

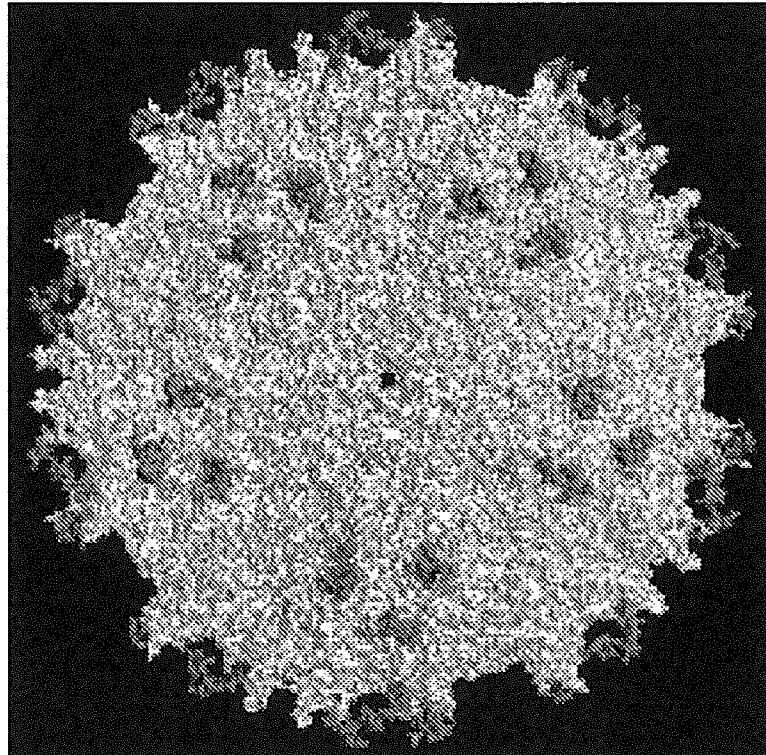
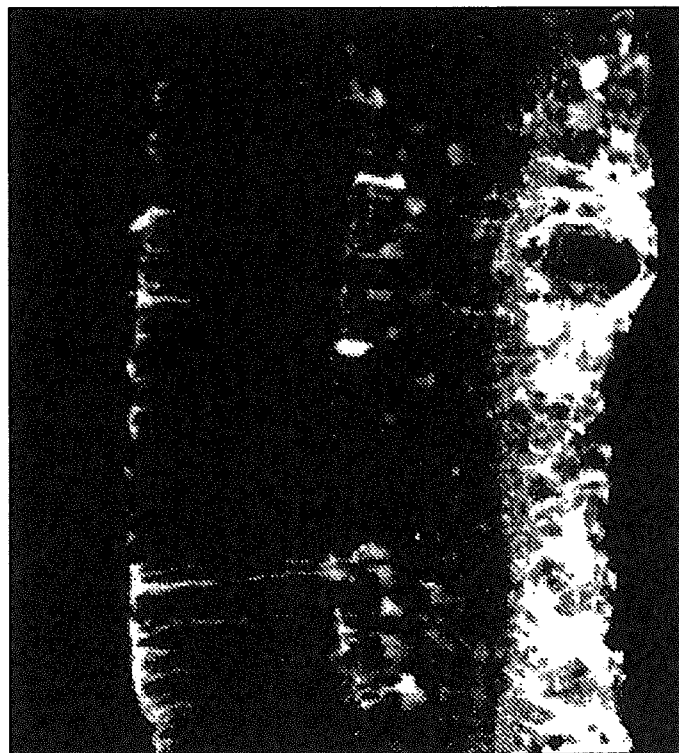
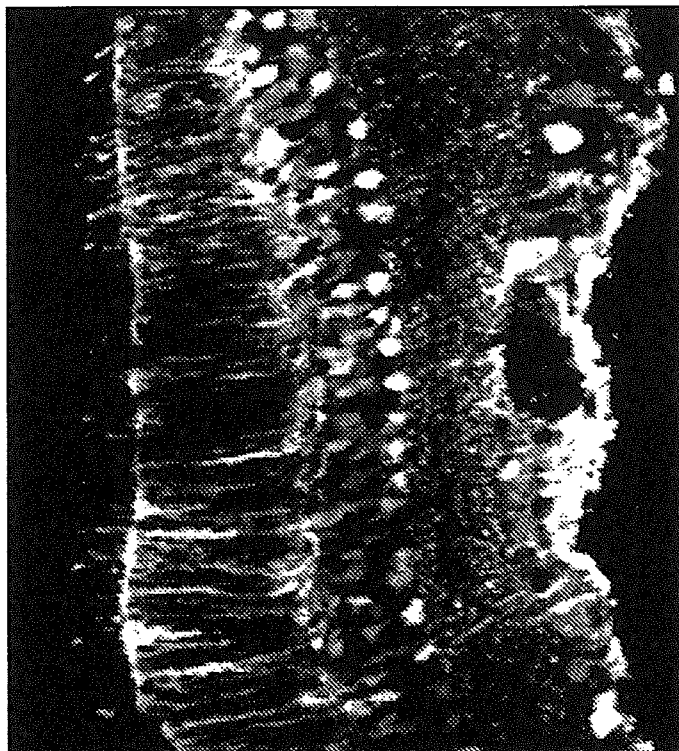


FIG. 1

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AAV2.CAG.GFP
(parental serotype)



7m8.CAG.GFP
(variant enhanced for PR transduction
by directed evolution)

FIG. 2

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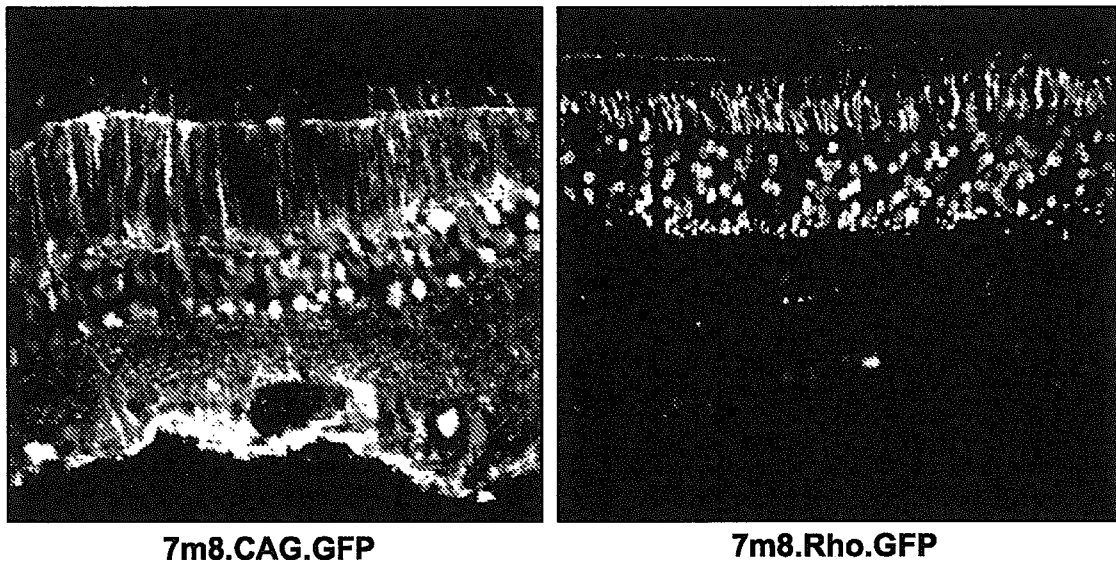


