

SEQ ID NO: 2:

FIG. 1

SEQ ID NO: 3:

ATGGCCCAACAATGGTCCCTTCAACGACTCGCCGGTAGACACCCACAGGACTCCTAC
GAAGATTTCGACCCAGTCATCCATTTTCACTTACACCAACTCCAACTCCACTCGCGGC
CCCTTCGAGGGCCCCGAATTATCACATTGCGCCGAGATGGGTGTACCACCTGACTAGC
GTGTGGATGATCTTCGTCGTGATCGCCAGCGTGTTCACTAACGGACTGGTGCTGGCC
GCGACCATGAAGTTCAAGAAGCTGAGGGCACCCCTCTGAACCTGGATTCTTGTGAACCTG
GCCGTGGCCGACCTGGCCGAAACAGTGATCGCCTCAACCATCTCCGTGGTCAACCA
GGTCTACGGTTACTTTGTGCTTGGACATCCTATGTGCGTGCTCGAGGGGCTACACCGT
GTCGCTGTGCGGGATCACTGGATTGTGGTCCCTGGCCATTATCTCGTGGGAGCGGTG
GATGGTTGTGTGCAAGCCCTTCGGCAACGTGCGCTTCGATGCAAAGCTGGCTATCGT
GGGAATCGCGTTTTCTTGGATCTGGGGCCCGCTCTGGACCGCTCCCCCTATTTTCGGT
TGGTCCCGGTACTGGCCCCACGGGCTCAAGACCTCCTGTGGTCCCGACGTGTTACGC
GGATCGTCGTACCTGGGGTGCAGTCCATACATGATTGTGCTGATGGTCACTTGCTGT
ATCACGCCGCTGTCTATTATCGTGTGTGTACCTCCAAGTCTGGTTGGCCATCCGGG
CTGTGGCCAAACAGCAGAAGGAGTCCGAGAGCACCCAGAAAGCCGAAAAGGAAGT
GACCCGGATGGTTCGTGTGATGGTGTGCTGGCATTCTGCTTCTGTTGGGGCCCGTACGC
TTTCTTTGCCTGCTTTGCGGCTGCGAACCCGGGCTACCCATTCCATCCTCTCATGGCC
GCCCTCCCGGCTTCTTCGCCAAGTCCGCGACCATCTACAATCCCGTGATCTATGTGT
TCATGAACCGGCAGTTCCGCAACTGCATCCTGCAACTCTTCGGAAAGAAAGTGGAC
GACGGATCCGAACGTGTCGAGCGCCTCAAAGACCGAAGTCAGCTCGGTGTCATCCGT
GAGCCAGCATAA

SEQ ID NO: 4:

AATCAACCTCTGGATTACAAAAATTTGTGAAAGATTGACTGGTATTCTTAACTATGT
TGCTCCTTTTACGCTATGTGGATACGCTGCTTTAATGCCTTTGTATCATGCTATTGCTT
CCCGTATGGCTTTTCATTTTCTCCTCCTTGTATAAATCCTGGTTGCTGTCTTTATGAG
GAGTTGTGGCCCGTTGTGAGGCAACGTGGCGTGGTGTGCACTGTGTTGTGCTGACGCA
ACCCCCACTGGTTGGGGCATTGCCACCACCTGTGAGCTCCTTTCCGGGACTTTTCGCTT
TCCCCCTCCCTATTGCCACGGCGGAACATCGCCCGCTGCCTTGCCCGCTGCTGGA
CAGGGGCTCGGCTGTTGGGCACTGACAATTCCGTGGTGTGTCGGGGAAGGTCTGCT
GAGACTCGGGGCTGCTCGCCTGTGTTGCCACCTGGATTCTGCGCGGGACGTCTTCT
GCTACGTCCCTTCGGCCCTCAATCCAGCGGACCTTCCTTCCCGCGGCCTGCTGCCGG
CTCTGCGGCCTCTTCCGCGTCTTCGCCTTCGCCCTCAGACGAGTCGGATCTCCCTTTG
GGCCGCCTCCCCGC

SEQ ID NO: 5:

CTGTGCCTTCTAGTTGCCAGCCATCTGTTGTTTGGCCCTCCCCCGTGCCTTCCTTGAC
CCTGGAAGGTGCCACTCCCACTGTCCTTTCTAATAAAATGAGGAAATTGCATCGCA
TTGTCTGAGTAGGTGTCACTTCTATTCTGGGGGGTGGGGTGGGGCAGGACAGCAAGG
GGGAGGATTGGGAAGACAATAGCAGGCATGCTGGGGA

FIG. 2

SEQ ID NO: 6:

CTCATTTTCATCTGTGACCCCTCCACTACCCTTTCTTCCTGATTCTTGGAAGCAAATCC
AAGACATCACACCCTTCCCTCTGTAAATCTTTACTATGTTCCCTCTAGGAGAAAAGGG
CTCTTCTCAATACATAACCACAAGTCATCATCACACCGACAAGTGTAACAGTATTTTC
CTGAATAGCTTCAAATATCCTAGTAGTGTTCAAAAAATGTCATACGTATTTTCAGTCT
GCTTGAATCAGGGCTCAAATAAGGTCCACACATTCAGATTGACTGATATGCCTTTTG
ACTACCTTTGAATCTAGAGGTTCCCTTTCTATCTCCCTGCAATTTATTTGTGGAAGCA
AGCAAGTCGTTTCATGACGTAGCCTAACAGGCCCTCTGACGTTGTTCAATTATGATTTT
TCTGTAAATTGGTAGTTGATCTGAGGATCTGGCCAGAGGCAGGTTGGATTTGTTGGT
GTGTTTTGGCAAGGAGAGTGTCTCTTTTCTGGGGTGTTGGCA

SEQ ID NO: 7:

AGGAACCCCTAGTGATGGAGTTGGCCACTCCCTCTCTGCGCGCTCGCTCGCTCACTG
AGGCCGGGCGACCAAAGGTCGCCCAGCGCCCGGGCTTTGCCCGGGCGGCCTCAGTG
AGCGAGCGAGCGCGCAGCTGCCTGCAGG

FIG. 3

SEQ ID NO: 8:

