  | cattcaagta  | 2220 |
| aaatggacac  | tccaaaaaga  | tgttcaataa  | ggttacatgg | cttcacattg  | ccccctctac  | 2280 |
| accatcttgt  | ggagctacac  | attcacctca  | cccaaatttg | agaaaaataa  | tcaagaaaaat | 2340 |
| gactctcact  | agcagtgaga  | ccaagtccat  | aagcactaat | gtcatcagtg  | cacactgcag  | 2400 |
| cctcatgctg  | ccaagcatgt  | tttggggcgt  | tccttgact  | ggtttggtga  | catgatcaaa  | 2460 |
| ggtacat     | ccacctgcat  | agccccatcc  | tggatctata | gccttccttg  | tgtctttgtg  | 2520 |
| aacaacctag  | tgtgaactca  | aagtatgaga  | cagatctcaa | ttaatttaga  | aagtttattt  | 2580 |
| tcccaagatt  | aaggacaagc  | ccatgataaa  | gcctccagag | gtcctgatat  | atgtgcccaa  | 2640 |
| gggggtcggg  | gcacagcttg  | gtgttataca  | ttttagggag | acaagaaaca  | tcaatcgata  | 2700 |
| tgtagaagat  | gtgcatcgct  | ttgggtctgga | aaggtgtgac | aactcaaggc  | aggggaagggg | 2760 |
| gcttctctgct | gggggtgcat  | tgttttgagt  | ctctgatcag | cctttcacat  | gtgaaaggca  | 2820 |
| ggtagagaaa  | tagtcattta  | tgcttagtc   | tggcttattg | aaacagtagg  | gcagaagaag  | 2880 |
| cattgcatat  | gcatttgtct  | gaagtgaaca  | gagggatgac | tttgagctct  | gtcctttctt  | 2940 |
| tgtccacaag  | gaattacctt  | gtgggcaa    | tgtgagggag | gtatgtagct  | tttttttctt  | 3000 |
| tgtagctatc  | ttatttagga  | ataaaatggg  | aggcagggtt | gcctgatgca  | attcccagct  | 3060 |
| tgactttccc  | ttttggctta  | gtgatttttg  | gggtcctgag | gtttattttt  | tctttcacat  | 3120 |
| tagtataact  | acttttcttt  | ttctaattcc  | ttttctactt | gtatgtgtta  | cagctgactt  | 3180 |
| atgttacttg  | caaaaaaat   | tctgactaat  | gcaccatctg | actagaaggc  | agggttcttc  | 3240 |
| gatgataacg  | aatcctccag  | aatctagtaa  | acagaattgc | ctgaaaaaga  | gggtgggtgct | 3300 |
| ttcttggggg  | atttctcatg  | gcaatgaatg  | gcaactggcc | aaaggattta  | tgaccagact  | 3360 |
| gagctctctt  | ttatctattc  | tgttactcac  | caagacctat | tagggtttgt  | gctccacagg  | 3420 |
| gacactgggt  | tctaagttct  | agggttaaac  | agtccactcc | caggcccacc  | acaccatacc  | 3480 |
| ctcctgacat  | ctgggtgaaca | gcaataaaat  | tgtttcttat | tctgaaaatc  | ctccaatact  | 3540 |
| tccaccatcc  | ccaaaaatgc  | agtggaggag  | gagagaaaat | gaattgttcc  | attagagaac  | 3600 |
| acaatatcca  | ttatattatt  | cttggccttt  | gagatacctt | acaaaacaaa  | tacaaaaaaa  | 3660 |
| gtcccaat    | aacatctttt  | aataatcttt  | acaaaacaga | acacatctcc  | tttcttgata  | 3720 |
| atagtcaaga  | ggctcagtg   | caactgtggg  | gaaaagtgtc | agattctggg  | catgtttcaa  | 3780 |
| aggtagaaaa  | aatagaattt  | gttaacatat  | tggatgtgag | gcgtgggaga  | aacgtgaaat  | 3840 |
| caagggtggt  | gcaagtgttt  | aacctgagca  | actagagaat | ttggaaggac  | attttctgag  | 3900 |
| atgggggaag  | caggcgggaa  | tcagggatta  | gagttgaaca | tattagacat  | ttgagatgcc  | 3960 |
| tgctagacct  | ctaattggca  | atatcccttg  | gacagggtga | tgaatatgcg  | tgattctgga  | 4020 |
| gttcgggaaa  | tagtccgggt  | ggagatgcaa  | atttgggaaa | cagggcgagg  | ttactagcaa  | 4080 |
| tgagttaaat  | caatgaaggc  | aggctgggac  | ctggcaggta | acccaacaag  | tagaggctga  | 4140 |
| agagatgaga  | agaaaaacag  | acaggagact  | tagaagcagt | ggtcaggagg  | aaggagtga   | 4200 |
| accaagaaa   | tgatgtccca  | gagccaacaa  | aataaggatt | tcttttctgt  | ttacaaatgt  | 4260 |
| aaaataaaaa  | ggtttaataa  | aaagaaaatt  | tacttttatg | gttggttggt  | attaagtgg   | 4320 |
| ccaaacactg  | tctcctattt  | gtagaatcag  | aactctctca | tggcagtaga  | aaatttgga   | 4380 |
| agttactttt  | taaaagggtg  | gtgcactgct  | gccctttgct | ggcgaagttt  | atgcactgca  | 4440 |
| aattccaagg  | acgattgctc  | gtcagctttt  | ctcctttaa  | atagctcagg  | ctgtacaagc  | 4500 |
| tagaaaaga   | ctcgcaagat  | attccttcca  | acatttgc   | ttgacttatg  | ggaagtgcag  | 4560 |
| gttcagccag  | aaaagttgtg  | tgcaaggccg  | tttatgtgag | tttatcagac  | ctgattctta  | 4620 |
| cggctcttcc  | cattgtttcg  | agcctccctt  | ccattcactt | cccgtcata   | cgcgaccaag  | 4680 |
| tataggacag  | gagtagttat  | tctgcacttt  | atagcagctc | cactgtctgg  | cactctgatg  | 4740 |
| ttctttaatt  | acaagcttta  | tgacagtgat  | tctcaacctg | ctccactgcc  | tccacctagt  | 4800 |
| ggcagaaaaga | agaaaatgtg  | tgtaactcgg  | gagtctctgg | tctgaaagct  | ccgggggtatc | 4860 |
| atttcttcaa  | agtcttgagc  | ttgtttttgt  | ttgtatttat | ttatttattt  | gttttagaga  | 4920 |
| caagggtctcg | cactgcactc  | cagcctggga  | gacagagcga | gacaattcag  | gatctatcta  | 4980 |
| gtgaataaa   | agatatcagt  | aatgactggt  | ttatattgtg | gctgtagcgc  | attcgaggga  | 5040 |
| taattcgatt  | ctgttctgct  | ttcgaatgca  | tggctcactg | taacctccaa  | ctcccgggct  | 5100 |
| caagcgatcc  | tctacacctca | gcttctccag  | tagttgagct | tgatttattt  | taaagtttca  | 5160 |
| taaaattttg  | gcatttcttt  | ccacaatatg  | gccatgtgtg | ctttactata  | aaatattttc  | 5220 |
| atcacaaaaat | ttacatcgct  | ggaaatcccc  | ataagccagt | ttgagaaaaca | caacccaaga  | 5280 |
| aagcagaaca  | gactcaaatt  | atcccttaaa  | tcccccttaa | ccacaaatat  | aaaacagtcc  | 5340 |
| gtgactgggc  | gtgttggctt  | acacctgtaa  | tccagcact  | ttggggaggcc | aaggcgggtg  | 5400 |
| gattacttga  | gctcaggagt  | tcaagaccag  | cctggccaac | atgggtgaaac | cccgtcccta  | 5460 |
| ttaaaaatac  | aaaattattc  | aggagtgtg   | gcaggcagtt | gtaatccag   | ctacttgga   | 5520 |