FIG. 3

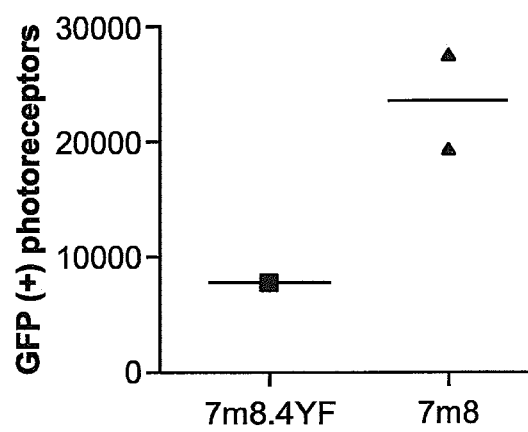


FIG. 4

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AAV2 VP1 1 MAADGYLPDWLEDTLSEGIRQWKKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPFENGLD
AAV2 VP1 61 KGEPVNEADAAALEHDKAYDRQLDSDGNPYLKYNHADAEEFQERLKEDTSFGNLGRAVFQ
AAV2 VP1 121 AKKRVLEPLGLVEEPVKTA PGKKRPVEHSPVEPDSSSGTGKAGQQPARKRLNFGQTGDAD
AAV2 VP1 181 SVPDPQPLGQPPAAPSGGLGTNTMATGSGAPMADNNEGADGVGNSSGNWHCDSTWMGDRVI
AAV2 VP1 241 TTSTRTWALPTYNNHLYKQISSQSGASNDNHYFGYSTPWGYFDENRFHCHFSPRDWQRLI
AAV2 VP1 301 NNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLSTVQVFTDSEYQLPYVLGSAHQG
AAV2 VP1 361 CLPPFPADVFMVPOYGylTLNNGSQAVGRSSFYCLEYFPsQMLRTGNNFTFSYTFEDVPPF
AAV2 VP1 421 HSSYAHSQSLDRLMNLIDQLYLYLSRTNTPSGTTTQSRQLQFSQAGASDIRDQSRNWLPG
AAV2 VP1 481 PCYRQQRVSKTSADNNNNSEYSWTGATKYHLNGRDSLVPNGPAMASHKDDDEEKFPPQSGVL
AAV2 VP1 541 IFGKQGSEKTNVDIEKVMITDEEEIIRTNPVATEQYGSVSTNLQRNRQAAATADVNTQGV
AAV2 VP1 601 LPGMVWQDRDVLQGPiWAKIPHTDGHFHPSPLMGGFGLKHPPPPQILIKNTVPVNPSTT
AAV2 VP1 661 FSAAKFASFITQYSTGQVSVEIEWELQKENSkrwnPEIQYTSNYNKSvNVDFtVDTNGVY
AAV2 VP1 721 SEPRPIGTRYLTR (SEQ ID NO:1)

FIG. 5

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AAV-2	570	PVATEQYGSVSTNLQ RNR QAATADVNTQGVLPGMVWQDRDV	611	(SEQ ID NO:2)
AAV-1	571	PVATERFGTVAVNFQSSST DP ATGDVHAMGALPGMVWQDRDV	612	(SEQ ID NO:3)
AAV-5	560	RVAYNVGGQMATNNQ SS TTAPATGTYNLQEI VPGSVWMERDV	601	(SEQ ID NO:4)
AAV-6	571	PVATERFGTVAVNLQSSST DP ATGDVHVMGALPGMVWQDRDV	612	(SEQ ID NO:5)
AAV-7	572	PVATEEYGIVSSNLQA ANT AAQTQVVNNQGALPGMVWQNRDV	613	(SEQ ID NO:6)
AAV-8	573	PVATEEYGIVADNLQQ NT APQIGTVNSQGALPGMVWQNRDV	614	(SEQ ID NO:7)
AAV-9	571	PVATESYGQVATNHQSA QA QAQTGWVQNQGILPGMVWQDRDV	612	(SEQ ID NO:8)
AAV-10	573	PVATEQYGVVADNLQ QA NTGPIVGNVNSQGALPGMVWQNRDV	614	(SEQ ID NO:9)

FIG. 6

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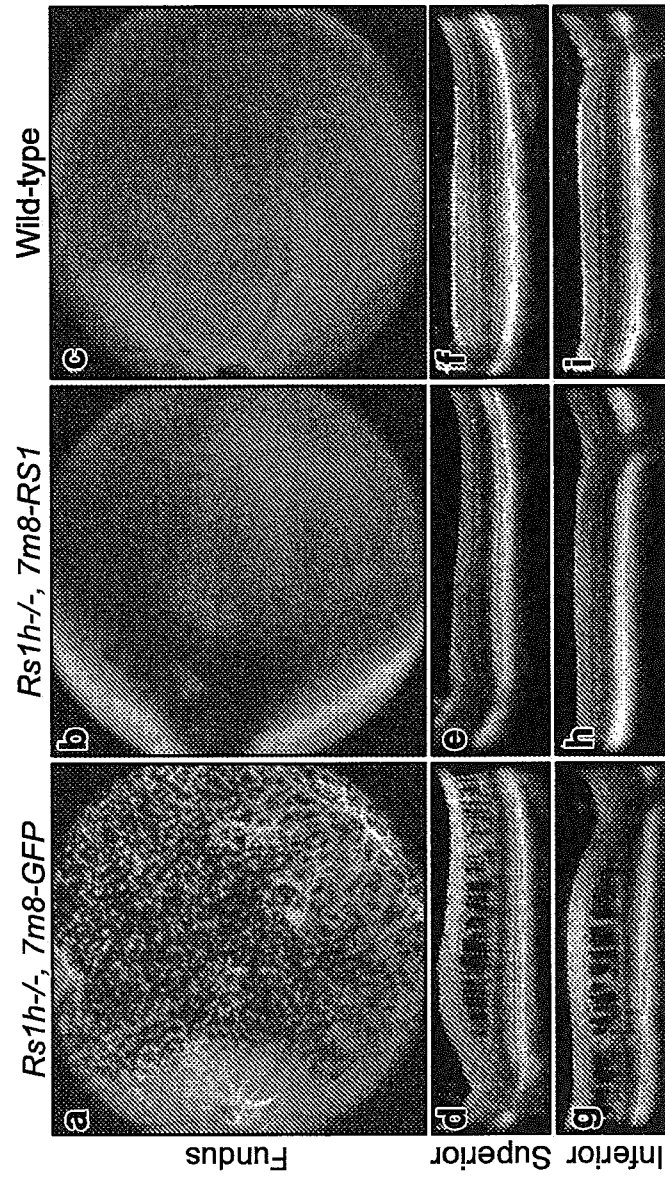