CCTGCAGGCAGCTGCGCGCTCGCTCGCTCACTGAGGCCGCCCGGGCAAAGCCCGGG
CGTCGGGGCGACCTTTGGTCGCCCCGGCCTCAGTGAGCGAGCGAGCGCGCAGAGAGGG
AGTGGCCAACTCCATCACTAGGGGGTTCTTGTAGTTAATACGCATGGAGCTAGTTAT
TAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGTTCGGGGTA
CCGACATTGATTATTGACTAGTTATTAATAGTAATCAATTACGGGGTTCATTAGTTCAT
AGCCCATATATGGAGTTCGCGGTTACATAACTTACGGTAAATGGCCCCGCTGGCTGA
CCGCCCCAACGACCCCCGCCCATTGACGTCAATAATGACGTATGTTCCCATAGTAACG
CCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCCAC
TTGGCAGTACATCAAGTGTATCATATGCCAAGTACGCCCCCTATTGACGTCAATGAC
GGTAAATGGCCCCGCTGGCATTATGCCCAGTACATGACCTTATGGGACTTTCTACT
TGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTCGAGGTGAGCCCCACG
TTCTGCTTCACTCTCCCCATCTCCCCCCCCCTCCCCACCCCCAATTTTGTATTTATTTAT
TTTTTAATTATTTTGTGCAGCGATGGGGGCGGGGGGGGGGGGGGGGGGGCCCCCCCCCAG
GCGGGGCGGGGCGGGGCGAGGGGCGGGGCGGGGCGAGGGCGGAAAGGTGCGGCGG
CAGCCAATCAGAGCGGCGCGCTCCGAAAGTTTCCTTTTATGGCGAGGCGGCGGCGG
CGGCGGCCCTATAAAAAGCGAAGCGCGCGGGCGGGCGGGAGTCGTTGCGCGCTGCCT
TCCCCCGGTGCCCCGCTCCGCCGCCGCTCGCGCCGCCCGCCCCGGCTCTGACTGAC
CGCGTTACTCCACAGGTGAGCGGGCGGGACGGCCCTTCTCCTCCGGGCTGTAATTA
GCGCTTGGTTTAAATGACGGCTTGTTCCTTTTCTGTGGCTGCGTGAAAGCCTTGAGGGG
CTCCGGGAGGGCCCCTTTGTGCGGGGGGAGCGGCTCGGGGGGTGCGTGCGTGTGTGT
GTGCGTGGGGAGCGCCGCGTGCGGCTCCGCGCTGCCGCGCGGCTGTGAGCGCTGCG
GGCGCGGCGCGGGGCTTTGTGCGCTCCGCAGTGTGCGCGAGGGGAGCGCGGCGGGG
GGCGGTGCCCGCGGTGCGGGGGGGGCTGCGAGGGGAACAAAGGCTGCGTGCGGG
GTGTGTGCGTGGGGGTGAGCAGGGGGTGTGGGCGCGTGGGTCGGGTGCAACCC
CCCCTGCACCCCCCTCCCCGAGTTGCTGAGCACGGCCCCGGCTTCGGGTGCGGGGCTC
CGTACGGGGCGTGGCGCGGGGCTCGCCGTGCCGGGCGGGGGGTGGCGGCAGGTGG
GGGTGCCGGGCGGGGCGGGGCGCCCTCGGGCCGGGAGGGCTCGGGGGAAGGGGC
GCGGCGGCCCCCGGAGCGCCGGCGGCTGTGAGGCGCGGCGAGCCGAGCCATTGC
CTTTTATGGTAATCGTGCGAGAGGGCGCAGGGACTTCCTTTGTCCCAAATCTGTGCG
GAGCCGAAATCTGGGAGGCGCCGCCGACCCCCCTAGCGGGCGCGGGGCGAAGCG
GTGCGGCGCCGGCAGGAAGGAAATGGGCGGGGAGGGCCTTCGTGCGTCCCGCGCC
GCCGTCCCCTTCTCCCTCTCCAGCCTCGGGGCTGTCCGCGGGGGGACGGCTGCCTTC
GGGGGGGACGGGGCAGGGCGGGGTTTCGGCTTCTGGCGTGTGACCGGCGGCTCTAGA
GCCTCTGCTAACCATGTTTCATGCCTTCTTCTTTTCTACAGCTCCTGGGCAACGTGC
TGGTTATTGTGCTGTCTCATCATTTTGGCAAAGAATTCTGGCCACCATGGCCCAACA
ATGGTCCCTTCAACGACTCGCCGGTAGACACCCACAGGACTCCTACGAAGATTTCGAC
CCAGTCATCCATTTTCACTTACACCAACTCCAACCTCACTCGCGGCCCTTCGAGGG
CCCGAATTATCACATTGCGCCGAGATGGGTGTACCACCTGACTAGCGTGTGGATGAT
CTTCGTGCTGATCGCCAGCGTGTTCATAACGGAAGTGGTGTGGCCGCGACCATGAA
GTTCAAGAAGCTGAGGCACCCCTCTGAACCTGGATTCTTGTGAACCTGGCCGTGGCCGA
CCTGGCCGAAACAGTGATCGCCTCAACCATCTCCGTGGTCAACCAGGTCTACGGTTA
CTTTGTGCTTGGACATCCTATGTGCGTGCTCGAGGGCTACACCGTGTGCTGTGCGG
GATCACTGGATTGTGGTCCCTGGCCATTATCTCGTGGGAGCGGTGGATGGTTGTGTG

FIG. 4A

SEQ ID NO: 8 (ctd):

CAAGCCCTTCGGCAACGTGCGCTTCGATGCAAAGCTGGCTATCGTGGGAATCGCGTT
TTCCTGGATCTGGGCCCGCGTCTGGACCGCTCCCCCTATTTTCGGTTGGTCCCGGTAC
TGGCCCCACGGGCTCAAGACCTCCTGTGGTCCCGACGTGTTACAGCGGATCGTCGTAC
CCTGGGGTGCAGTCCTACATGATTGTGCTGATGGTCACTTGCTGTATCACGCCGCTG
TCTATTATCGTGTGTGCTACCTCCAAGTCTGGTTGGCCATCCGGGCTGTGGCCAAA
CAGCAGAAGGAGTCCGAGAGCACCCAGAAAGCCGAAAAGGAAGTGACCCGGATGG
TCGTCTGTGATGGTGTGCTGGCATTCTGCTTCTGTTGGGGCCCGTACGCTTTTCTTTGCCTG
CTTTGCGGCTGCGAACCCGGGCTACCCATTCCATCCTCTCATGGCCGCCCTCCCGGC
CTTCTTCGCCAAGTCCGCGACCATCTACAATCCCGTGATCTATGTGTTTCATGAACCG
GCAGTTCCGCAACTGCATCCTGCAACTCTTCGGAAAAGAAAGTGGACGACGGATCCG
AACTGTGCGAGCGCCTCAAAGACCGAAGTCAGCTCGGTGTCATCCGTGAGCCCAGCA
TAAGCGGAAGCTTCCGTAATCAACCTCTGGATTACAAAAATTTGTGAAAGATTGACT
GGTATTCTTAATATGTTGCTCCTTTTACGCTATGTGGATACGCTGCTTTAATGCCTT
TGTATCATGCTATTGCTTCCCGTATGGCTTTCATTTTCTCCTCCTTGTATAAATCCTGG
TTGCTGTCTCTTTATGAGGAGTTGTGGCCCCGTTGTCAGGCAACGTGGCGTGGTGTGC
ACTGTGTTTGCTGACGCAACCCCCACTGGTTGGGGCATTGCCACCACCTGTCAGCTC
CTTTCCGGGACTTTTCGCTTTCCCCCTCCCTATTGCCACGGCGGAATCATCGCCGCCT
GCCTTGCCCGCTGCTGGACAGGGGCTCGGCTGTTGGGCACTGACAATTCGTGGTGT
TGTCCGGGAAGGTCTGCTGAGACTCGGGGCTGCTCGCCTGTGTTGCCACCTGGATTG
TGCGCGGGACGTCTCTGCTACGTCCCTTCGGCCCTCAATCCAGCGGACCTTCCTTC
CCGCGGCCTGCTGCCGGCTCTGCGGCCTCTTCGCGCTCTTCGCCTTCGCCCTCAGACG
AGTCGGATCTCCCTTTGGGCCCGCCTCCCCGCCAGCCTGCTAGCCGACTGTGCCTTCT
AGTTGCCAGCCATCTGTTGTTTGGCCCTCCCCCGTGCCCTTCCTTGACCCTGGAAGGTG
CCACTCCCACCTGTCTTTTCTAATAAAATGAGGAAATTGCATCGCATTGTCTGAGTA
GGTGTCTATTCTATTCTGGGGGGTGGGGTGGGGCAGGACAGCAAGGGGGAGGATTGG
GAAGACAATAGCAGGCATGCTGGGGAGAACGCGACCGGTGATCTGCTCATTTTCATC
TGTGACCCCTCCACTACCCTTTCTTCCTGATTCTTGGAAGCAAATCCAAGACATCAC
ACCCTTCCCTCTGTAAATCTTTACTATGTTCCCTCTAGGAGAAAAGGGCTCTTCTCAAT
ACATAACCACAAGTCATCATCACACCGACAAGTGTAACAGTATTTTCTGAATAGCTT
CAAATATCCTAGTAGTGTTCAAAAAATGTCATACGTATTTTCAGTCTGCTTGAATCA
GGGCTCAAATAAGGTCCACACATTTCAGATTGACTGATATGCCTTTTGACTACCTTTG
AATCTAGAGGTTCCCTTTTCTATCTCCCTGCAATTTATTTGTGGAAGCAAGCAAGTCGT
TCATGACGTAGCCTAACAGGCCCTCTGACGTTGTTTATTATGATTTTTCTGTAAATT
GGTAGTTGATCTGAGGATCTGGCCAGAGGCAGGTTGGATTTGTTGGTGTGTTTGGC
AAGGAGAGTGTCTCTTTTCTGGGGTGTGGCATGTGACCTGATTTTGTATAACCACT
TGCGGTGATCTAGAGCATGGCTATGTAGATAAGTAGCATGGCGGGTTAATCATTAAC
TACAAGGAACCCCTAGTGATGGAGTTGGCCACTCCCTCTCTGCGCGCTCGCTCGCTC
ACTGAGGCCGGGCGACCAAGGTGCGCCGACGCCCCGGGCTTTGCCCGGGCGGCCTC
AGTGAGCGAGCGAGCGCGCAGCTGCCTGCAGG