|             |             |             |             |             |            |      |
|-------------|-------------|-------------|-------------|-------------|------------|------|
| ggctgaggca  | ggagaatcac  | ttgaacccag  | gaggtggagg  | ttgtagtgag  | ccaagattgt | 5580 |
| gccagtgcac  | tccagcctgg  | gcaacagagc  | gagacttcca  | tcttaaaaaa  | aaaaaattaa | 5640 |
| gtaaaataaaa | tataaaaaaa  | taaagcagtc  | cctatttgata | tctcttttatt | cactaaatca | 5700 |
| acctggaatt  | gacctgaatt  | ctgattttttt | tttcatcatg  | gatttttttgc | attaattttg | 5760 |
| attgttttaaa | tattgcatta  | aaatattatt  | tatcttgact  | actgagtttg  | cgggacctcc | 5820 |
| ttaaaatttta | tgaccaaggc  | aatgcctcac  | tcactcgcct  | taccataatc  | tgggccacat | 5880 |
| atcaggggct  | ccaatagcaa  | gcaacatgac  | ttttgaacag  | ctaagacttc  | tctcttcact | 5940 |
| gtgaagacca  | gatgggccct  | gcaaacagtg  | taacctctac  | atgaaaatgc  | acgagattcc | 6000 |
| aactacaacc  | aggcacaaaa  | gactctgatg  | gtgaagtccc  | agccctccaa  | gtcccaactt | 6060 |
| cctgaaggga  | aagagcacc   | caagttctga  | ccagaggcca  | gagtcataac  | gaagatggaa | 6120 |
| tgtgagcttg  | acatagaagg  | ggtggtagca  | cctggctcag  | taatgaagag  | gctttcggtc | 6180 |
| ctgaagggaag | agctcagcac  | attcaaagat  | tagaaggag   | gtcccagtc   | taggagcagg | 6240 |
| gaaggagaga  | aggccaata   | agaaacacag  | acaggaggga  | ggggtcagg   | caagatcata | 6300 |
| ctggaacaa   | ctagagagct  | aataaaagtc  | acagtgccca  | gtccccacat  | ggaccagact | 6360 |
| cttcggaatc  | tctaggcatc  | aatttgggca  | ccagtagttt  | tcaaagttct  | ccagaagatt | 6420 |
| ctatgcacac  | cagccaaggg  | tgggaaccac  | aggtgttggc  | ctagggatca  | tgacaatgag | 6480 |
| tttctaagt   | caataagaaa  | cctccagaga  | gtttaagcag  | gggaataatt  | tgatttgttt | 6540 |
| cttgtttgtg  | atttttaaa   | atcagtctgg  | ttactgtgtg  | taagacaata  | atccagaaaa | 6600 |
| tctgttgctc  | atgaaccaca  | tatctgtaaa  | tttgcttccc  | ctgtaactgg  | atctaacca  | 6660 |
| caaaaattag  | tacttactaa  | gaaattacat  | gccaggggac  | tatgctaagt  | aattcataaa | 6720 |
| cactattttt  | tttactcctc  | acagcaagtt  | tataagagaa  | acgttattat  | ttccacattt | 6780 |
| cggatgagaa  | atttgaggct  | tggggaaaagt | taagtaattt  | acctaattgc  | acaccagtt  | 6840 |
| cataagatgc  | agagttaaga  | ttctaattct  | gtgtctaagt  | tgatgctcca  | tcaaacacac | 6900 |
| cacgcctcca  | actaggaagc  | aacatgctgg  | ccagaggatg  | ctgtcatcaa  | gtttacagaa | 6960 |
| tggttagatt  | tctaggcaca  | gatgaataaa  | tcaacatggt  | ggtttgcaat  | agaatgaatc | 7020 |
| tatccagctc  | tgaatttgca  | tccaaggggt  | tgtgagcaca  | caagtctaaa  | agtgtggcct | 7080 |
| cagctctgct  | aacttcatca  | aggtgaatac  | ctaggaggcc  | accctctgag  | accaccagat | 7140 |
| ggacagtcca  | ccatctgttt  | acagatggta  | aagccacata  | ccagctttgc  | catctgatgt | 7200 |
| tctctattca  | cattcaacat  | ttatacaaga  | aatagtcata  | tggatccttt  | tcaatagaca | 7260 |
| gtactgggga  | aattgaattg  | ccatatgcag  | aagaatggaa  | ctagacctct  | atctctcacc | 7320 |
| aaatacaaaa  | gttaactcaa  | gacagattaa  | agacttacat  | ataagacctg  | taactacaaa | 7380 |
| aacactagaa  | gaaaacctag  | ggaaaatgct  | tctggaatta  | atctagggtga | agaactcagg | 7440 |
| actaagatat  | caaaagcaca  | agcaccacaaa | caaaaataga  | caaacaggac  | ttaattaaac | 7500 |
| tagaacgctt  | ctgaacagca  | agagaaataa  | tcaatagagt  | gaacagataa  | tctgcagaat | 7560 |
| gggtgaaaaat | atttgcaaac  | tatgcacctc  | acagggaat   | aatgtccaga  | atttagaagg | 7620 |
| aactcaaaaa  | attcaacaac  | aacagcaaaa  | taacccacc   | aaaaaagtgg  | gcaaaggaca | 7680 |
| tgaatagaca  | tttttcaaaa  | gaaggatat   | gatatgggtt  | ggctctgtgt  | ctccaccag  | 7740 |
| atctcacctt  | aaattgtaat  | aatccccaca  | tatcatggga  | gagaccggt   | gggaggtaat | 7800 |
| tgaatcatgg  | gggcaggttt  | gtcccatgct  | gttctcatga  | tactgaataa  | gtcctatgag | 7860 |
| atctgatgat  | tttataaagg  | ggagttcccc  | tgcacacact  | ctcttgccctg | cctccatgta | 7920 |
| atatgtgcct  | tgtcttctcc  | tttgcttctc  | gccatgattg  | tgaggcctct  | ccagccatat | 7980 |
| ggaactgagt  | caattaaacc  | actttttctt  | tgtaaattac  | ccaatcttgg  | gtatgtcttt | 8040 |
| attagcagca  | taagaacaga  | ctaatacagt  | gtacaaatgg  | ccaagaagcg  | tacaaaaaac | 8100 |
| aaaatgctca  | aatcactaat  | cactagagaa  | tcgcaagtta  | aaaccacaat  | gagatattat | 8160 |
| cttacagcag  | tcagaatgcc  | tattatttaa  | acacacaaaa  | ataacatgtt  | ggcaaggatg | 8220 |
| cagagaaaaag | ggaatactta  | cacattatta  | gtgggaatgt  | aaactagtag  | agcttctgtg | 8280 |
| gaaaacacta  | tggagatttc  | tcaaagaact  | agaaatagaa  | ctaccatgtg  | gttcagcaat | 8340 |
| accacaactg  | ggtatctacc  | caaaggga    | taaattatta  | tataaaaaag  | atatctgcac | 8400 |
| tcacttggtt  | attgcagcac  | tattcacaat  | agcaaagata  | tggaatcaac  | ccaagtgtcc | 8460 |
| atcaacagat  | gattggataa  | agaaaacgtg  | gtgtgtgtgt  | gtgtgtgtgt  | gtgtgtgtat | 8520 |
| acacatacca  | caatgaaata  | ctattcagct  | ataaagaaaa  | gaatgaaatc  | atgtcttttg | 8580 |
| cagcaatgtg  | gttggaactg  | gaggccatta  | tcttaagtgg  | ataattcaaa  | aacagaaggt | 8640 |
| caaatgtcac  | atgttctcac  | ttataagtgg  | gagctaaatg  | atgtgtacac  | atggacatag | 8700 |
| agtgtggtat  | gataaacact  | ggagattgag  | atgggtggaa  | gggtggaagg  | aggttgagt  | 8760 |
| atgagaaaaat | actaaatgga  | tacaatatac  | atgattcagg  | cgatagatac  | actaaaagcc | 8820 |
| cagacttcac  | cactacacag  | tatagctatg  | tagcaaaatt  | gcacctgtat  | tgcttaaatt | 8880 |
| tatacaagta  | aaaaaaagat  | cgtacgaatt  | ctgtttttta  | ttctctatga  | aattactact | 8940 |
| gagagtatta  | tccaatgccc  | tttctatgca  | tgcaccccaa  | tattatccat  | ttagcagctc | 9000 |
| ctatgcaatg  | ccccaaagata | gaaattgtct  | tgaactttta  | tcccaggaaa  | accttcagtc | 9060 |
| acacgtagaa  | actagaaatt  | tttcccctag  | atgaaagtta  | tgtaacataa  | cacattatct | 9120 |
| tcatttagtc  | ggtttccaag  | aagctcagaa  | ccagatttta  | tgttcaatca  | aaaactgctt | 9180 |