FIG. 7

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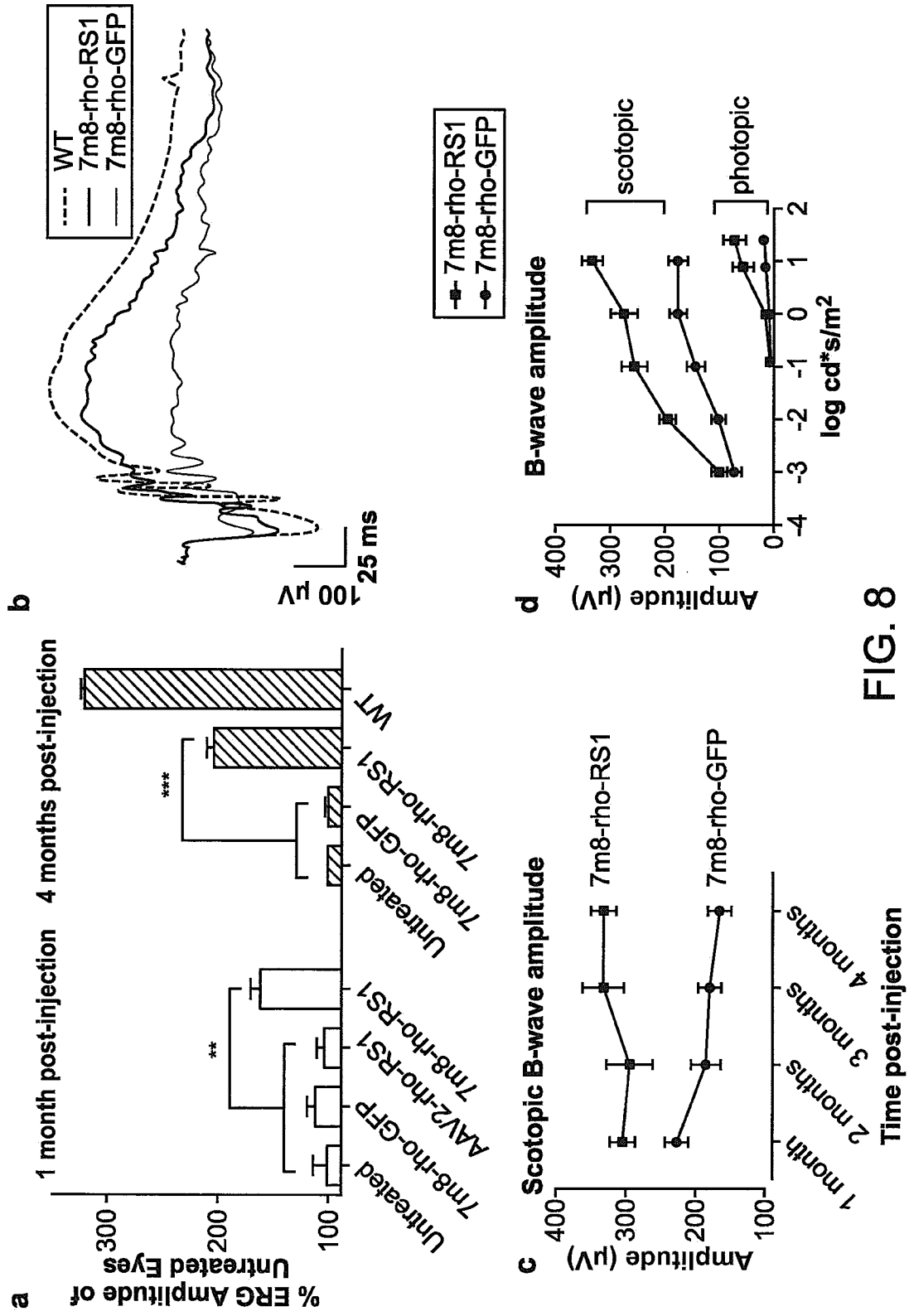
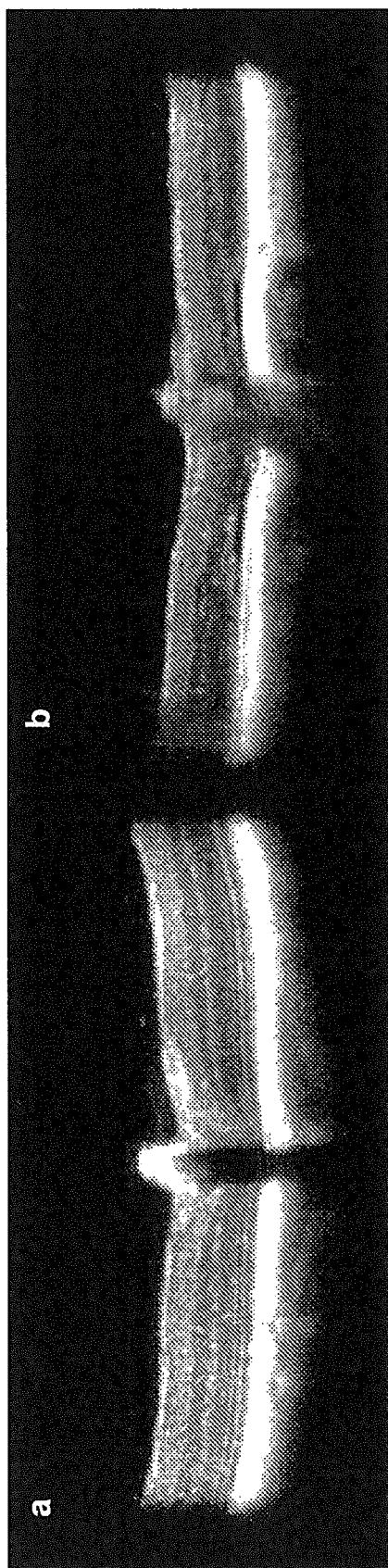
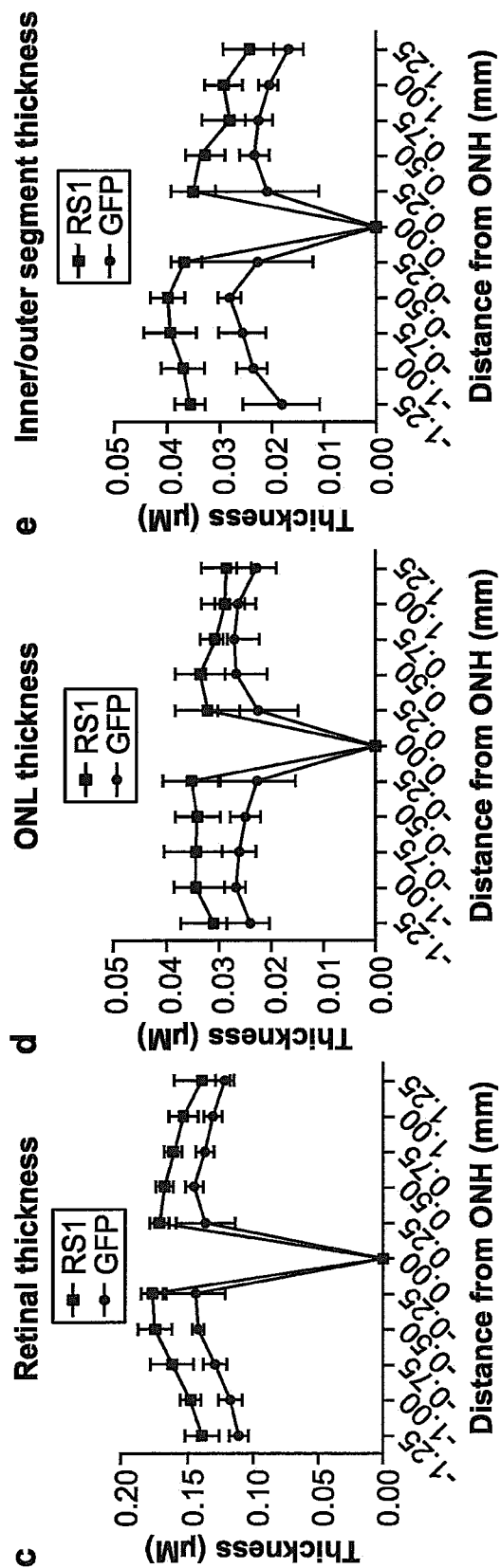


FIG. 8

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Retinoschisin-1
Homo sapiens
GenBank CAI42483