FIG. 4B

SEQ ID NO: 9:

CCTGCAGGCAGCTGCGCGCTCGCTCGCTCACTGAGGCCGCCCGGGCAAAGCCCCGGG
CGTCGGGGCGACCTTTGGTCGCCCCGGCCTCAGTGAGCGAGCGAGCGCGCAGAGAGGG
AGTGGCCAACTCCATCACTAGGGGGTTCTTGTAGTTAATACGCATGGAGCTAGTTAT
TAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGTTCCGGGTA
CCGACATTGATTATTGACTAGTTATTAATAGTAATCAATTACGGGGGTCATTAGTTCAT
AGCCCATATATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCCGCTGGCTGA
CCGCCCCAACGACCCCCGCCCATTGACGTCAATAATGACGTATGTTCCCATAGTAACG
CCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCCAC
TTGGCAGTACATCAAGTGTATCATATGCCAAGTACGCCCCCTATTGACGTCAATGAC
GGTAAATGGCCCCGCTGGCATTATGCCCAGTACATGACCTTATGGGACTTTCTACT
TGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTCGAGGTGAGCCCCACG
TTCTGCTTCACTCTCCCCATCTCCCCCCCCCTCCCCACCCCCAATTTTGTATTTATTTAT
TTTTTAATTATTTTGTGCAGCGATGGGGGCGGGGGGGGGGGGGGGGGGGCCCCCCCCCAG
GCGGGGCGGGGCGGGGCGAGGGGCGGGGCGGGGCGAGGCGGAAAGGTGCGGCGG
CAGCCAATCAGAGCGGCGCGCTCCGAAAGTTTCCTTTTATGGCGAGGCGGCGGCGG
CGGCGGCCCTATAAAAAGCGAAGCGCGCGGGCGGGCGGGAGTCGTTGCGCGCTGCCT
TCCCCCGGTGCCCCGCTCCGCGCGCCGCTCGCGCGCCCCGCCCGGGCTCTGACTGAC
CGCGTTACTCCCACAGGTGAGCGGGCGGGACGGCCCTTCTCCTCCGGGCTGTAATTA
GCGCTTGGTTTAAATGACGGCTTGTTCCTTTTCTGTGGCTGCGTGAAAGCCTTGAGGGG
CTCCGGGAGGGCCCCTTTGTGCGGGGGGAGCGGCTCGGGGGGTGCGTGCGTGTGTGT
GTGCGTGGGGAGCGCCGCGTGCGGCTCCGCGCTGCCGCGGGCTGTGAGCGCTGCG
GGCGCGGCGCGGGGCTTTGTGCGCTCCGCAAGTGTGCGCGAGGGGAGCGCGGGCCGGG
GGCGGTGCCCGCGGTGCGGGGGGGGCTGCGAGGGGAACAAAGGCTGCGTGCGGG
GTGTGTGCGTGGGGGTGAGCAGGGGGTGTGGGCGCGTGGGTCGGGTGCAACCC
CCCCTGCACCCCCCTCCCCGAGTTGCTGAGCACGGCCCCGGCTTCGGGTGCGGGGCTC
CGTACGGGGCGTGGCGCGGGGCTCGCCGTGCCGGGCGGGGGGTGGCGGCAGGTGG
GGGTGCCGGGCGGGGCGGGGCGCCCTCGGGCCGGGAGGGCTCGGGGAAGGGGC
GCGGCGGCCCCCGGAGCGCCGGCGGCTGTGAGGCGCGGCGAGCCGAGCCATTGC
CTTTTATGGTAATCGTGCGAGAGGGCGCAGGGACTTCCTTTGTCCCAAATCTGTGCG
GAGCCGAAATCTGGGAGGCGCCGCCGACCCCCCTAGCGGGCGCGGGGCGAAGCG
GTGCGGCGCCGGCAGGAAGGAAATGGGCGGGGAGGGCCTTCGTGCGTCCCGCGCC
GCCGTCCCCCTTCTCCCTCTCCAGCCTCGGGGCTGTCCGCGGGGGGACGGCTGCCTTC
GGGGGGGACGGGGCAGGGCGGGGTTTCGGCTTCTGGCGTGTGACCGGCGGCTCTAGA
GCCTCTGCTAACCATGTTTCATGCCTTCTTCTTTTCTACAGCTCCTGGGCAACGTGC
TGGTTATTGTGCTGTCTCATCATTTTGGCAAAGAATTCTGGCCACCATGGCCCAACA
ATGGTCCCTTCAACGACTCGCCGGTAGACACCCACAGGACTCCTACGAAGATTTCGAC
CCAGTCATCCATTTTCACTTACACCAACTCCAACCTCACTCGCGGCCCTTCGAGGG
CCCGAATTATCACATTGCGCCGAGATGGGTGTACCACCTGACTAGCGTGTGGATGAT
CTTCGTGCTGATCGCCAGCGTGTTCATAACGGAAGTGGTGTGGCCGCGACCATGAA
GTTCAAGAAGCTGAGGCACCTCTGAACTGGATTCTTGTGAACCTGGCCGTGGCCGA
CCTGGCCGAAACAGTGATCGCCTCAACCATCTCCGTGGTCAACCAGGTCTACGGTTA
CTTTGTGCTTGGACATCCTATGTGCGTGCTCGAGGGCTACACCGTGTGCTGTGCGG
GATCACTGGATTGTGGTCCCTGGCCATTATCTCGTGGGAGCGGTGGATGGTTGTGTG

FIG. 5A

SEQ ID NO: 9 (ctd):