|             |             |             |             |             |             |       |
|-------------|-------------|-------------|-------------|-------------|-------------|-------|
| atTTtaagtG  | aggTttactg  | aggTataaat  | tacaataaaa  | gccacctttt  | cgtgtatatt  | 9240  |
| tctataagtt  | ttggcaaagt  | catagctgtg  | taaccacaac  | cacattcaag  | atataggaca  | 9300  |
| agtccctcat  | ccttttaaagt | tcctttatgc  | cccttccttc  | accccagccc  | ttggcaacca  | 9360  |
| ctgggtttttg | tctgatccaa  | tcgtttgcct  | cttcctgaat  | gtcatgtaaa  | tagagccatg  | 9420  |
| caatgtgaag  | ccttttgagt  | ctggccttgt  | tcacttgttc  | acttaggaga  | atgcatttga  | 9480  |
| gattcatctt  | tgctgtttcg  | tgtagcacta  | gttcactgtc  | tattgttgag  | tagtattcca  | 9540  |
| ttgtgtggat  | atgccacaga  | ttgtttatct  | agttaacaat  | ttaaagccat  | ttggtcattt  | 9600  |
| ctaattttta  | gctgctaaga  | ataaagttgc  | tgtaagcttt  | ccaatgcagg  | ttttgtgtg   | 9660  |
| aactcaggat  | ttcatttcgc  | ttgggtaaat  | tcctagcttt  | gggactgctg  | agtcactctg  | 9720  |
| taggtgtatg  | ttgaacttta  | taagaaactg  | ccaaactgtt  | ttccaaagtt  | gctgtgctct  | 9780  |
| tttgcactcc  | catcagcagt  | gaatgagggt  | tccacttgct  | cgagcctagt  | atTTtaactt  | 9840  |
| cactatatac  | cttctttgat  | gacataatcct | ttcaaatttt  | tggtcaagtt  | tttattgggg  | 9900  |
| tgttgttact  | atggactgtg  | agagttcttt  | gtatatctctg | catatgattt  | ttttctcaca  | 9960  |
| tttgtgtttt  | atgaatatgt  | tctcccaatg  | tgtggcgcct  | tttattttct  | taacgtgcc   | 10020 |
| tgtgaagagc  | agaagtTTaa  | ttttatgatg  | tccaaattat  | ctttttttct  | tttctttttt  | 10080 |
| agatcaaaaat | aggggtctat  | tttgattacc  | actgttattt  | tatctccatt  | tgatttttoga | 10140 |
| tttttatttt  | tattttttcta | atttcattgt  | aaatttttaa  | ttaaacccaa  | atattctagg  | 10200 |
| ggaaagaggc  | aagataaaaa  | tagtctaact  | tgggcataaa  | tttttagagtc | atattctctt  | 10260 |
| gccgagaaaag | gaaactagct  | ctcttacatt  | gattgtttta  | tttcagacgt  | cactacttta  | 10320 |
| tgaggatgcc  | caaattatgg  | gctttaaaaa  | atatatatcc  | aaacaggggt  | tcagaaagaa  | 10380 |
| taactaattt  | gtccacaaca  | acacaaaaaa  | tgattccacc  | ataagtttgc  | ccagtgcag   | 10440 |
| ggtctatatt  | atTTtctata  | tatcaaatct  | tacaactggg  | tcttaaagct  | actgtacata  | 10500 |
| acctaagtta  | aaatatagg   | tattagtTga  | taagacattt  | tatcatctat  | gaaatgttgc  | 10560 |
| ctgttgtcat  | agttagagaa  | tcttttaaaa  | tatggagcta  | ttttcataga  | ttaaactatg  | 10620 |
| ccagttaaaa  | gttgggtaaa  | aagaactaca  | gaataatatt  | tatgtttatc  | gtgtaagggt  | 10680 |
| ttaaagcaaa  | ctccaagtca  | ttttcatcaa  | tgaaatcaat  | aaggttttgc  | aaatatatat  | 10740 |
| gtatgaaaat  | actgatttaa  | aatgcaaata  | aggggagagt  | ttgagagaga  | gagagagacc  | 10800 |
| aaatgatttt  | ataattctag  | taagtttata  | ggtttatggg  | gtttttacgt  | acttttctac  | 10860 |
| ccaacttgtc  | tataagactt  | taatgaatca  | cttagaattt  | ttaaaataat  | ttattattac  | 10920 |
| tctgtacctg  | ttctttactc  | tgcaaatctt  | accttgccct  | tttgtctaaa  | agcaataaaa  | 10980 |
| tctgacctgg  | tttatatcgt  | atcattgatt  | ttgttactta  | gcaagcacag  | tgatccatta  | 11040 |
| ggcctatgta  | ggctcatggg  | ttatacaaca  | ctgccatctg  | ctgacagagt  | gtgacagtca  | 11100 |
| cagtcagcaa  | cacgagacca  | ctttattttc  | atTTtttagtg | tttatagaaa  | tatgaatata  | 11160 |
| cacaaatagt  | ataatgaacc  | ctaagcttca  | caaatttaaca | ttttgcta    | cttgtttcaa  | 11220 |
| ctaccgcctc  | ccccctcatc  | caattactct  | gttctctcac  | ctcctcacac  | acagacactg  | 11280 |
| gcagtatTTt  | tcagccaatc  | attaatacgt  | tgccaactga  | taaggacttt  | taaaaaacia  | 11340 |
| ccaccattcc  | attatgattc  | ccagcataat  | tgagagtaat  | tccctaatat  | ccaataccca  | 11400 |
| ttttctattc  | caatttcctt  | gattgtcttt  | aaactgtttt  | taccctaagt  | ttgcttaaat  | 11460 |
| caaagtccag  | gtcctgttaa  | acatatgggt  | aagttttacc  | caaaccctaa  | taaataaata  | 11520 |
| aaataataaa  | taaataacct  | atTTtttcca  | attccaggga  | atagtgaag   | agggtaaatg  | 11580 |
| ccattatttta | gaaacataaa  | tcacatcata  | ggactagaat  | tatcttgaag  | tcaaaattga  | 11640 |
| agactgaaaa  | tggaaaaagaa | aggtatagac  | taaacttatt  | taaaaacttc  | aatgcagaac  | 11700 |
| tctaagagaa  | gatattagaa  | agttgtacca  | gcattcatta  | ttcagtattc  | atcagtattc  | 11760 |
| actcagctat  | atgtagttga  | aatctaacta  | gaggagcttg  | atcagataaa  | gagatacatt  | 11820 |
| tttctcacca  | aggcggactc  | tggaggcagg  | tggttcagag  | ctagacagct  | gctgcaggac  | 11880 |
| ccaggtcctt  | tccctgcctg  | ctcctccact  | ctagcttggt  | actttcatcc  | tgcaagatgg  | 11940 |
| gtgtttctgc  | caagttccag  | atagaagaag  | atagaacaca  | aaggagaaat  | aagcagtggg  | 12000 |
| gcctctgtcc  | atcaagcaaa  | atTTttccag  | aaatgcacaa  | tagatttcag  | atgatgtctc  | 12060 |
| aacagtccta  | actgcaaaga  | agctgaggaa  | ttagattttt  | ggctgggaca  | ctgttgccct  | 12120 |
| gtaaaaaaat  | tgggattctg  | ttattaaaga  | ataagaggag  | ggaagaaaga  | ttgaaaactc  | 12180 |
| ctatgcaata  | gtgaaaaaaa  | taagaaactc  | aataaaaaag  | tgggcatacc  | ttaaaaaacag | 12240 |
| gcaattcaca  | acagatgaga  | ccccaatagc  | caataaacat  | ttttaaatgg  | tcaacctcat  | 12300 |
| gagtgatcag  | aaaacacaaa  | tatgtatttt  | aaaccaaaaa  | taaaatacaa  | tgtattgacc  | 12360 |
| atTTgagtgg  | aaaaaaatta  | aaaagcctga  | taatatcaag  | tattggagag  | gatgtagagt  | 12420 |
| gaggaaactc  | catggaggac  | ctatcattgc  | aaatgtggga  | atgaaactta  | atacacgaat  | 12480 |
| ttgaggccaa  | tttgtaaatt  | gaaaaatgcg  | cacacctgc   | aaccaagtac  | cccttgcaat  | 12540 |
| atTTttgaaa  | agacaaaaac  | gttatgtaaa  | tggaatcatg  | caatatgtga  | cctttatact  | 12600 |
| cagcataatg  | cccctcagat  | ccattgaagt  | catgtgtatc  | aacagctcac  | tatttttttt  | 12660 |
| ttaatttttt  | ttagagacag  | agtctcactc  | tgtcacacag  | ggtggagtgc  | agtgccgaga  | 12720 |
| tcataactct  | ctctagcagc  | ctcgaactcc  | tgggctcaag  | catcctcctg  | cctcagcctc  | 12780 |
| ccaagtagct  | aggactacag  | gcatgggaca  | caacacacag  | ctaatttttt  | taaatttttt  | 12840 |