1 msrkiegfll lllfgyeatl glsstedege dpwyqkackc dcqggpnalw sagatsldci
61 pecpyhkp1g fesgevtpdq itcsnpeqv gwysswtank arlnsqgfgc awlskfqdss
121 qwlqidlkei kvisgiltqg rcdidewmtk ysvqyrtder lnwiyykdqt gnnrvfygns
181 drtstvtqnl1 rppiisrfir liplgwhvri airmellecv skca (SEQ ID NO:10)

FIG. 10

Brain-derived neurotrophic factor
Homo sapiens
GenBank CAA62632

1 mtillfltmvi syfgcmkaap mkeanirgqg glaypgvrth gtlesvngpk agsrgltsla
61 dtfehvieel ldedhkvrpn eennkdadly tsrvmlssqv plep1lfl1 eeyknyldaa
121 nmsmv1r1hs dparrgelsv cdsisewvta adkktavdms ggtvtvlekv pvskgqlkqy
181 fyetkcnpmg ytkegcrgid krhwnsqcrt tqsyvraltm dskkrigwrf iridts cvct
241 l1tkrgr (SEQ ID NO:11)

FIG. 11

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RPE65
Homo sapiens
GenBank AAC39660

1 msiqvehpag gyklfetve elsspltahv tgriplwltg sllrcgpglf evgsepfyhl
61 fdgqallhkf dfkeghvtyh rrfirtdayv ramtekriivi tefgtcafpd pcknifsrff
121 syfrgvevtd nalvnvypvg edyyactetn fitkinpetl etikqvdlcn yvsvngatah
181 phiendgtvy nigncfgknf siaynivkip plqadkedpi skseiivvqfp csdrfkpsyv
241 hsfgltpnyi vfvetpvkin lfkflsswsl wfanymdcfe snetmgvwlh iadkkrrkyl
301 nnkyrtspfn lfhhintyed ngfliivdlcc wkgfefvyny lylanlrenw eevkknarka
361 pqpevrryvl plnidkadtg knlvltlpntt atailcsdet iwlepevlfs gprqafefpq
421 inyqkycgkp ytyayglgln hfvpdrclckl nvtketwvw qepdsypsep ifvshpdale
481 eddgvvlsvv vspgaggkpa yllilnakdl sevaraeevei nipvtfhglf kks (SEQ ID NO:12)

FIG. 12

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1 agcttggtgc caatcaacct ctggattaca aaatttgtga aagattgact ggtattctta
 61 actatgttgc tcctttttacg ctatgtggat acgtgctttt aatgcctttg tatcatgcta
 121 ttgcttcccg tatggctttc atttctctct cttgtataaa atcctggttg ctgtctcttt
 181 atgaggagt ttggcccgtt gtccaggaac gtggcgtggt gtgcaactgt tttgctgacg
 241 caaccccccac tggttggggc attgccacca cctgtcagct cctttccggg actttcgctt
 301 tccccctccc tattgccacg gcggaactca tcgcgcgcct ccttgcccgc tgcctggacag
 361 gggctcggct gttgggcact gacaattccg tgggtttgtc ggggaagctg acgtcctttc
 421 catggctgct cgctgtgttt gccacctgga ttctgcgcggt gacgtccttc tgctacgtcc
 481 cttcggccct caatccacg gaccttctt cccgcggcct gctgcggct ctgcggcctc
 541 ttccgcgtct tcgagatctg cctcgactgt gccttctagt tgcagccat ctgttgtttg
 601 cccctcccc gtgccttctt tgaccttggg aggtgccact ccaactgtcc ttccctaata
 661 aatgaggaa attgcacgc attgtctgag taggtgtcat tctattctgg ggggtggggt
 721 ggggcaggac agcaaggggg aggatgtgga agacaatagc aggcactgtg gggactcgag
 781 ttaagggcga attccgatt aggatcttcc tagagcatgg ctacgtagat aagtagcatg
 841 gcgggttaat cattaactac aaggaacccc tagtgatgga gttggccact cctctctgc
 901 gcgctcgtc gctcactgag gccgggcgac caaaggctgc ccgacgccc ggttttgccc
 961 gggcgccctc agtgagcgag cgagcgcga gccttaatta acctaatca ctggccgtg
 1021 ttttacaacg tcgtgactgg gaaaacccctg gcgttaccga acttaatgc cttgcagcac
 1081 atccccctt cgccagctgg cgtaatagcg aagaggcccg caccgatcg ccttcccaac
 1141 agttgcgcag cctgaatggc gaatgggacg cgccctgtag cggcgcatta agcgcggcgg
 1201 gtgtggtggt tacgcgcagc gtgaccgcta cacttgccag cgccctagcg ccgctcctt
 1261 tcgctttctt ccttctctt ctcgccactg cgatttagtg ctltacggca cctcgacccc
 1321 gggggctccc tttagggttc agatttagtg cgccccgata gacggttttt cgccctttga
 1381 attaggggtga tggttcacgt agtgggccat cgttgttcca aactggaaca acactcaacc
 1441 cgctggagtt cacgttcttc aatagtggac tcttgttcca gatttgcgta tattgggttaa
 1501 ctatctcggt ctattctttt gatttataag gattttttcc cgttcggcc caaatatataa
 1561 aaaatgagct gatttaacaa aaatttaacg cgaattttta tatttgttta tttttctaaa
 1621 ttccagggtg catctttcgg gaaatgtgc gcggaacccc ataatgtctt caataatatt
 1681 tacattcaaa tatgtatccg ctcatgagac aataacccctg ataatgtctt caataatatt
 1741 gaaaaaggaa gagtatgagt attcaacatt tccgtgtcgc cttatttccc ttttttgcg
 1801 cattttgct tcctgtttt gctcaccag aaacgctggt gaaagtaaaa gatgctgaag

FIG. 13A

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1861 atcagttggg tgacagagtg ggttacatcg aactggatct caatagtggg aagatccttg
1921 agagttttcg cccgaagaa cgttttccaa tgatgagcac ttttaaagtt ctgctatgtg
1981 gcgcggtatt atccgtatt gacgccgggc aagagcaact cggtcgccgc atacactatt
2041 ctcagaatga cttggtttgag tactcaccag tactcagaaa gcatcttacg gatggcatga
2101 cagtaagaga attatgcagt gctgccataa ccatgagtga taacactgcg gccaaacttac
2161 ttctgacaac gatcggagga cgaaggagc taaccgcttt ttgacacaac atgggggatac
2221 atgtaactcg ctttgatcgt tgggaaccgg agctgaatga agccatacca aacgacgagc
2281 gtgacaccac gatgcctgta gtaatggtaa caacgttgcg caaactatta actggcgaac
2341 tacttactct agcttcccg gacaaattaa tagactggat ggaggcggat aaagttgcag
2401 gaccacttct gcgctcgcc cttccggctg gctggtttat tgcgtataaa tctggagccg
2461 gtgagcgtgg gtctcgcgg atcattgcag cactggggcc agatggtaag cctccccta
2521 tcgtagttat ctacacgacg gggagtcagg caactatgga tgaacgaaat agacagatcg
2581 ctgagatagg tgctcactg attaaagcatt ggtaactgtc agaccaagtt tactcatata
2641 tactttagat tgatttaaaa cttcattttt aatttaaaag gatctaggtg aagatccttt
2701 ttgataatct catgaccaaa atcccttaac gtgagttttc gttccactga gcgtcagacc
2761 ccgtagaaaa gatcaaaagg tcttcttgag atcctttttt tctgcgcgta atctgctgct
2821 tgcaaacaaa aaaaccaccg ctaccagcgg tggtttggtt gccggataca gagctaccaa
2881 ctctttttcc gaaggtaact ggcttcagca gaggcagat accaaatact gtccttctag
2941 tgtagccgta gttaggccac cacttcaaga actctgtagc accgcctaca tacctcgcgc
3001 tgctaatacct gttaccagt gctgctgcca gtggcgataa gtcgtgtctt accgggttgg
3061 actcaagacg atagttaccg gataaggcgc agcggtcggg ctgaacgggg ggttcgtgca
3121 cacagcccag cttggagcga acgacctaca ccgaactgag atacctacag cgtgagctat
3181 gagaaagcgc caccgttccc gaaggagaa aggcggacag gtatccggta agcggcaggg
3241 tcggaacagg agagcgcac agggagcttc caggggaaa cgcctggtat ctttatagtc
3301 ctgtcggggt tcgccacctc tgacttgagc gtcgattttt gtgatgctcg tcagggggggc
3361 ggagcctatg gaaaaacgcc agcaacgcgg ccttttttacg gttcctggcc ttttgctgcg
3421 gttttgctca catgttcttt cctgcgttat cccctgattc tgtggataac cgtattaccg
3481 cttttgagt gctgatacc gctcgccgca gccgaacgac cgagcgcagc gagtcaagtga
3541 gcgaggaagc ggaagagcgc ccaatacgca aaccgcctct cccgcgcgt tggccgattc
3601 attaatgcag ctggcacgac aggtttcccc actggaaaagc gggcagtgag cgcaacgcaa
3661 ttaatgtgag ttagctcact cattaggcac ccaggccttt acactttatg cttccggcgc