CAAGCCCTTCGGCAACGTGCGCTTCGATGCAAAGCTGGCTATCGTGGGAATCGCGTT
TTCCTGGATCTGGGCCCGCGTCTGGACCGCTCCCCCTATTTTCGGTTGGTCCCGGTAC
TGGCCCCACGGGCTCAAGACCTCCTGTGGTCCCGACGTGTTACAGCGGATCGTCGTAC
CCTGGGGTGCAGTCCTACATGATTGTGCTGATGGTCACTTGCTGTATCACGCCGCTG
TCTATTATCGTGTGTGCTACCTCCAAGTCTGGTTGGCCATCCGGGCTGTGGCCAAA
CAGCAGAAGGAGTCCGAGAGCACCCAGAAAGCCGAAAAGGAAGTGACCCGGATGG
TCGTCTGTGATGGTGTGCTGGCATTCTGCTTCTGTTGGGGCCCGTACGCTTTTCTTTGCCGTG
CTTTGCGGCTGCGAACCCGGGCTACCCATTCCATCCTCTCATGGCCGCCCTCCCGGC
CTTCTTCGCCAAGTCCGCGACCATCTACAATCCCGTGATCTATGTGTTTCATGAACCG
GCAGTTCCGCAACTGCATCCTGCAACTCTTCGGAAAAGAAAGTGACGACGGATCCG
AACTGTGCGAGCGCCTCAAAGACCGAAGTCAGCTCGGTGTATCCGTGAGCCCAGCA
TAAGCGGAAGCTTCCGTAATCAACCTCTGGATTACAAAAATTTGTGAAAGATTGACT
GGTATTCTTAATATGTTGCTCCTTTTACGCTATGTGGATACGCTGCTTTAATGCCTT
TGTATCATGCTATTGCTTCCCGTATGGCTTTCATTTTCTCCTCCTTGTATAAATCCTGG
TTGCTGTCTCTTTATGAGGAGTTGTGGCCCCGTTGTACAGGCAACGTGGCGTGGTGTGC
ACTGTGTTTGCTGACGCAACCCCCACTGGTTGGGGCATTGCCACCACCTGTCAGCTC
CTTTCCGGGACTTTTCGCTTTCCCCCTCCCTATTGCCACGGCGGAATCATCGCCGCCT
GCCTTGCCCGCTGCTGGACAGGGGCTCGGCTGTTGGGCACTGACAATTCGTGGTGT
TGTCCGGGAAGGTCTGCTGAGACTCGGGGCTGCTCGCCTGTGTTGCCACCTGGATTG
TGCGCGGGACGTCTCTGCTACGTCCCTTCGGCCCTCAATCCAGCGGACCTTCCTTC
CCGCGGCCTGCTGCCGGCTCTGCGGCCTCTTCGCGCTCTTCGCTTCGCCCTCAGACG
AGTCGGATCTCCCTTTGGGCCCGCTCCCCGCCAGCCTGCTAGCCGACTGTGCCTTCT
AGTTGCCAGCCATCTGTTGTTTGGCCCTCCCCCGTGCCCTTCCTTGACCCTGGAAGGTG
CCACTCCCAGCTTCCTTTTCTAATAAAAATGAGGAAATGTCATCGCATGCTGTGAGTA
GGTGTCTATTCTATTCTGGGGGGTGGGGGAGGACAGCAAGGGGGAGGATTGG
GAAGACAATAGCAGGCATGCTGGGGGAGAACGCGACCGGTGATCTGCTCATTTTCATC
TGTGACCCCTCCACTACCCTTCTTCTCTGATTCTTGGAAGCAAATCCAAGACATCAC
ACCCTTCCCTCTGTAAATCTTTACTATGTTCCCTCTAGGAGAAAAGGGCTCTTCTCAAT
ACATAACCACAAGTCATCATCACACCGACAAGTGTAACAGTATTTTCTGAATAGCTT
CAAATATCCTAGTAGTGTTCAAAAAATGTCATACGTATTTTTCAGTCTGCTTGAATCA
GGGCTCAAATAAGGTCCACACATTTCAGATTGACTGATATGCCTTTTGACTACCTTTG
AATCTAGAGGTTCCCTTTTCTATCTCCCTGCAATTTATTTGTGGAAGCAAGCAAGTCGT
TCATGACGTAGCCTAACAGGCCCTCTGACGTTGTTTATTATGATTTTTCTGTAAATT
GGTAGTTGATCTGAGGATCTGGCCAGAGGCAGGTTGGATTGTTGGTGTGTTTGGC
AAGGAGAGTGTCTCTTTTCTGGGGTGTGGCATGTGACCTGATTTTGTATAACCACT
TGCGGTGATCTAGAGCATGGCTATGTAGATAAGTAGCATGGCGGGTTAATCATTAAAC
TACAAGGAACCCCTAGTGATGGAGTTGGCCACTCCCTCTCTGCGCGCTCGCTCGCTC
ACTGAGGCCGGGCGACCAAGGTGCGCCGACGCCCCGGGCTTTGCCCGGGCGGCCTC
AGTGAGCGAGCGAGCGCGCAGCTGCCTGCAGGCCCCCCCCCCCCCCCCCGGCGATT
CTCTTGTGTTGCTCCAGACTCTCAGGCAATGACCTGATAGCCTTTGTAGAGACCTCTCA
AAAATAGCTACCCTCTCCGGCATGAATTTATCAGCTAGAACGGTTGAATATCATATT
GATGGTGATTTGACTGTCTCCGGCCTTTCTCACCCGTTTGAATCTTTACCTACACATT
ACTCAGGCATTGCATTTAAAATATATGAGGGTTCTAAAAATTTTATCCTTGCGTTGA

FIG. 5B

SEQ ID NO: 9 (ctd):