|             |              |             |             |             |             |       |
|-------------|--------------|-------------|-------------|-------------|-------------|-------|
| ttagagacat  | ggtctcacta   | tgttgccctac | gctgggtctca | aactcctagg  | tcaagcgatt  | 12900 |
| ctcccacctc  | tactttcacia  | agtgtctgtag | gtatgtagggt | atggattgta  | ggtatgaacc  | 12960 |
| accgtgcccc  | actcactact   | ttttattact  | aattattcca  | tgggatggat  | gtaccgcagt  | 13020 |
| ttgtttttacc | attaatctat   | tgtaggacat  | tttgactgat  | tccagttttt  | ttttaataca  | 13080 |
| aataaaacca  | ctatgaatag   | ttgtgtattg  | tatacgtttt  | tgtgctaagt  | tttcattttt  | 13140 |
| ctgggataag  | ttttcatttc   | tttgggcttt  | tactgtatcc  | ttgatattat  | aatatgttac  | 13200 |
| atcttcagtt  | ttattctatt   | caatatataa  | tctttttatt  | tccttgaaat  | ctcccatgga  | 13260 |
| ttgttttagaa | gtgtgttggt   | ttgtttccaa  | gggtttggca  | tttttcccat  | tatttttcta  | 13320 |
| ttatcgattt  | ccagtttgat   | tccaggtggt  | cagagaacac  | acttcatgtg  | atttcagttc  | 13380 |
| tattaaattt  | gttgagggtt   | gttacatggc  | ccagtatatg  | gcaatttttg  | tatatgttcc  | 13440 |
| atgagcactt  | gaaaagaatg   | cgaattctgc  | tgggtgctgg  | tggagttttc  | cagcaatgtt  | 13500 |
| gatttatgat  | cttactcatt   | gatggtggtg  | ttgagtttga  | tgtgttctta  | cgatggcagc  | 13560 |
| tttaacattc  | ttgtcaggta   | attctaacgt  | ctctgtcatg  | tcagtattag  | cgcctcttaa  | 13620 |
| ctgtctcatc  | aaagctgaga   | ttttcctggt  | tcccctgggt  | cctgttgagg  | tgtgtgggtt  | 13680 |
| tcatttgaaa  | tctggacttt   | ggagtattgt  | gttatgaggc  | tttgatcttc  | atttaaactc  | 13740 |
| atctcagcga  | atttcctctc   | ttgccactca  | ggaaggagaa  | gttgggtggt  | tgaatggagc  | 13800 |
| agagccgtta  | ctgcctaaga   | attgtttttac | tgggcttccc  | ctttctttct  | cctttgacta  | 13860 |
| gagagagcca  | gctttttatt   | agggctttat  | gtttttctgg  | gcctgttggt  | gtttctgggt  | 13920 |
| tgacaaactt  | ctccagaacc   | aagtctggaa  | tggatgaggc  | aaaaagaaac  | cccgtggaat  | 13980 |
| gcaactgctgg | gtcgtctcct   | gggtcccaat  | gttcctaact  | ggtctgcctt  | cttctctcca  | 14040 |
| gcttccagag  | tcttcataag   | tttgctttac  | gtacaatgtc  | cggggttttt  | actttacttg  | 14100 |
| agagaaatag  | gtaaaagtaa   | ttctactcca  | tctttcagga  | agcaaaagcc  | cccttgtgta  | 14160 |
| tttttttaaa  | ctttcaaaaa   | caaaacaaaa  | ggcagctgca  | acagtaaaga  | agctagtaac  | 14220 |
| acccttggtg  | ggaaattcaa   | gtccaaatac  | acatttttaag | tttggttagc  | cagtggagac  | 14280 |
| atcagaatag  | ttcagggttt   | aaacaaattt  | atattttatga | ttatgcatat  | actaaaagct  | 14340 |
| gaaggcatct  | tatatttact   | aagcacctat  | tttgttcttg  | ttaaaaagac  | agaattccat  | 14400 |
| tccctaggaa  | atttgacctg   | gcagctggag  | ctgatccacc  | tggccactag  | agcacagagc  | 14460 |
| agggagagta  | gtagccctgc   | cccagccacc  | cctcaagaca  | ggattctttc  | tctgggaact  | 14520 |
| gtaggtaaca  | ctaaatcggt   | ctggaacaca  | acaacgaaag  | aagaaaggaa  | agagaaagaa  | 14580 |
| agaaaggaag  | aaagagagag   | agaaggaagg  | aagggaggga  | gggaagggaag | gaaggggaag  | 14640 |
