

Mutant	Oligonucleotide sequence
C34S	5' GAA GCG GCT CCA GCA T CC TGC TCT GCT CGG TAC AAT
C35S	5' GCG GCT CCA GCA T CC G CC TCT GCT CGG TAC AAT
C48F	5' GCA CTG TTG GCG TTC T TT GGT TTC TTC GTT CTC
C83S	5' AGA ACT TCC AAG GAG AGT GCG GAA CAC TCT GCC
C221S	5' CTT TCC GGA ATA ATT AGC TAC TAT ATG AAT TGG
C338S	5' TTG CCC TAT TTT GGC AGT TGG TTA TGC ATG ATT
C341A	5' TTT GGC AGT TGG TTA GGC ATG ATT GTC TGT GGT
C345S	5' TTA GGC ATG ATT GTC AGT GGT CAA GCC GCT GAT
C387S	5' GCT GGA TTT ATA GGC AGC GAC TAT TCT TTG GCT
C461Y	5' TGC CAG ACT CTG TTG T AT ATC GCT GCT GCT ATT A

Supplemental table 1. Sequence of sense primers used to generate the cystless sialin.

Oligonucleotides used to generate the indicated cysteine substitutions with site-directed mutagenesis. Four of the mutated cysteines are predicted to lie within TMDs Cys-83 (TMD1), and Cys-338, Cys-341, and Cys-345 (TMD8). Cys-48 and Cys-461 were mutated to phenylalanine and tyrosine respectively. These amino acids were chosen because they are present at these positions in human sialin. The bold italic font indicates the mutated nucleotides.