AATAAAGGCTTCTCCCGCAAAAGTATTACAGGGTCATAATGTTTTTGGTACAACCGA
TTAGCTTTATGCTCTGAGGCTTTATTGCTTAATTTTGCTAATTCTTTGCCTTGCCTGT
ATGATTTATTGGATGTTGGAATCGCCTGATGCGGTATTTTCTCCTTACGCATCTGTGC
GGTATTTTACACCCGCATATGGTGCACCTCTCAGTACAATCTGCTCTGATGCCGCATAG
TTAAGCCAGCCCCGACACCCGCCAACACTATGGTGCACCTCTCAGTACAATCTGCTCT
GATGCCGCATAGTTAAGCCAGCCCCGACACCCGCCAACACCCGCTGACGCGCCCTG
ACGGGCTTGTCTGCTCCCGGCATCCGCTTACAGACAAGCTGTGACCGTCTCCGGGAG
CTGCATGTGTCAGAGGTTTTACCCGTCATCACCGAAACGCGCGAGACGAAAGGGCC
TCGTGATACGCTATTTTTATAGGTAAATGTCATGATAATAATGGTTTTCTTAGACGTC
AGGTGGCACTTTTCGGGGAAATGTGCGCGGAACCCCTATTTGTTTATTTTTCTAAATA
CATTCAAATATGTATCCGCTCATGAGACAATAACCCCTGATAAATGCTTCAATAATAT
TGAAAAAGGAAGAGTATGAGCCATATTCAACGGGAAACGTCGAGGGCCGCGATTAAA
TTCCAACATGGATGCTGATTTATATGGGTATAAATGGGCTCGCGATAATGTCCGGCA
ATCAGGTGCGACAATCTATCGCTTGTATGGGAAGCCCGATGCGCCAGAGTTGTTTCT
GAAACATGGCAAAGGTAGCGTTGCCAATGATGTTACAGATGAGATGGTCAGACTAA
ACTGGCTGACGGAATTTATGCCACTTCCGACCATCAAGCATTTTATCCGTACTCCTG
ATGATGCATGGTTACTCACCCTGCGATCCCCGGAAAAACAGCGTTCCAGGTATTAG
AAGAATATCCTGATTTCAGGTGAAAAATATTGTTGATGCGCTGGCAGTGTTCTCGCGCC
GGTTGCACTCGATTCCCTGTTTGTAAATTGTCCTTTTAAACAGCGATCGCGTATTTGCGCT
CGCTCAGGCGCAATCACGAATGAATAACGGTTTGGTTGATGCGAGTGATTTTGATGA
CGAGCGTAATGGCTGGCCTGTTGAACAAGTCTGGAAAGAAATGCATAAACTTTTGCC
ATTCTCACCGGATTCAGTCGTCACCTCATGGTGATTTCTCACTTGATAACCTTATTTTT
GACGAGGGGAAATTAAGGTTGTATTGATGTTGGACGAGTCGGAATCGCAGACCG
ATACCAGGATCTTGCCATCCTATGGAATCGCTCGGTGAGTTTCTCCTTACATTACAG
AAACGGCTTTTTTCAAAAATATGGTATTGATAATCCTGATATGAATAAATGCAGTTT
CATTTGATGCTCGATGAGTTTTTCTAACTGTGACACCAAGTTTACTCATATATACTTT
AGATTGATTTAAACTTCATTTTTAATTTAAAGGATCTAGGTGAAGATCCTTTTTTGA
TAATCTCATGACCAAAATCCCTTAACGTGAGTTTTTCGTTCCACTGAGCGTCAGACCC
CGTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTTCTGCGCGTAATCTGCTGC
TTGCAAAACAAAAAACCACCGCTACCAGCGGTGGTTTGTGTTGCCGGATCAAGAGCT
ACCAACTCTTTTTCCGAAGGTAACTGGCTTCAGCAGAGCGCAGATACCAAAATACTGT
TCTTCTAGTGTAGCCGTAGTTAGGCCACCACTTCAAGAACTCTGTAGCACCGCCTAC
ATACCTCGCTCTGCTAATCCTGTTACCAGTGGCTGCTGCCAGTGGCGATAAGTCGTG
TCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTCGGGCT
GAACGGGGGGTTTCGTGCACACAGCCAGCTTGGAGCGAACGACCTACACCGAACTG
AGATACCTACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGGC
GGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAGGAGAGCGCACGAGGGAGCTT
CCAGGGGGAAACGCCCTGGTATCTTTATAGTCCTGTCGGGTTTCGCCACCTCTGACTT
GAGCGTCGATTTTTGTGATGCTCGTCAGGGGGGCGGAGCCTATGGAAAAACGCCAG
CAACGCGGCCTTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCACATGTTCTTTC
CTGCGTTATCCCCTGATTCTGTGGATAACCGTATTACCGCCTTTGAGTGAGCTGATAC
CGCTCGCCGCAGCCGAACGACCGAGCGCAGCGAGTCAGTGAGCGAGGAAGCGGAA
GAGCGCCCAATACGCAAACCGCCTCTCCCCGCGCGTTGGCCGATTCATTAATGCAGC

FIG. 5C

SEQ ID NO: 9 (ctd):

TGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCT
GAATGGCGAATGGCGATTCCGTTGCAATGGCTGGCGGTAATATTGTTCTGGATATTA
CCAGCAAGGCCGATAGTTTGAGTTCTTCTACTCAGGCAAGTGATGTTATTACTAATC
AAAGAAGTATTGCGACAACGGTTAATTTGCGTGATGGACAGACTCTTTTACTCGGTG
GCCTCACTGATTATAAAAACACTTCTCAGGATTCTGGCGTACCGTTCTCTGTCTAAAA
TCCCTTTAATCGGCCCTCCTGTTTAGCTCCCGCTCTGATTCTAACGAGGAAAGCACGTT
ATACGTGCTCGTCAAAGCAACCATAGTACGCGCCCTGTAGCGGCGCATTAAGCGCG
GCGGGTGTGGTGGTTACGCGCAGCGTGACCGCTACACTTGCCAGCGCCCTAGCGCCC
GCTCCTTTTCGCTTTTCTTCCCTTCCTTTCTCGCCACGTTTCGCCGGCTTTCCCCGTCAAGC
TCTAAATCGGGGGCTCCCTTTAGGGTTCCGATTTAGTGCTTTACGGCACCTCGACCCC
AAAAAACTTGATTAGGGTGATGGTTCACGTAGTGGGCCATCGCCCTGATAGACGGTT
TTTCGCCCTTTGACGTTGGAGTCCACGTTCTTTAATAGTGGACTCTTGTTCCAACTG
GAACAACACTCAACCCTATCTCGGTCTATTCTTTTGATTTATAAGGGATTTTGCCGAT
TTCGGCCTATTGGTTAAAAAATGAGCTGATTTAACAAAAATTTAACGCGAATTTTAA
CAAAATATTAACGCTTACAATTTAAATATTTGCTTATACAATCTTCCTGTTTTTGGGG
CTTTTCTGATTATCAACCGGGGTACATATGATTGACATGCTAGTTTTACGATTACCGT
TCATCGCC