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FIG. 13B

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3721 gtatgtttgtg tggaattgtg agcggataac aatttcacac aggaaacagc tatgaccatg
 3781 attacgccag atttaattaa ggctgcgcgc tcgctcgctc actgaggccg ccggggcaaa
 3841 gccgggagcgt cgggcgaact ttggtcgccc ggctcagtg agcagcagag cgcgcagaga
 3901 gggagtggcc aactccatca ctagggggttc ctgtagtta atgattaacc cgccatgcta
 3961 cttatctacg tagccatgct ctaggaaagt cggaaattgc cttaaagcta gcagatcttc
 4021 ccacacctagc cacctggcaa actgctcctt ctctcaaagg ccaaaacatg gcctcccaga
 4081 ctgcaacccc caggcagtca ggcctgtct ccacaacctc acagccaccc tggacgggaat
 4141 ctgctttctc ccacatttga gtctctctca gccctgagc tcctctgggc agggctgttt
 4201 ctttccatct ttgtattccc aggggcctgc aaataaatgt ttaatgaacg aacaagagag
 4261 tgaattccaa ttccatgcaa caaggattgg gctcctgggc cctaggctat gtgtctggca
 4321 ccagaaacgg aagctgcagg ttgcagcccc tgccctcatg gagctcctcc tgtcagagga
 4381 gtgtggggac tggatgactc cagaggtaac ttgtggggga acgaacaggt aaggggctgt
 4441 gtgacgagat gagagactgg gagaataaac cagaaagtct ctagctgtcc agaggacata
 4501 gcacagaggg ccatgggtccc tatttcaaac ccaggccacc agactgagct gggaccttgg
 4561 gacagacaag tcatgcagaa gttaggggac ctctcctcc ctttctctgg atggatcctg
 4621 agtaccttct cctccctgac ctcaggcttc ctctagtgt caccttggcc cctcttagaa
 4681 gccaatagg cctcagttt ctgcagcggg gattaatatg attatgaaca ccccaatct
 4741 ccagatgct gattcagcca ggagcttagg agggggaggt cactttataa gggctctggg
 4801 gggtcagaac ccagagtcat cccctgaatt ctgcagatat ccatcacact ggcggccgcg
 4861 ccaccatg^{tc} acgcaagata gaaggc^{tttt} tgttattact tctctttggc tatgaagcca
 4921 cattgggatt atcgtctacc gaggatgaag gcgaggaccc ctggtaccaa aaagcatgca
 4981 agtgcgattg ccaaggagga ccaatgctc tgtggtctgc aggtgccacc tccttggact
 5041 gtataccaga atgcccata^t cacaagcctc tgggttttca gtcaggggag gtcacacccg
 5101 accagatcac ctgctctaac ccggagcagt atgtgggctg gtattcttcg tggactgcaa
 5161 acaaggcccg gctcaacagt caaggctttg ggtgtgcctg gctctccaag ttccaggaca
 5221 gtagccagt^g gttacagata gatctgaagg agatcaaa^{gt} gatttcaggg atcctcacc
 5281 aggggcgctg tgacatcgat gagtggatga ccaagtacag cgtgcag^{tac} aggaccgatg
 5341 agcgcctgaa ctggatttac tacaaggacc agactgg^{aaa} caaccgggtc ttctatggca
 5401 actcggaccg cacctccacg gttcagaacc tgc^{tg}cgccgccc ccccatc^{atc} tcccgc^{ttca}
 5461 tccgcctcat ccgctgggc tggcacgtcc gcattgccat ccg^{at}ggag ctgctggag^t
 5521 gcgtcagcaa gtgtgcct^{ga} a (SEQ ID NO:18)

FIG. 13C

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Peripherin-2

1 mallkvkfdq kkrvklagg1 wlmnwfsvla giiifslglf lkielkrds vmnnseshfv
61 pnsligmgvl scvfnsllagk icydaldpak yarwkpwlkp ylaicvlfni ilflvalccf
121 llrgslentl ggglkngmky yrdtdtpgrc fmkktidmlq iefkccgnng frdwfeiqwi
181 snryldfssk evkdriksnv dgrylvdgvp fscnnpsspr pciqyqitnn sahysydhqt
241 eelnlwvrgc raallsyys lnmngvvtl liwlfevtit iglrylqtsl dgvsnppeese
301 sesqgwllr svpetwkaf1 esvkkklgkn qveaegadag qapeag (SEQ ID NO:19)

FIG. 14

Peripherin

1 mshhpsglra gfsstsyrrt fgpppslspg afsyssssrf sssrllgsas psssvrlgsf
61 rspragagal lrlpserldf smaealnqef latrsnekqe lqelndrfan fiekvrfleq
121 qnaalrgels qargqepara dqlcqqlre lrrelellgr erdrvqverd glaedlaalk
181 qrleeetrkr edaehnlvlf rkdvddatls rlelerkies lmdeieflkk lheeelrldq
241 vsvesqqvqq veveatvkpe ltaalrdira qyesiaaknl geaeewyksk yadlsdaanr
301 nhealrqakq emnesrrqiq sltcevdglr gtneallrql releeqfale aggyqagaar
361 leeelrqlke emarhlreyq ellnvkmald ieiatyrkl1 egeesrisvp vhsfaslnik
421 ttvpeveppq dshsrktvli ktietrngv vtesqkeqrs eldkssahsy (SEQ ID NO:20)