| ggaaggggaat | ggaaggggaag  | gaaggaagga  | aaaggaagga  | agggaggagg  | agagggagga  | 14700 |
| aggaaggaaa  | ggaaggggaag  | gaaggaagaa  | ggaagaaaaa  | aaagaaagaa  | agaagaaaga  | 14760 |
| aagaaagaca  | agaaagaaaag  | aaagaaagaa  | agaaagggga  | aagaaaagaa  | agaggaaaga  | 14820 |
| aagagaaaaga | aagaaaagaa   | agaaaggaag  | gaaagagaaa  | gaaagaaaaa  | gaaagagaaa  | 14880 |
| gaaagagaaa  | gacaagaaaag  | aaaaaggaag  | gaaaagaaaag | agaaagaaaa  | gaaagaaagg  | 14940 |
| aaagaaaagag | aaagaaaagaa  | aaagaaaagaa | agaaaagaag  | aaagagaaaag | aaagaaaagaa | 15000 |
| aaagaaaagaa | agaaagaaaag  | aaagaaaaag  | aaaaagaaaag | gagaaaatga  | cagcaattac  | 15060 |
| ttttgcaaca  | acctaataata  | agttttttta  | aagttaaata  | ttctgttcca  | tgcattgctg  | 15120 |
| gataccttat  | aaataacagg   | gcacccctatg | acctgaattt  | cccaaattat  | gagttgaggg  | 15180 |
| tttgaactag  | ttttaaaaaa   | caaggaggcc  | aggcgactg   | gctcatgcct  | gtaattccca  | 15240 |
| cacttttgga  | ggctgaggga   | ggtggatcac  | gaggtcagga  | gctcgagacc  | agccttacca  | 15300 |
| acatagtga   | acacccgctc   | tactaaaaaat | acaaaaattta | gccgggcgtg  | atggtgcgca  | 15360 |
| cctgtaatct  | cagctactca   | gcaggctgag  | gcaggagaat  | cgcttgaacc  | cagaaggcgg  | 15420 |
| aggttgcagt  | gagccaagat   | cacagcattg  | cactccagcc  | tgggcgacag  | agggagactc  | 15480 |
| cgtcttcaaa  | aaaaaaaaaaaa | aagacaagga  | atctgtaaaa  | caggcactgg  | aagtatatgc  | 15540 |
| actttttatt  | tcattctatg   | ctatccgatg  | cctactgcta  | tttcccttca  | tatttaacct  | 15600 |
| ccaacagctg  | catttttgctc  | cctccagacc  | acctgattgg  | agctcacgtg  | ctccacaca   | 15660 |
| gtacctccaa  | ccagagagag   | tcgagtccca  | cagaaaggcg  | taacaatcac  | cagtaatttt  | 15720 |
| gcacttattt  | tacattgtgc   | cttgatacag  | agtactcaat  | gaatgctctt  | tgaatcatat  | 15780 |
| ttaataaata  | tgtgtatttg   | ggattgtagc  | atattgcagc  | tacctggata  | tataatttaa  | 15840 |
| ttagaaaaaa  | aatttttgtgt  | ggctcaatca  | acaaacgact  | tttctctctc  | tctctttctc  | 15900 |
| tttctccctc  | tctctctctt   | tcttctcagt  | tgatgttgct  | ggagttcagt  | gttgtgcaga  | 15960 |
| tggcagtgac  | aaatgccatg   | ggcacatgag  | atatgataaa  | aggtccctga  | agaaggtgga  | 16020 |
| gaaccagtta  | tcttatgaaa   | ttttccagag  | tgggtactgg  | atctctctct  | tctggcacca  | 16080 |
| tgtctggcctc | agcccaaggg   | gaatttcctt  | ccagagacag  | agggcagtga  | ttgaggtggg  | 16140 |
| gagacagatc  | gtaacactga   | gacttacatg  | aggacaccaa  | acagaaaaaa  | ggtggcaagt  | 16200 |
| atagaaaatt  | ctttcttctg   | gacagtcttc  | tctgttctaa  | cttcagcaaa  | attctccccc  | 16260 |
| cagtggatgc  | tattgcacaa   | ccctacatat  | gctatgtttt  | ttcctatata  | cacttaacct  | 16320 |
| tgataaaatg  | cattaattag   | tcacagtaag  | aggttaacaa  | caataactag  | taataaaata  | 16380 |
| gaacaattca  | gtaaaaataag  | agttacttga  | gcacaaacac  | taggatataca | tgacagtcaa  | 16440 |
| tctgatgacc  | aagaggggcta  | ctaagcatct  | aaacaggagg  | gtaagtgtag  | acagcatgga  | 16500 |