FIG. 5D

FIG. 6

Detection of human MWO protein in 293T cells after plasmid transfection

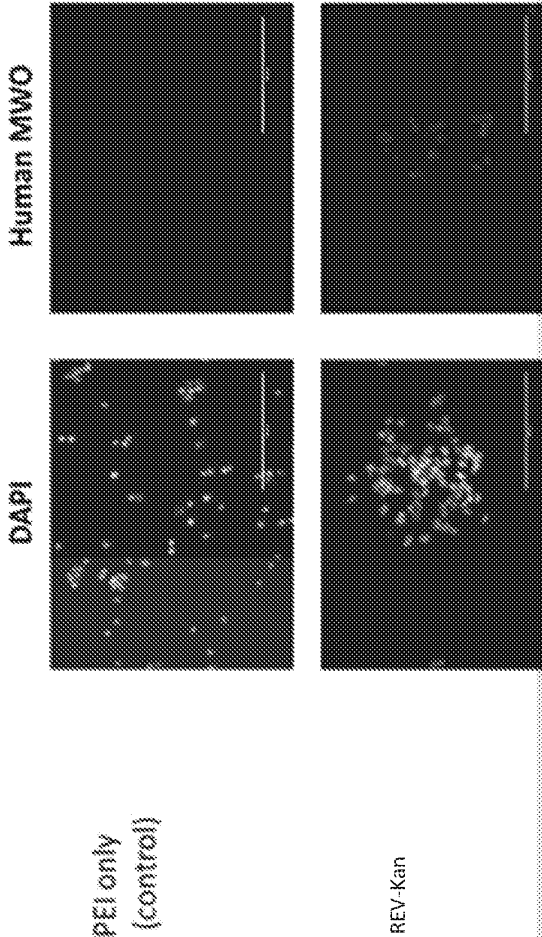
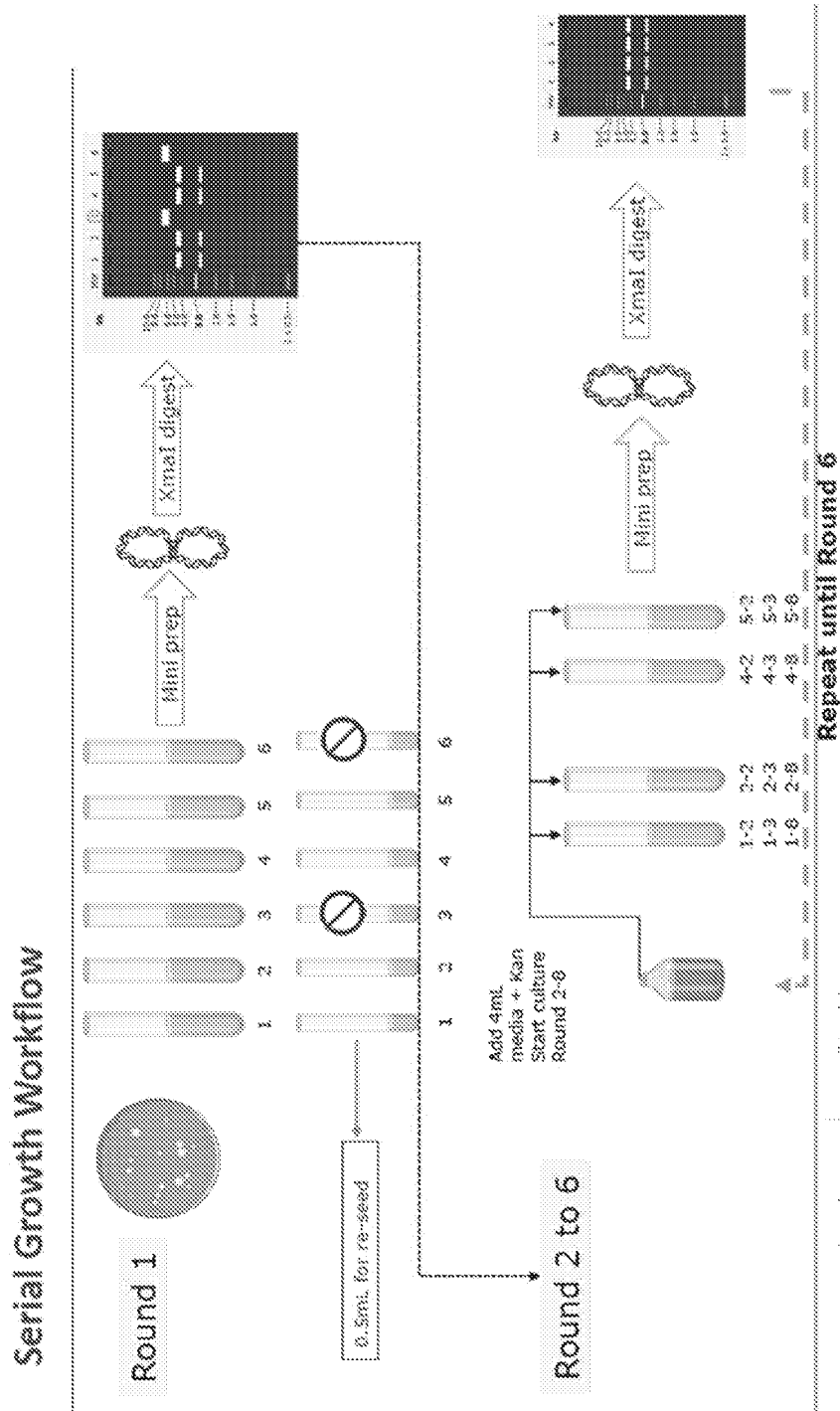


