

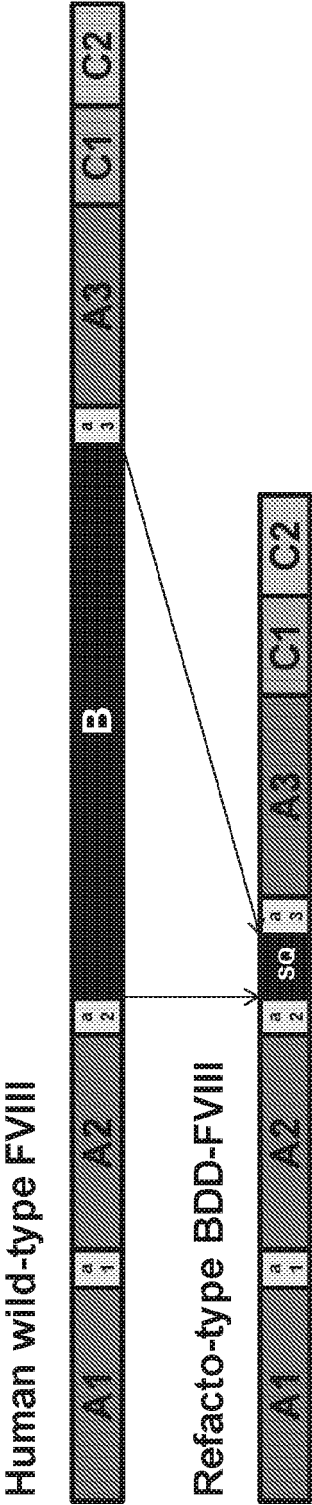


Figure 1

CS04-FL-NA

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(Continued)

Figure 2A

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Figure 2B

CS04-FL-AA

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Figure 3

CS04-HC-NA

gcc

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(SEQ ID NO:3)

Figure 4

CS04-LC-NA

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```

Figure 5

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BDL023 - agc ttcagccaga acccccctgt gctgaagagg caccagagg (SEQ ID NO:7)

Figure 6

CS04-AV-NA

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2401   catcttcaag aaccaggcct ccaggcccta caacatctac ccacatggca tcactgatgt
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Figure 7A

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3841 cttctctgat gtggacctgg agaaggatgt gcaactctgg ctgattggcc cactcctggt
3901 ctgccacacc aacaccctga acctgccc a tgggaaggcaa gtgactgtgc aggagtgtgc
3961 cctcttcttc accatctttg atgaaacca a gagctggtag ttcactgaga acatggagcg
4021 caactgcagg gccccatgca acattcagat ggaggacccc accttcaaag agaactaccg
4081 cttccatgcc atcaatggct acatcatgga caccctgcct gggcttgtca tggcccagga
4141 ccagaggatc aggtggtacc tgctttctat gggctccaat gagaacattc actccatcca
4201 cttctctggg catgtcttca ctgtgcgcaa gaaggaggag tacaagatgg cctgtacaa
4261 cctctacctt ggggtctttg agactgtgga gatgctgcc tccaaagctg gcatctggag
4321 ggtggagtgc ctcatgggg agcacctgca tgctggcatg agcacctgt tctgtgtcta
4381 cagcaacaag tgccagaccc ccctgggaat ggctctggc cacatcaggg acttccagat
4441 cactgcctct ggccagtatg gccagtgggc cccaagctg gccaggctcc actactctgg
4501 atccatcaat gcctggagca ccaaggagcc attcagctgg atcaaagtgg acctgctggc
4561 ccccatgate atccatggca tcaagacca gggggccagg cagaagttct ccagcctgta
4621 catcagccag ttcatcatca tgtacagcct ggatggcaag aaatggcaga cctacagagg
4681 caactccact ggaacactca tggctctctt tggcaatgtg gacagctctg gcatcaagca
4741 caacatcttc aaccccccaa tcatcgccag atacatcagg ctgcacccca cccactacag
4801 catccgcagc acctcagga tggagctgat gggctgtgac ctgaactcct gcagcatgcc
4861 cctgggcatg gagagcaagg ccatttctga tgcccagatc actgcctcca gctacttcac
4921 caacatgttt gccacctgga gcccaagcaa ggccaggctg cactccagg gaaggagcaa
4981 tgcttgagg cccaggtca acaacccaaa ggagtggctg cagggtgact tccagaagac