|             |             |             |             |             |             |       |
|-------------|-------------|-------------|-------------|-------------|-------------|-------|
| gacgctggac  | aaaggggatga | ttcagtccca  | ggctggtatg  | gagcgggaagg | gcatgatatg  | 16560 |
| tcatcacgct  | actaaggcac  | acaattttaa  | atgagtaaat  | tcttatttct  | agaaatttct  | 16620 |
| ttttaaatatt | ttcagactac  | agttgcctac  | aggtaactga  | aaccccagaa  | agcaaaattg  | 16680 |
| ttgataagga  | ggtactactg  | tacatcgtcc  | tttgaaccaa  | ctttatcatt  | tgctagtata  | 16740 |
| tacatatata  | cctacatata  | tacatatata  | catacctgca  | cacacctata  | tgtatacgta  | 16800 |
| cacacacaca  | cacgcacaca  | cacacactca  | catctactaa  | tgttagaata  | agtttgctaa  | 16860 |
| ataagatgca  | caacttgtta  | atgtcctaca  | gagcaataaa  | accataagca  | ttgggggttat | 16920 |
| cttttctact  | agataaaaaat | ccattatcat  | tttcataaag  | ttttctttac  | attaacatct  | 16980 |
| aacttttgca  | atctagtttt  | taatcatcat  | aaataggaag  | caaatgaact  | gtttctctag  | 17040 |
| tgaatcaa    | atccttgaaa  | acatacatag  | tcatcttttt  | ggtttatttt  | tattttttaga | 17100 |
| taaattat    | aaagttttta  | ataatttaac  | attcacaata  | gtttgtgact  | gtatattttg  | 17160 |
| acttggctct  | tcaaacttaa  | tttgtacttt  | tatgtatcgt  | gcttacctca  | attttttatt  | 17220 |
| cacttttct   | aaactttgct  | ggattgggtt  | attatttttg  | tctatttctt  | ttccttctag  | 17280 |
| tggtttggga  | gggtttttta  | aatcccatta  | ctattgaatg  | cctattaact  | tgcccccttt  | 17340 |
| ttctttcaat  | ctctattccc  | acggcctgaa  | gcatgagggc  | caagctgtct  | gtaaccagca  | 17400 |
| gagagatgac  | ccagggtgta  | ttccactctc  | cactgtccac  | ctatcaccat  | tcccagcccg  | 17460 |
| atagctctga  | agtacggctt  | ttctggggct  | ctgtggggaa  | aactagaact  | ggctgcttca  | 17520 |
| aggacacctc  | ctgtttttgc  | aatggaaaaa  | atgtttctaa  | attccagttt  | ctctatgaat  | 17580 |
| tcaatgacat  | ggtttaaatc  | tctgtgggtg  | tcttcaaagt  | tttttcttct  | aataggacct  | 17640 |
| ctcatgattc  | tccaaccacg  | aaataaattc  | attatcattt  | ttatatttct  | tctgtcattg  | 17700 |
| caaaggaggt  | tttgaaaagag | tggaggacgc  | gctaataaac  | tcaaaaatcc  | acactattcc  | 17760 |
| ttgtttccat  | ctgttgttca  | ttcattgttt  | ccattggcct  | gtccgcctcc  | tatcctctct  | 17820 |
| cttagacttg  | gagctctagc  | ctcagccagg  | atagggaaaa  | gagagatcag  | actgttactt  | 17880 |
| tgtctatgta  | gaaaaggaag  | acataagaaa  | ctccattttg  | atctgtatcc  | tgaacaattg  | 17940 |
| ttttgccttg  | agatgctgtt  | aatctgtaac  | tttagcccca  | accttgtgct  | cacagaaaca  | 18000 |
| tgtgttgat   | ggaatcaaga  | tttaagggat  | ctagggctgt  | gcagaatgtg  | ccttgttaac  | 18060 |
| aacatgttta  | caggcagtat  | gcttggtaaa  | agtcacgcgc  | attctccatt  | ctcgattaac  | 18120 |
| taggggcaca  | gtgactgcg   | gaaagccgca  | gggacctctg  | cccaggaaaa  | ctgggtattg  | 18180 |
| tccaaggttt  | ctccccactg  | agacagcctg  | agatatggcc  | ttgcgggatg  | ggaaagatct  | 18240 |
| gaccgtcccc  | cagcctgaca  | cccgtgaagg  | gtctgcgctg  | aggaggatta  | gtaaaagagg  | 18300 |
| aaggcctctt  | gcggttgaga  | taagaggaag  | ccctctgtct  | cctgcatgcc  | cctgggaacg  | 18360 |
| gcatgtctca  | gtgtaaaacc  | tgattgtaca  | ttcgttctat  | tctgagatag  | gagaaaaccg  | 18420 |
| ctctgtggct  | ggaggcgaga  | tatgctggcg  | gcaatgctgc  | tctgttggtc  | tttactacac  | 18480 |
| tgagatgttt  | gggtgagaga  | agcataaatc  | tggcctacgt  | gcacatccag  | gcatagtacc  | 18540 |
| ttcccttgaa  | tttacttggt  | acacagattc  | ctttgctcac  | atgttttctt  | gctgaccttc  | 18600 |
| tccccactat  | caccctgttc  | tcctgccgca  | ttcccttgcc  | tgaggtagtg  | aaaatagtaa  | 18660 |
| tcaataaata  | ctgagggaac  | tcagagaccg  | gtgccagcgc  | gggtcctccg  | tatgctgagt  | 18720 |
| gacggtccct  | tgggccact   | gttccttctc  | tatactttgt  | ctctgtgtct  | tatttctttt  | 18780 |
| ctcagtctct  | cgtcccacct  | gacgagaaat  | acccacaggt  | gtggaggggc  | tggacacccc  | 18840 |
| ttcagagccag | gattatcagg  | gcatttgggg  | gtctgcaaaa  | ctaagcccca  | actcatgat   | 18900 |
| ttcacacact  | catccagagc  | cagcctgaac  | agtagttgcc  | catgatttct  | atgccttaat  | 18960 |
| acgagaagag  | aacatagggg  | ctgggtgccca | agtaggtaga  | cagggagggc  | agggaactct  | 19020 |
| aagacagagc  | ttgaggggct  | cattcctctt  | gcaaaatgaa  | acaaaaacca  | cagcactgaa  | 19080 |
| tatgtaaaat  | tcggtggctg  | aacccctcct  | aggatagtaa  | gccctgacac  | aattgctgct  | 19140 |
| atcttctctt  | tctctcaagg  | aagtcaaaaa  | acacctgcag  | ccttactgtc  | cccttgaaaa  | 19200 |
| caagatgaac  | atctacattt  | tctaaagtgg  | gacaagaatc  | tctgttcata  | tttatgtccc  | 19260 |
| atgcatttgc  | acgtggccgg  | acaaaggact  | ttgcttctgc  | cagcacatct  | gtcttcagat  | 19320 |
| atgagaggaa  | acagacacaa  | cctggaggcg  | gcaaagaagc  | agctctttct  | caagtgcact  | 19380 |
| cctctatctc  | cctacttcct  | ggctaattgg  | gcagccttga  | tccttgggaa  | tccaggacag  | 19440 |
| atatccactc  | gtgacaaaact | agctggaaga  | atgacaacca  | atcaggttcc  | aagcaccact  | 19500 |
| ggatgtgaac  | cacagaattt  | cctcctctcc  | ttgtggaatg  | tcagcttacg  | tctgacaaaa  | 19560 |
| aatgtaaaac  | tgagagagtt  | acaatcttaa  | ggaggagtca  | agctaaagca  | gaaagaatca  | 19620 |
| cctactctgg  | actccagcat  | gactgctgag  | ctcaaataata | tatagagaga  | gaaagaacca  | 19680 |
| caaacttgaa  | gatggatatc  | agctacagac  | tttctgagt   | caggtaggga  | aatggccatc  | 19740 |
| cctcaaacct  | tgcaaaaaggc | aaacttatgc  | cattgtgtcc  | tctgacatac  | tgggtgatgt  | 19800 |
| actgtatgtt  | actgatgtga  | ggggaacttc  | ctaaattggc  | tagtaaatta  | tgccaaataa  | 19860 |
| aaagcaaaaa  | tgatatttct  | tgaaatgtta  | catctgagga  | acattgctaa  | aataatttat  | 19920 |
| cagtatgttt  | caggatgatt  | tatagatgtg  | cattgaagtg  | tgtacttgtg  | ctctctctct  | 19980 |
| cctctctctc  | tctcttctc   | tcctctctct  | cgctctttct  | ctccttggcc  | ccctccctcc  | 20040 |
| ctgactttcc  | ttcctgtccc  | ctccacagca  | gttttatatt  | tttttctgat  | aatctaactt  | 20100 |
| tgctgagggt  | tcaatgtaaa  | gcaccttcag  | tgatgagtta  | gttggaatgt  | tccccaagaa  | 20160 |