FIG. 15

RPGR-interacting protein-1

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1  mshlvdptsg dlpvrldidai plvlpaskgk nmktqpplsr mnreeledsf frlredhmlv
61  kelswkqgde ikrlrttllr ltaagrldlr aeeaaaplset arrgqkagwr qrlsmhqrpq
121 mhrllqghfhc vgpasprraq prvgvghrql htagapvpek pkrgrdris ytappsfkeh
181 atnenrgeva skpselvsqs nsiisfssvi smakpiglcm pnsahimasn tmqveeppks
241 pekmpkden feqrssleca qkaaelrasi kekvelirlk kllhernasl vmtkaqltev
301 qeayetllqk nqgilsaah eallkqvnelr aelkeeskka vslksqledv silqmtlkef
361 qervedleke rklldndnydk llesmldssd sssqphwsne liaeqllqqv sqlqddqldae
421 ledkrkvll e lsrekaqned lklevtnilq khkqevellq naatisqppd rqsepathpa
481 vlqentqiep sepknqeek lsqvlnelqv shaettlele ktrdmlilqr kinvcyqeel
541 eamntkadnd nrdhkekler ltrlldlkn rikqlegilr shdlptseql kdwaygtrpl
601 slcletlpah gdedkvdisl lhqgenlfel hihqafitsa alaqagdtqp ttftctysfyd
661 fethctplsv gpqplydfts qymetdself lhylqeasar ldihqamase hstlaagwic
721 fdrvletvek vhglatliga ggeefgvley wmlrfrpikp slqacnkrkk aqvylstdvl
781 ggrkaqeef rseswepqne lwieitkccg lrsrwlgtqp spyavyrfft fsdhdtaiip
841 asnnpyfrdq arfpvlvtst ldhylrreal sihvddedl epgsylgrar vpllpakne
901 sikgdfnltd paekpngsiq vqldwkfpvi ppesflkpea qtkgkdtkds skisseeka
961 sfpsqdqmas pevpieagqy rskrkpphgg erkekehqv sysrrkhgkr igvqgknrme
1021 ylslnilngn tpeqvnyte w kfsetnsfig dgfknqheee emtlshsalk qkeplhpvnd
1081 kesseqgsev seaqtdsdd vivppmsqky pkadseknci eivslafype aevmsdenik
1141 qvyveykfyd lplsetetpv slrkpragee ihfhfskvid ldpqeqqgrr rflfdmlngq
1201 dpdgghlkft vvsdpddeek keceevgyay lqlwqilesq rdileqeldi vspedlatpi
1261 grlkvslqaa avlhaiykem tedlfs (SEQ ID NO:21)

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FIG. 16

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AAV1 --TFSYTFEEVPFHSSYAHSQSLDRIMNPLIDQYLYYINRTQ-NQS**G**SAQNKDILFSRGS 467
AAV6 --TFSYTFEDVPFHSSYAHSQSLDRIMNPLIDQYLYYINRTQ-NQS**G**SAQNKDILFSRGS 467
AAV3 ---FSYTFEDVPFHSSYAHSQSLDRIMNPLIDQYLYYINRTQ**G**TTNQSRLIFSQAG 467
AAV2 ---FSYTFEDVPFHSSYAHSQSLDRIMNPLIDQYLYYISRTN-TPS**G**TTTQSRLIFSQAG 466
AAV8 NFOFTYTFEDVPFHSSYAHSQSLDRIMNPLIDQYLYYLSRTQTT-G**G**TANTQTLGFSQGG 469
AAV8.1 NFOFTYTFEDVPFHSSYAHSQSLDRIMNPLIDQYLYYLSRTQTT-G**G**TANTQTLGFSQGG 469
AAV8 rh8 FQFSYTFEDVPFHSSYAHSQSLDRIMNPLIDQYLYYLVRTQTTGTGGTQLAFSQAGPS 469
AAV10 NFEFSYTFEDVPFHSSYAHSQSLDRIMNPLIDQYLYYLSRTQST-G**G**TQGTQQLIFSQAG 469
AAV7 -FEFSYTFEDVPFHSSYAHSQSLDRIMNPLIDQYLYYLARTQSNPG**G**TAGNRELQFYQGG 469
AAV9 -FQFSYEFENVPFHSSYAHSQSLDRIMNPLIDQYLYYLSKTI--NG**S**GQNQQTILKFSVAG 467
AAV9.1 -FQFSYEFENVPFHSSYAHSQSLDRIMNPLIDQYLYYLSKTI--NG**S**GQNQQTILKFSVAG 467
AAV5 NFEFTYNFEEVPFHSSFAPSQNLFKLANPLVDQYLYRFVSTN-----NTGGVQFNKNL 453
*: * ** : * : * : * : * : * : *

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AAV1 PAGMSVQPKNWLPGPCYRQQRVSKTKTDNNNSNFTWTGASKYNLNGRESIINPGTAMASH 527
AAV6 PAGMSVQPKNWLPGPCYRQQRVSKTKTDNNNSNFTWTGASKYNLNGRESIINPGTAMASH 527
AAV3 PQSMSLQARNWLPGPCYRQQRVSKTANDNNNSNFPWTAASKYHLNGRDSLVNPGPAMASH 527
AAV2 ASDIRDQSRNWLPGPCYRQQRVSKTSADNNNSNSEYSWTGATKYHLNGRDSLVNPGPAMASH 526
AAV8 PNTMANQAKNWLPGPCYRQQRVSTTTGQNNNSNFAWTAGTKYHLNGRNSLANPGIAMATH 529
AAV8.1 PNTMANQAKNWLPGPCYRQQRVSTTTGQNNNSNFAWTAGTKYHLNGRNSLANPGIAMATH 529
AAV8 rh8 S--MANQARNWVPGPCYRQQRVSTTTNQNNSNFAWTGAAKFKLNGRDSLMNPGVAMASH 527
AAV10 PANMSAQAKNWLPGPCYRQQRVSTTLSQNNNSNFAWTGATKYHLNGRDSLVNPGVAMATH 529
AAV7 PSTMAEQAKNWLPGPCFRQQRVSKTLDQNNNSNFAWTGATKYHLNGRNSLVNPGVAMATH 529
AAV9 PSNMAVQGRNYPGPSYRQQRVSTTVTQNNNSEFAWPGASSWALNGRNSLMNPGPAMASH 527
AAV9.1 PSNMAVQGRNYPGPSYRQQRVSTTVTQNNNSEFAWPGASSWALNGRNSLMNPGPAMASH 527
AAV5 AGRYANTYKNWFPGPMGRTQGWNLGSGVNRASVSFAFATNRMELLEGASYQVPPQPNGMTN 513
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FIG. 17A