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Figure 7B

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5041 catgaaggctc actgggggtga ccacccaggg ggtcaagagc ctgctcacca gcatgtatgt
5101 gaaggagttc ctgatcagct ccagccagga tggccaccag tggacctctt tcttcagaa
5161 tggcaaggctc aaggtgttcc agggcaacca ggacagcttc acccctgtgg tgaacagcct
5221 ggaccccccc ctcctgacca gatacctgag gattcacccc cagagctggg tccaccagat
5281 tgccctgagg atggaggctc tgggatgtga ggcccaggac ctgtactgat gacgagcggc
5341 cgctcttagt agcagtatcg ataataaaag atctttatct tcattagatc tgtgtgttgg
5401 ttttttgtgt gttaattaag ctgcggaagg aaccctagt gatggagtgt gccactccct
5461 ctctgcgcgc tcgctcgctc actgaggccg ggcgaccaa ggctcgccga cgcccggtct
5521 ttgcccgggc ggctcagtg agcgagcgag cgcgcagaga gggagtggcc aagacgattt
5581 aaatgacaag cttggcgtaa tcatggtcat agctgtttcc tgtgtgaaat tgttatccgc
5641 tcacaattcc acacaacata cgagccggaa gcataaagtg taaagcctgg ggtgcctaata
5701 gagtgaagct actcacatta attgcgttgc gctcactgcc cgctttccag tcgggaaacc
5761 tgtcgtgcca gctgcattaa tgaatcggcc aacgcgcggg gagaggcggt ttgcgtattg
5821 ggcgctcttc cgcttcctcg ctcaactgact cgctgcgctc ggctcgttcg ctgcgagcag
5881 cggtatcagc tcaactcaaag gcggtaatat ggttatccac agaatacagg gataacgcag
5941 gaaagaacat gtgagcaaaa gccagcaaaa aggccaggaa ccgtaaaaag gccgcgttgc
6001 tggcggtttt ccataggctc cgccccctg acgagcatca caaaaatcga cgctcaagtc
6061 agagggtggc aaacccgaca ggactataaa gataccaggc gtttccccct ggaagctccc
6121 tcgtgcgctc tcctgttccg accctgcgc ttaccggata cctgtccgcc tttctccctt
6181 cgggaagcgt ggcgctttct catagctcac gctgtaggta tctcagttcg gtgtaggctc
6241 ttcgctccaa gctgggctgt gtgcacgaac ccccgttca gcccgaccgc tcgccttat
6301 ccggtaaacta tcgtcttgag tccaacccgg taagacacga cttatcgcca ctggcagcag
6361 cactggtaaa caggattagc agagcgagg atgtaggcgg tgctacagag ttcttgaagt
6421 ggtggcctaa ctacggctac actagaagaa cagtatttgg tatctgcgct ctgctgaagc
6481 cagttacctt cggaaaaaga gttggttagc cttgatccgg caaacaacc accgctggta
6541 gcggtggttt ttttggttgc aagcagcaga ttacgcgcag aaaaaaggga tctcaagaag
6601 atcctttgat cttttctacg gggctctgac ctcagtggaa cgaaaactca cgttaaggga
6661 ttttggtcat gagattatca aaaaggatct tcacctagat ctttttaaat taaaaatgaa
6721 gttttaaatc aatctaaagt atatatgagt aaacttggtc tgacagttac caatgcttaa
6781 tcagtgaagg acctatctca gcgatctgtc tatttcgttc atccatagtt gcctgactcc
6841 ccgtcgtgta gataactacg atacgggagg gcttaccatc tggccccagt gctgcaatga
6901 taccgcgaga cccacgctca ccggtccag atttatcagc aataaaccag ccagccggaa
6961 gggccgagcg cagaagtggc cctgcaactt tatccgcctc catccagtct attaatgttt
7021 gccgggaagc tagagtaagt agttcgccag ttaatagttt gcgcaacggt gttgccattg
7081 ctacaggcat cgtggtgtca cgctcgctgt ttggtatggc ttcattcagc tccggttccc
7141 aacgatcaag gcgagttaca tgatcccca tgttgtgcaa aaaagcggtt agctccttcg
7201 gtctccgat cgttgtcaga agtaagttgg ccgagtggtt atcactcatg gttatggcag
7261 cactgcataa ttctcttact gtcatgccat ccgtaagatg cttttctgtg actggtgagt
7321 actcaaccaa gtcattctga gaatagtgtg tgcggcgacc gagttgctct tgcccggcgt
7381 caatacggga taataccgcg ccacatagca gaactttaaa agtgctcatc attggaaaac
7441 gttcttcggg gcgaaaactc tcaaggatct taccgctgtt gagatccagt tcgatgtaac
7501 cactcgtgc acccaactga tcttcagcat cttttacttt caccagcgtt tctgggtgag
7561 caaaaacagg aaggcaaaat gccgcaaaaa agggaataag ggcgacacgg aaatgttgaa
7621 tactcatact cttccttttt caatattatt gaagcattta tcagggttat tgtctcatga
7681 gcggatacat atttgaatgt atttagaaaa ataaacaaat aggggttccg cgcacatttc
7741 cccgaaaagt gccacctgac gtctaagaaa ccattattat catgacatta acctataaaa
7801 ataggcgtat caccaggccc tttcgtc (SEQ ID NO:8)