|              |             |             |             |             |             |       |
|--------------|-------------|-------------|-------------|-------------|-------------|-------|
| attctatttc   | cagcactcct  | ttacatgaaa  | tccaagaagc  | tctcagacta  | tcttactgac  | 20220 |
| accttgccct   | tcctcaacag  | atcaatctta  | tcaatgtcca  | tcacagatat  | ttttagaac   | 20280 |
| ggtggatcct   | ggcagagtct  | cacagatgct  | tctgagacaa  | catttgcttt  | caaaaaatga  | 20340 |
| accacacaca   | tcctaaagat  | ctcagccact  | tcccatgttt  | cattttgtgt  | tacagcaaac  | 20400 |
| atcacaaaca   | tcattccctac | agatcaccac  | tgcatgtgat  | caataaaata  | gtttttgcaa  | 20460 |
| caatgggtact  | tatgataatc  | atctttttatt | gtttacaaat  | actgctttac  | aatagttatt  | 20520 |
| cgggttgcaact | gttcatatta  | gattttccaat | tagctcactt  | aggaacataa  | gtccctcgaa  | 20580 |
| cagctcagtc   | atcttttttca | ttcctgtttc  | tatcccctac  | atctctttcc  | tttgagacg   | 20640 |
| actatctcct   | acactgaaac  | aggaaaagctt | ttaccttttt  | ggcatgcttg  | atttaaagat  | 20700 |
| tatagaaaag   | tatttgacaa  | agaaaactca  | cacatgtgtg  | tacatatctt  | ttaaaaagtt  | 20760 |
| atgtttatgc   | attgcacagg  | aatatcgaga  | atgctaatag  | gcaatgtcag  | agtttactgt  | 20820 |
| ttttcaaaat   | tagtacagtt  | ttattatttc  | taaaaactat  | aaaatgaata  | tattcacatc  | 20880 |
| accatacaga   | agagtaggag  | gagatggcat  | aaagtgtcat  | tgttcctcct  | ctgcaatccc  | 20940 |
| aggagataac   | taccaagcac  | aatttatgtc  | ttttaaaatt  | cagcccgtat  | ttatatacat  | 21000 |
| atatattcaa   | tgtagatggg  | atcatgatat  | ctcaccacac  | atactcttca  | gtgacctgca  | 21060 |
| ttttcacaaa   | caccttccac  | gtaactatat  | agaagtctac  | gtcttcccct  | taatgtctgc  | 21120 |
| tttgtgctac   | attgtaaagc  | tctagcacag  | tttaaccaa   | ctcctattaa  | tgaggatttt  | 21180 |
| agttattttt   | cactctttta  | acaatatttc  | catgtgtagt  | cttatacata  | cgtctgtaca  | 21240 |
| cacttatccc   | agtctaagga  | gttcctttta  | ccttccccca  | tcccagcatt  | cctgtgcacg  | 21300 |
| cttggtgctt   | ccgttgagt   | actttactcc  | tggagtataa  | tctgctgata  | gttcagttaa  | 21360 |
| aaacatggga   | tctgagttta  | gttcacagct  | ctgccactta  | ctgccataag  | ccagttcctt  | 21420 |
| gacctctctg   | ccctcaagtt  | tttgacacta  | caaagtaggg  | gataatatta  | gttcctagtt  | 21480 |
| catagagtct   | tgggataaat  | taaatgtgat  | gatccatgta  | caatgtctgg  | cagttagtaa  | 21540 |
| gtgctcaata   | aatgtcaccc  | tttatgattg  | gtattgcgtg  | tatgtctgca  | gagaaaaatca | 21600 |
| ctttgtgtcc   | cctttaaaaa  | aggactatgc  | ccttgggtcag | ctatttttgca | cattaaattt  | 21660 |
| cacttgccaa   | tattaaactct | ccacctctaa  | cttgatccct  | ctccttcctc  | atcttctggt  | 21720 |
| gagaccaa     | gctaattctg  | ctattcaagg  | caactagcaa  | agctgccagt  | gacagaatca  | 21780 |
| aataaaccta   | cccctaattct | ttagaattgt  | agttatgatt  | tctgttgtaa  | aagttactgt  | 21840 |
| tgtggcagtc   | agtattagtc  | tttggctctat | gatagcatct  | ctgatctatt  | attgaytttc  | 21900 |
| aattakgtat   | ttttttttat  | ttattctgaa  | aatgtttgtt  | aagcatttgc  | taagtaaaga  | 21960 |
| tactggackg   | agcctcccaa  | atacagggca  | aataaaacat  | caaacagctt  | ataattttaga | 22020 |
| agggtagaag   | agaatctgaa  | agcaggtaaa  | aataaacagg  | cactcggctg  | ggcgcggtgg  | 22080 |
| ctcacgcctg   | taatcccagc  | actttgggag  | gccgaggtgg  | gcggatcacg  | aggtcaggag  | 22140 |
| atcgagacca   | tcctggctaa  | cacggtgaaa  | ccccgtctct  | actaaaaata  | caaaaaatta  | 22200 |
| gcgaggcggtg  | gtggcgggcg  | cctttagtcc  | cagctagtcg  | ggaggctgag  | gcaggagaat  | 22260 |
| ggtgtgaacc   | cgggaggcg   | agcttgacgt  | gagccaagat  | cgcaccactg  | cactccagcc  | 22320 |
| tgggygacag   | agcgagactc  | cgtctcaaaa  | aaaataaata  | aataaaataa  | aaaataatta  | 22380 |
| ggtactctag   | gccagtgac   | ctgtctctgt  | actctgtaaa  | ttcaggtcac  | ctgctcaggg  | 22440 |
| ctaactctgag  | agaaggtctc  | tcttcagttg  | aattttgaaa  | gacaattagc  | agttcacaag  | 22500 |
| ctagaaaac    | tggacaaaga  | tgttcccaag  | cagagggagt  | gcttgtgaaa  | gtggaggg    | 22560 |
| ataagaaaac   | tctaaggagt  | gtaggagggt  | ggaggtaatg  | tatggaagg   | gtggagatgg  | 22620 |
| aagggttaaga  | gagatacaag  | gctgcaaaaa  | tggagctgga  | ctcaaaagaa  | aatactgaaa  | 22680 |
| aggtcttcag   | tgttgttgat  | gagattacta  | tggaaacact  | atggaacact  | gggactccat  | 22740 |
| ggcagctcca   | aagatggcat  | gcgcctggtc  | cagctcagta  | agagctgagc  | tcttctgtg   | 22800 |