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AAV1	KDDEDKFFPMSGVMIFGK--ESAGASNTALD-NVMITDEEEIKATNPVATERFGTVAVNF	584
AAV6	KDDKDKFFPMSGVMIFGK--ESAGASNTALD-NVMITDEEEIKATNPVATERFGTVAVNL	584
AAV3	KDDEEKFFPMHGNLIFGK--EGTTASNAELD-NVMITDEEEIRTTNPVATEQYGTVANNL	584
AAV2	KDDEEKFFPQSGVLIIFGK--QGSEKTNVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNL	583
AAV8	KDDEERFFPNSGILIFGK--QNAARDNADYS-DVMLTSEEEIKTTNPVATEEYGIVADNL	586
AAV8.1	KDDEERFFPNSGILIFGK--QNAARDNADYS-DVMLTSEEEIKTTNPVATEEYGIVADNL	586
AAV8 rh8	KDDDDRFFPSSGVLIFGK--QGAGNDGVDYS-QVLIITDEEEIKATNPVATEEYGAVAINN	584
AAV10	KDDEERFFPSSGVLIFGK--QGAGRDNDVYS-SVMLTSEEEIKTTNPVATEQYGVVADNL	586
AAV7	KDDEDRFFPSSGVLIFGK--TGAT-NKTILE-NVLMTNEEEIRPTNPVATEEYGIVSSNL	585
AAV9	KEGEDRFFPLSGSLIFGK--QGTGRDNVDAD-KVMITNEEEIKTTNPVATESYQQVATNH	584
AAV9.1	KEGEDRFFPLSGSLIFGK--QGTGRDNVDAD-KVMITNEEEIKTTNPVATESYQQVATNH	584
AAV5	NLQGSNTYALENTMIFNSQPANPGTTATYLEGNMLITSESETQPVNRVAYNVGGQMATNN	573
	: . . : . . : : * : : : : * : : *	
AAV1	QSSSTDPATGDVHAMGALPGMVWQDRDVYLQGPWAKIPHDTDGHFHPSPLMGGFGLKNPP	644
AAV6	QSSSTDPATGDVHVMGALPGMVWQDRDVYLQGPWAKIPHDTDGHFHPSPLMGGFGLKHPP	644
AAV3	QSSNTAPTGTGNHQGALPGMVWQDRDVYLQGPWAKIPHDTDGHFHPSPLMGGFGLKHPP	644
AAV2	QRGNRQAATAADVNTQGVLPGMVWQDRDVYLQGPWAKIPHDTDGHFHPSPLMGGFGLKHPP	643
AAV8	QQQNTAPQIGTVNSQGALPGMVWQNRDVYLQGPWAKIPHDTDGNFHPSPLMGGFGLKHPP	646
AAV8.1	QGGQAQAQIGTVNSQGALPGMVWQNRDVYLQGPWAKIPHDTDGNFHPSPLMGGFGLKHPP	646
AAV8 rh8	QAANTQAQTGLVHNQGVIPGMVWQNRDVYLQGPWAKIPHDTDGNFHPSPLMGGFGLKHPP	644
AAV10	QAANTGPIVGNVNSQGALPGMVWQNRDVYLQGPWAKIPHDTDGNFHPSPLMGGFGLKHPP	646
AAV7	QAANTAAQTQVVNNQGALPGMVWQNRDVYLQGPWAKIPHDTDGNFHPSPLMGGFGLKHPP	645
AAV9	QSAQAQAQTGWVQNQGILPGMVWQDRDVYLQGPWAKIPHDTDGNFHPSPLMGGFGLKHPP	644
AAV9.1	QSGQAQAQTGWVQNQGILPGMVWQDRDVYLQGPWAKIPHDTDGNFHPSPLMGGFGLKHPP	644
AAV5	QSSTTAPATGTYNLQEIIVPGSVWMERDVYLQGPWAKIPETGAHFHPSPAMGGFGLKHPP	633
	* . . : : ** ** : ***** : : : ***** : : : *	

FIG. 17B

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AAV1	PQILLIK-	650	(SEQ	ID	NO:22)
AAV6	PQILLIK-	650	(SEQ	ID	NO:23)
AAV3	PQIMIK-	650	(SEQ	ID	NO:24)
AAV2	PQILLIKN	650	(SEQ	ID	NO:25)
AAV8	PQILLIKN	653	(SEQ	ID	NO:26)
AAV8.1	PQILLIKN	653	(SEQ	ID	NO:27)
AAV8 rh8	PQILLIKN	651	(SEQ	ID	NO:28)
AAV10	PQILLIKN	653	(SEQ	ID	NO:29)
AAV7	PQILLIKN	652	(SEQ	ID	NO:30)
AAV9	PQILLIK-	650	(SEQ	ID	NO:31)
AAV9.1	PQILLIK-	650	(SEQ	ID	NO:32)
AAV5	PMMLIKN	640	(SEQ	ID	NO:33)
	* :	:	:	:	:
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FIG. 17C

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AAV1	--TFSYTFEEV	PFHSS	YAH	SQSL	DR	LM	PL	ID	QY	LY	LN	RT	Q-NQ	SG	SA	QN	KD	LL	FS	RGS	467
AAV6	--TFSYTFED	VPFHSS	YAH	SQSL	DR	LM	PL	ID	QY	LY	LN	RT	Q-NQ	SG	SA	QN	KD	LL	FS	RGS	467
AAV3	---FSYTFED	VPFHSS	YAH	SQSL	DR	LM	PL	ID	QY	LY	LN	RT	QGT	TS	GT	TN	QS	RL	LF	SQAG	467
AAV2	---FSYTFED	VPFHSS	YAH	SQSL	DR	LM	PL	ID	QY	LY	LN	RT	Q-NQ	SG	SA	QN	KD	LL	FS	RGS	466
AAV8	NFQFTYTFED	VPFHSS	YAH	SQSL	DR	LM	PL	ID	QY	LY	LN	RT	QTT-G	GT	TANT	QT	LG	FS	QGG	469	
AAV8.1	NFQFTYTFED	VPFHSS	YAH	SQSL	DR	LM	PL	ID	QY	LY	LN	RT	QTT-G	GT	TANT	QT	LG	FS	QGG	469	
AAV8 rh8	FQFSYTFED	VPFHSS	YAH	SQSL	DR	LM	PL	ID	QY	LY	LN	RT	QTTG	GT	QT	LA	FS	QA	GPS	469	
AAV10	NFEFSYTFED	VPFHSS	YAH	SQSL	DR	LM	PL	ID	QY	LY	LN	RT	QST-G	GT	QT	QL	LF	SQAG	469		
AAV7	-FEFSYSFED	VPFHSS	YAH	SQSL	DR	LM	PL	ID	QY	LY	LN	RT	QSN	PG	GT	AG	NR	EL	QFY	QGG	469
AAV9	-FQFSYEFEN	VPFHSS	YAH	SQSL	DR	LM	PL	ID	QY	LY	LN	RT	QTTI--	NG	SG	QN	QQT	LK	FS	VAG	467
AAV9.1	-FQFSYEFEN	VPFHSS	YAH	SQSL	DR	LM	PL	ID	QY	LY	LN	RT	QTTI--	NG	SG	QN	QQT	LK	FS	VAG	467
AAV5	NFEFTYNFEE	VPFHSS	FA	PS	QN	LF	KL	AN	PL	VD	QY	LY	RF	V	STN-----	NT	GG	VQ	FN	KNL	453
AAV1	PAGMSVQPK	NWLP	GP	CY	RQ	RV	SK	TK	T	D	N	N	S	N	S	N	S	N	S	N	527
AAV6	PAGMSVQPK	NWLP	GP	CY	RQ	RV	SK	TK	T	D	N	N	S	N	S	N	S	N	S	N	527
AAV3	PQMSLQARN	NWLP	GP	CY	RQ	RV	SK	TK	T	A	N	D	N	N	S	N	S	N	S	N	527
AAV2	ASDIRDQSR	NWLP	GP	CY	RQ	RV	SK	TS	A	D	N	N	S	E	Y	S	W	T	G	A	526
AAV8	PNTMANQAK	NWLP	GP	CY	RQ	RV	ST	T	T	G	Q	N	N	S	N	S	N	S	N	S	529
AAV8.1	PNTMANQAK	NWLP	GP	CY	RQ	RV	ST	T	T	G	Q	N	N	S	N	S	N	S	N	S	529
AAV8 rh8	S--MANQARN	NWLP	GP	CY	RQ	RV	ST	T	T	Q	N	N	S	N	S	N	S	N	S	N	527
AAV10	PANMSAQAK	NWLP	GP	CY	RQ	RV	ST	T	L	S	Q	N	N	S	N	S	N	S	N	S	529
AAV7	PSTMAEQAK	NWLP	GP	CF	RQ	RV	SK	T	L	D	Q	N	N	S	N	S	N	S	N	S	529
AAV9	PSNMAVQGR	NYI	PG	PSY	RQ	RV	ST	T	T	Q	N	N	S	E	F	A	W	P	G	SS	527
AAV9.1	PSNMAVQGR	NYI	PG	PSY	RQ	RV	ST	T	T	Q	N	N	S	E	F	A	W	P	G	SS	527
AAV5	AGRYANTYK	NWFP	GP	MG	RT	Q	GW	N	L	G	S	V	N	R	A	S	V	S	A	F	513