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Figure 7C

CS04Δ(760-1667) - CS04-SC1-NA

ATGCAGATTGAGCTGAGCACCTGCTTCTTCCTGTGCCTGCTGAGGTTCTGCTTCTCTGCCACCAGGAGATAC
TACCTGGGGGCTGTGGAGCTTTCTTGGGACTACATGCAGTCTGACCTGGGGGAGCTGCCTGTGGATGCCAGG
TTCCCACCCAGAGTGCCCAAATCCTTCCCATTCAACACCTCTGTGGTCTACAAGAAGACCCTCTTTGTGGAG
TTCACCTGACCACCTGTTCACATTGCCAAACCCAGGCCACCTGGATGGGACTCCTGGGACCCACCATTTCAG
GCTGAGGTGTATGACACTGTGGTCATCACCTCAAGAACATGGCCTCCCACCTGTGAGCCTGCATGCTGTG
GGGGTCAGCTACTGGAAGGCTCTGAGGGGGCTGAGTATGATGACCAGACCTCCCAGAGGGAGAAGGAGGAT
GACAAAGTGTTCCCTGGGGGCGACCCACACCTATGTGTGGCAGGTCCTCAAGGAGAATGGCCCCATGGCCTCT
GACCCACTCTGCCTGACCTACTCCTACCTTTCTCATGTGGACCTGGTCAAGGACCTCAACTCTGGACTGATT
GGGGCCCTGCTGGTGTGCAGGGAGGGCTCCCTGGCCAAAGAGAAGACCCAGACCTGCACAAGTTCATTCTC
CTGTTTGCTGTCTTTGATGAGGGCAAGAGCTGGCACTCTGAAACCAAGAACTCCCTGATGCAGGACAGGGAT
GCTGCCTCTGCCAGGGCTGGCCCAAGATGCACACTGTGAATGGCTATGTGAACAGGAGCCTGCCTGGACTC
ATTGGCTGCCACAGGAAATCTGTCTACTGGCATGTGATTGGCATGGGGACAACCCCTGAGGTGCACTCCATT
TTCCTGGAGGGCCACACCTTCTGGTCAAGAACACAGACAGGCCAGCCTGGAGATCAGCCCCATCACCTTC
CTCACTGCCACAGACCCTGCTGATGGACCTCGGACAGTTTCTGCTGTTCTGCCACATCAGCTCCCACCAGCAT
GATGGCATGGAGGCCTATGTCAAGGTGGACAGCTGCCCTGAGGAGCCACAGCTCAGGATGAAGAACAATGAG
GAGGTGAGGACTATGATGATGACCTGACTGACTCTGAGATGGATGTGGTCCGCTTTGATGATGACAACAGC
CCATCCTTCATTTCAGATCAGGTCTGTGGCCAAGAAACACCCCAAGACCTGGGTGCACTACATTGCTGCTGAG
GAGGAGGACTGGGACTATGCCCCACTGGTCTGGCCCCCTGATGACAGGAGCTACAAGAGCCAGTACCTCAAC
AATGGCCCACAGAGGATTGGACGCAAGTACAAGAAAGTCAGGTTTCATGGCCTACACTGATGAAACCTTCAAG
ACCAGGGAGGCCATTTCAGCATGAGTCTGGCATCCTGGGCCACTCCTGTATGGGGAGGTGGGGGACACCCTG
CTCATCATCTTCAAGAACCAGGCCTCCAGGCCCTACAACATCTACCCACATGGCATCACTGATGTCAGGCC
CTGTACAGCCGCAGGCTGCCAAAGGGGGTGAAACACCTCAAGGACTTCCCCATTCTGCCTGGGGAGATCTTC
AAGTACAAGTGGACTGTCACTGTGGAGGATGGACCAACCAAATCTGACCCAGGTGCCTCACCAGATACTAC