FIG. 7



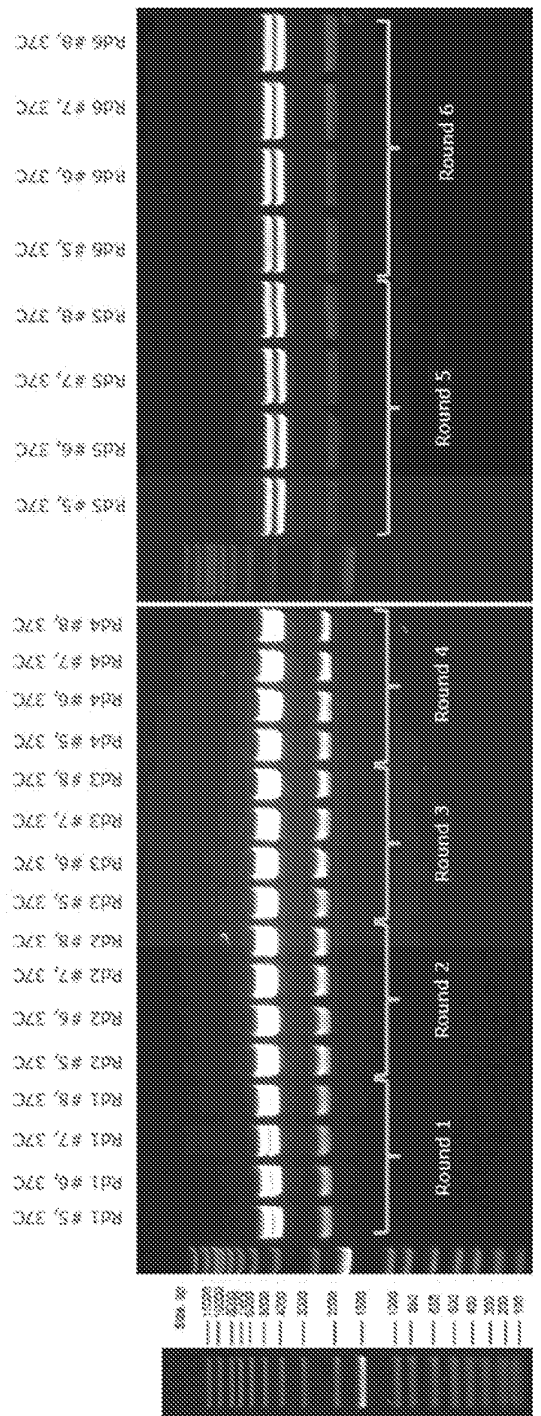


FIG. 8

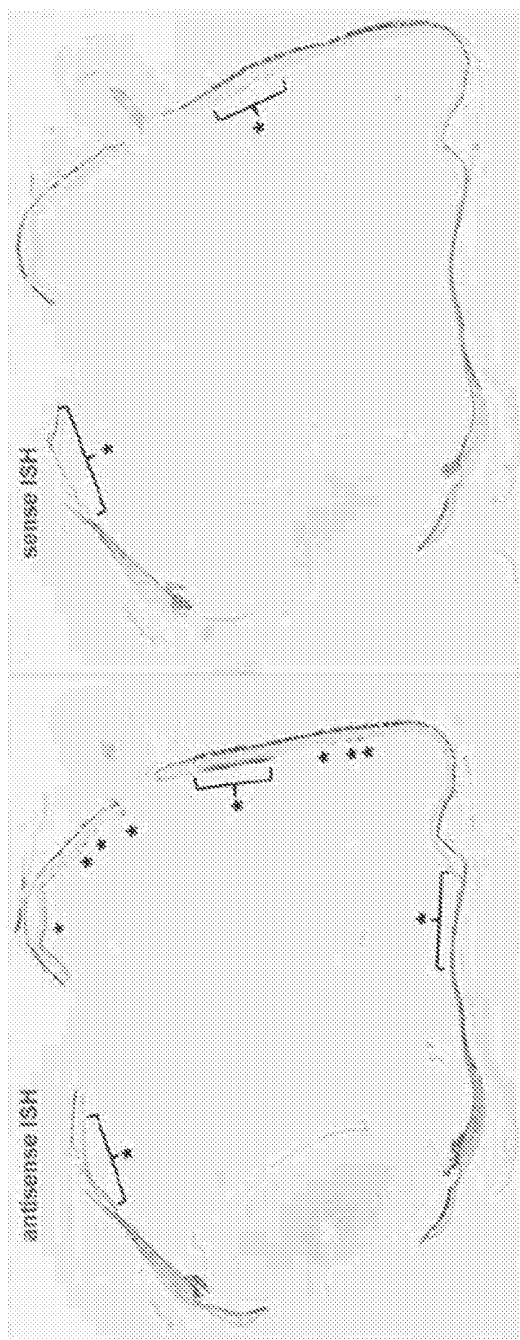
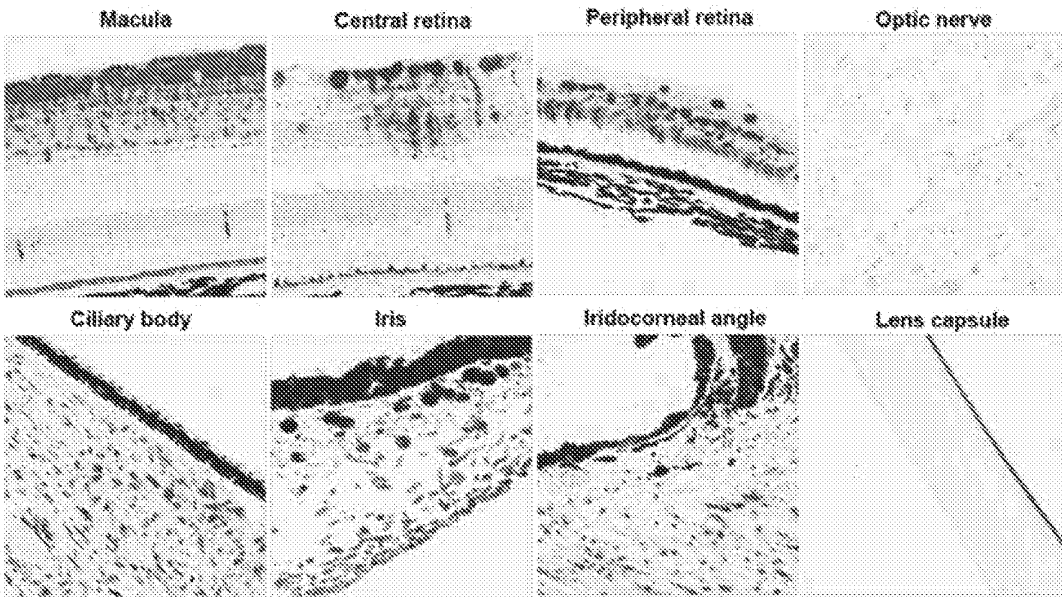
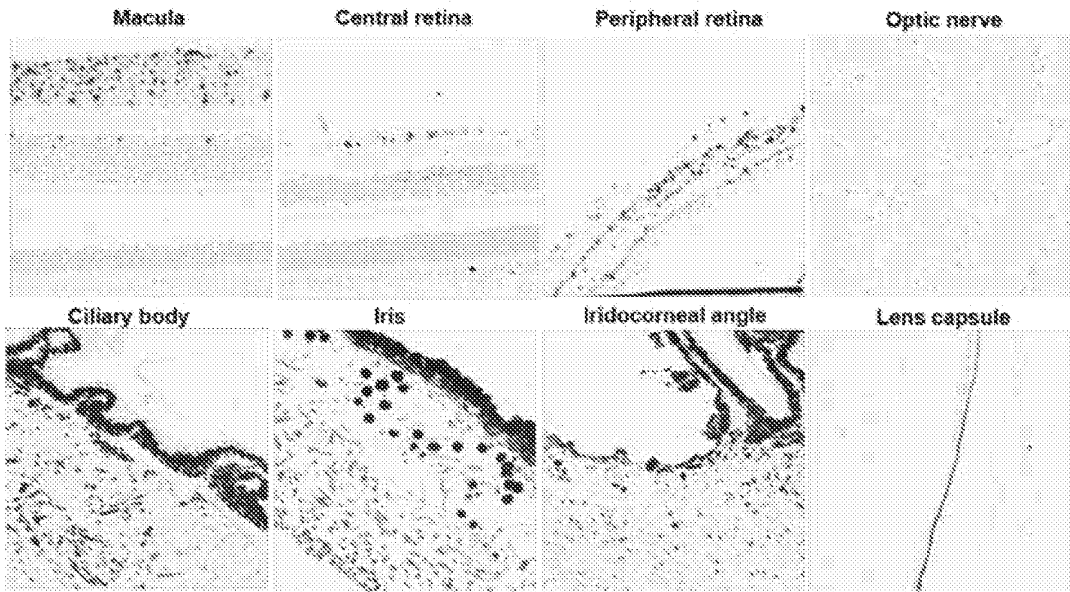


FIG. 9



A



B

FIG. 10

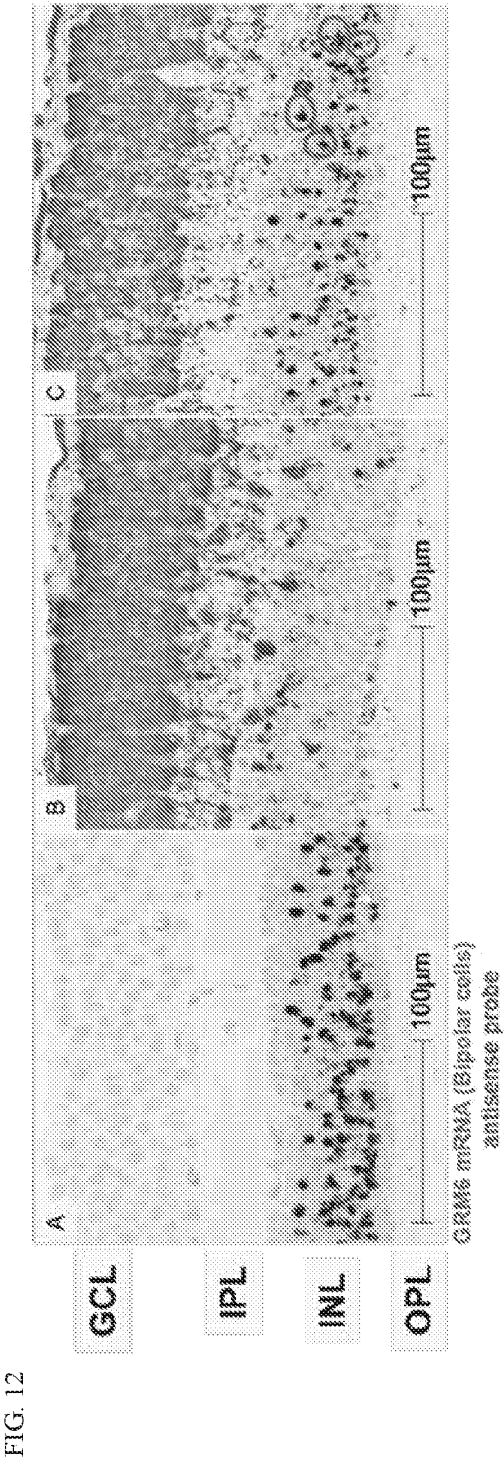
Modified H-Score ^a													
		Interim Sacrifice (4 weeks)						Terminal Sacrifice (13 weeks)					
		@4.5x10 ¹⁰ vg/eye			@4.5x10 ¹¹ vg/eye			@4.5x10 ¹⁰ vg/eye			@4.5x10 ¹¹ vg/eye		
Site/Animal		P0101	P0102	P0401	P0201	P0202	P0501	P0103	P0402	P0403	P0203	P0502	P0503
Retina (central), multifocal		56	56	56	120	105	105	58	58	58	105	105	105
Retina (peripheral), multifocal		175	175	175	230	230	230	175	175	175	230	230	230
Optic nerve		60	60	60	60	60	60	60	60	60	60	60	60
Choroid		0	0	0	0	0	0	0	0	0	0	0	0
Ciliary body and ciliary process		70	70	70	170	170	170	100	100	100	170	170	170
Iris		30	30	30	50	50	50	50	50	50	50	50	50
Iridocorneal angle		60	60	60	60	60	60	60	60	60	65	65	65
Cornea		0	0	0	0	0	0	0	0	0	0	0	0
Conjunctiva		0	0	0	0	0	0	0	0	0	0	0	0