FIG. 18A

AAV1 KDEDKFFPMSGVMIFGK--ESAGASNTALD-NVMITDEEEIKATNPVATERFGTVAVNF 584
 AAV6 KDDKDKFFPMSGVMIFGK--ESAGASNTALD-NVMITDEEEIKATNPVATERFGTVAVNL 584
 AAV3 KDDEEKFFPMHGNLIFGK--EGTASNAELD-NVMITDEEEIRTTNPVATEQYGTVANNL 584
 AAV2 KDDEEKFFPQSGVLIIFGK--QGSEKTNVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNL 583
 AAV8 KDDEERFFPSNGILIFGK--QNAARDNADYS-DVMLTSEEEIKTTNPVATEEYGIVADNL 586
 AAV8.1 KDDEERFFPSNGILIFGK--QNAARDNADYS-DVMLTSEEEIKTTNPVATEEYGIVADNL 586
 AAV8 rh8 KDDDRFFPSSGVLIFGK--QGAGNDGVDYS-QVLLITDEEEIKATNPVATEEYGAVAINN 584
 AAV10 KDDEERFFPSSGVLIFGK--QGAGRDNVDYS-SVMLTSEEEIKTTNPVATEQYGVVADNL 586
 AAV7 KDDDRFFPSSGVLIFGK--TGAT-NKTILE-NVIMTNEEEIRPTNPVATEEYGIVSSNL 585
 AAV9 KEGEDRFFPLSGSLIFGK--QGTGRDNVDAD-KVMITNEEEIKTTNPVATESYGQVATNH 584
 AAV9.1 KEGEDRFFPLSGSLIFGK--QGTGRDNVDAD-KVMITNEEEIKTTNPVATESYGQVATNH 584
 AAV5 NLQGSNTYALENTMIFNSQPANPGTTATYLEGNMLITSESETQPVNRVAYNVGGQMATNN 573

AAV1 QSSSTDDLALGETTRPAPATGDDVHAMGALPGMVWQDRDVYLQGPWAKIPHTDGHFHPSPLMGGFGLKNPP
 AAV6 QSSSTDDLALGETTRPAPATGDVHVMGALPGMVWQDRDVYLQGPWAKIPHTDGHFHPSPLMGGFGLKHPP
 AAV3 QSSNTAPTGTGNHQALPGMVWQDRDVYLQGPWAKIPHTDGHFHPSPLMGGFGLKHPP 644
 AAV2 QRGNLALGETTRPARQAATADVNTQGVLPGMVWQDRDVYLQGPWAKIPHTDGHFHPSPLMGGFGLKHPP
 AAV8 QQQLALGETTRPATAPQIGTVNSQGALPGMVWQNRDVYLQGPWAKIPHTDGNFHPSPLMGGFGLKHPP
 AAV8.1 QGQRLGETTRPAQAQIGTVNSQGALPGMVWQNRDVYLQGPWAKIPHTDGNFHPSPLMGGFGLKHPP
 AAV8 rh8 QAANLALGETTRPATQAQTGLVHNQGVIPGMVWQNRDVYLQGPWAKIPHTDGNFHPSPLMGGFGLKHPP
 AAV10 QQLALGETTRPAAANTGPVGNVNSQGALPGMVWQNRDVYLQGPWAKIPHTDGNFHPSPLMGGFGLKHPP
 AAV7 QAANLALGETTRPATAAQTQVVNNQGALPGMVWQNRDVYLQGPWAKIPHTDGNFHPSPLMGGFGLKHPP
 AAV9 QSAQLALGETTRPAQAQTGWVQNQGILPGMVWQDRDVYLQGPWAKIPHTDGNFHPSPLMGGFGLKHPP
 AAV9.1 QSGQAALGETTRPAQAATGWVQNQGILPGMVWQDRDVYLQGPWAKIPHTDGNFHPSPLMGGFGLKHPP
 AAV5 QSLALGETTRPASTTAPATGTYNLQEI VPGSVWMERDVYLQGPWAKIPETGAHFHPSPAMGGFGLKHPP

FIG. 18B

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AAV1	PQILIK-	(SEQ ID NO:34)
AAV6	PQILIK-	(SEQ ID NO:35)
AAV3	PQIMIK-	(SEQ ID NO:24)
AAV2	PQILIKN	(SEQ ID NO:36)
AAV8	PQILIKN	(SEQ ID NO:37)
AAV8.1	PQILIKN	(SEQ ID NO:38)
AAV8 rh8	PQILIKN	(SEQ ID NO:39)
AAV10	PQILIKN	(SEQ ID NO:40)
AAV7	PQILIKN	(SEQ ID NO:41)
AAV9	PQILIK-	(SEQ ID NO:42)
AAV9.1	PQILIK-	(SEQ ID NO:43)
AAV5	PMMLIKN	(SEQ ID NO:44)

FIG. 18C

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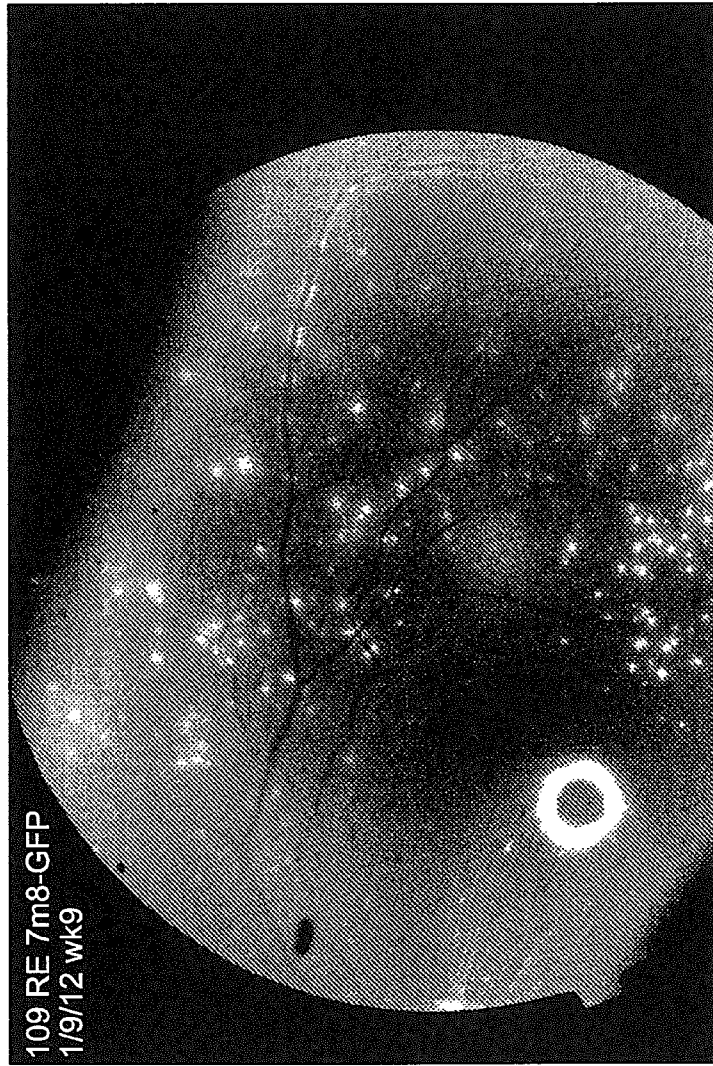


FIG. 19