<210> 101

<211> 154

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic

<400> 101

|            |            |            |            |            |            |     |
|------------|------------|------------|------------|------------|------------|-----|
| tctggcaaca | cggcctccct | gaccgtctct | gggctccagg | ctgaggatga | ggctgattat | 60  |
| tactgcagct | catatgcagg | cagcaacaat | ttaagtcttc | ggaactggga | ccaaggtcac | 120 |
| cgtcctaggt | cagcccaagt | ccactccac  | tctc       |            |            | 154 |

<210> 102  
 <211> 156  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 102  
 tcagggacaa tggccacctt gactatcagt gggggcccagg tggaggatga agctgactac 60  
 tactgttact caacagacag cagtggtaat cattatgtct tcggaactgg gaccaaggtc 120  
 accgtcctag gtcagcccaa gtccactccc actctc 156  
  
 <210> 103  
 <211> 150  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 103  
 tctgggaaca cagccactct gaccatcagc gggaccagg ctatggatga ggctgactat 60  
 tactgtcagg cgtgggacag cagcactgcc gtcttcggaa ctgggaccaa ggtcaccgtc 120  
 ctaggtcagc ccaagtccac tcccactctc 150  
  
 <210> 104  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 104  
 aggtggaaac acggtgagag t 21  
  
 <210> 105  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> synthetic  
  
 <400> 105  
 ccactcgggg aaaagttgga a 21