A

Modified H-Score ^a													
		1-25			26-50			51-100			101-200		
		Interim Sacrifice (4 weeks)						Terminal Sacrifice (13 weeks)					
		@5x10 ¹⁰ vg/eye			@4.5x10 ¹¹ vg/eye			@5x10 ¹⁰ vg/eye			@4.5x10 ¹¹ vg/eye		
Site/Animal		P0101	P0102	P0401	P0201	P0202	P0501	P0103	P0402	P0403	P0203	P0502	P0503
Retina (central), multifocal		15	15	15	75	75	60	26	26	18	75	71	75
Retina (peripheral), multifocal		78	78	78	130	130	130	105	105	90	145	130	130
Optic nerve		0	0	0	0	0	0	0	0	0	0	0	0
Choroid		0	0	0	0	0	0	0	0	0	0	0	0
Ciliary body and ciliary process		15	15	15	30	30	30	11	11	11	30	30	30
Iris		15	15	15	20	20	20	15	15	15	20	20	20
Iridocorneal angle		50	50	50	60	60	60	60	60	60	60	60	60
Cornea		0	0	0	0	0	0	0	0	0	0	0	0
Conjunctiva		0	0	0	0	0	0	0	0	0	0	0	0

B

FIG. 11



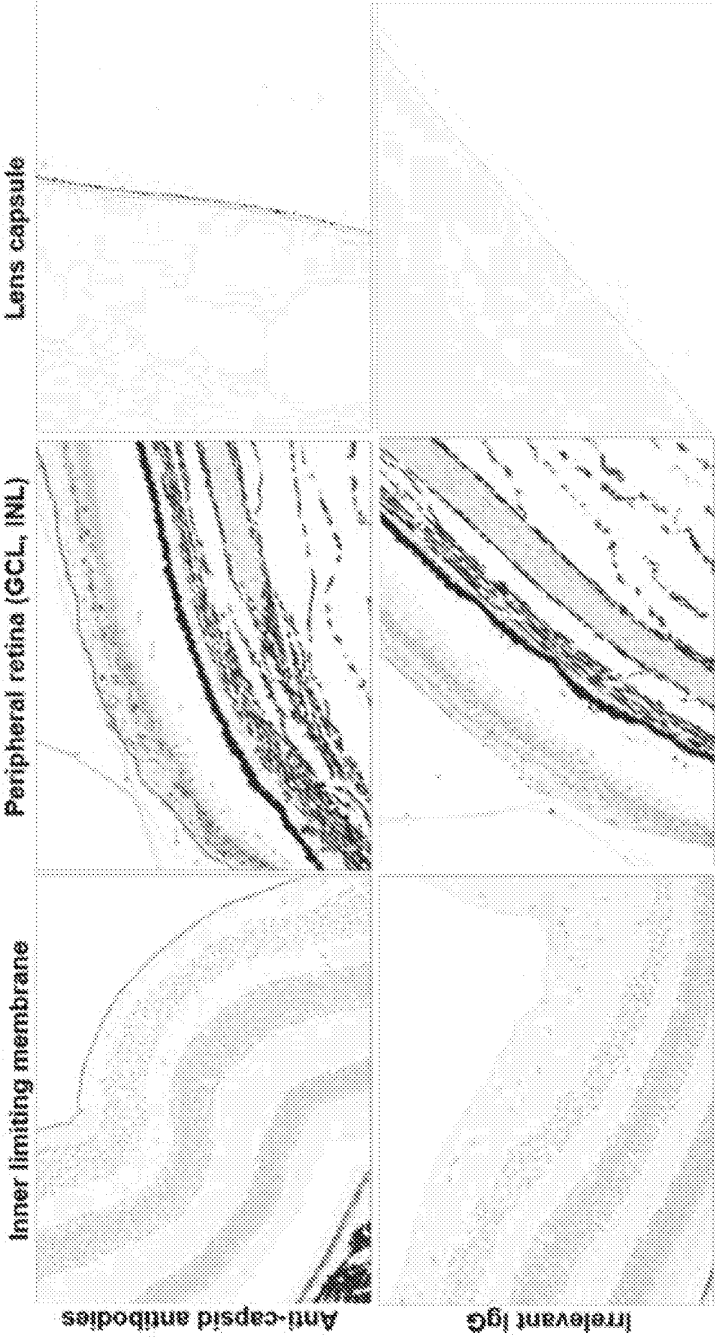


FIG. 13

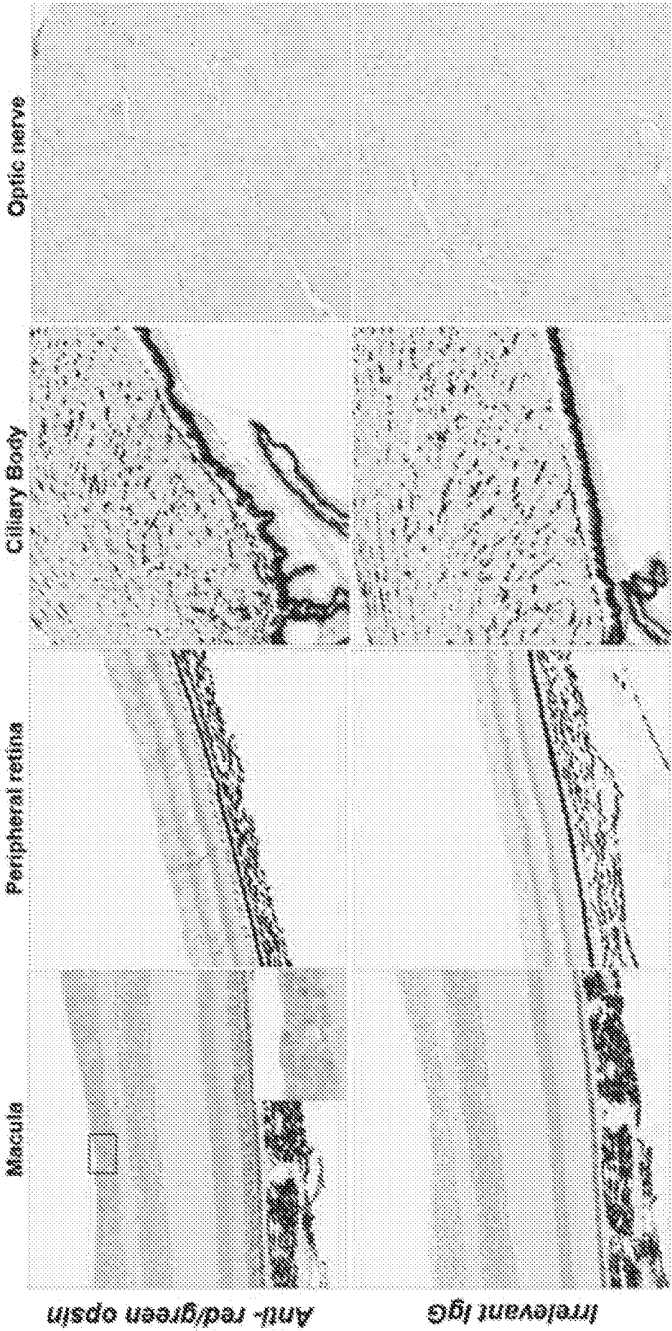


FIG. 14