TCCAGCTTTGTGAACATGGAGAGGGACCTGGCCTCTGGCCTGATTGGGCCACTGCTCATCTGCTACAAGGAG
TCTGTGGACCAGAGGGGAAACCAGATCATGTCTGACAAGAGGAATGTGATTCTGTTCTCTGTCTTTGATGAG
AACAGGAGCTGGTACCTGACTGAGAACATTTCAGCGCTTCTGCCCAACCCTGCTGGGGTGCAGCTGGAGGAC
CCTGAGTTCCAGGCCAGCAACATCATGCACTCCATCAATGGCTATGTGTTTGACAGCCTCCAGCTTTCTGTC
TGCCTGCATGAGGTGGCCTACTGGTACATTCTTTCTATTGGGGCCCAGACTGACTTCCTTTCTGTCTTCTTC
TCTGGCTACACCTTCAAACACAAGATGGTGTATGAGGACACCCTGACCCTCTTCCCATTCTCTGGGGAGACT
GTGTTTCATGAGCATGGAGAACCCTGGCCTGTGGATTCTGGGATGCCACAACCTCTGACTTCCGCAACAGGGGC
ATGACTGCCCTGCTCAAAGTCTCCTCCTGTGACAAGAACACTGGGGACTACTATGAGGACAGCTATGAGGAC
ATCTCTGCCTACCTGCTCAGCAAGAACAATGCCATTGAGCCCAGGGAGATCACCAGGACCACCCTCCAGTCT
GACCAGGAGGAGATTGACTATGATGACACCATTTCTGTGGAGATGAAGAAAGAGGACTTTGACATCTATGAC
GAGGACGAGAACCAGAGCCCCAAGGAGCTTCCAGAAGAAGACCAGGCACTACTTCATTGCTGCTGTGGAGCGC
CTGTGGGACTATGGCATGAGCTCCAGCCCCCATGTCTCAGGAACAGGGGCCAGTCTGGCTCTGTGCCACAG
TTCAAGAAAGTGGTCTTCCAAGAGTTCACTGATGGCAGCTTCACCCAGCCCCTGTACAGAGGGGAGCTGAAT
GAGCACCTGGGACTCCTGGGGCCATACATCAGGGCTGAGGTGGAGGACAACATCATGGTGACCTTCCGCAAC
CAGGCCTCCAGGCCCTACAGCTTCTACAGCTCCCTCATCAGCTATGAGGAGGACCAGAGGCAGGGGGCTGAG
CCACGCAAGAACTTTGTGAAACCAATGAAACCAAGACCTACTTCTGGAAAGTCCAGCACCATATGGCCCC

(Continued)

Figure 8A

ACCAAGGATGAGTTTGA CTGCAAGGCCTGGGCCTACTTCTCTGATGTGGACCTGGAGAAGGATGTGCACTCT
GGCCTGATTGGCCCACTCCTGGTCTGCCACACCAACACCCTGAACCCTGCCCATGGAAGGCAAGTGACTGTG
CAGGAGTTTGGCCCTCTTCTTCACCATCTTTGATGAAACCAAGAGCTGGTACTTCACTGAGAACATGGAGCGC
AACTGCAGGGCCCCATGCAACATTCAGATGGAGGACCCCCACCTTCAAAGAGAACTACCGCTTCCATGCCATC
AATGGCTACATCATGGACACCCCTGCCTGGGCTTGTTCATGGCCCAGGACCAGAGGATCAGGTGGTACCTGCTT
TCTATGGGCTCCAATGAGAACATTCACCTCCATCCACTTCTCTGGGCATGTCTTCACTGTGCGCAAGAAGGAG
GAGTACAAGATGGCCCTGTACAACCTCTACCCTGGGGTCTTTGAGACTGTGGAGATGCTGCCCTCCAAAGCT
GGCATCTGGAGGGTGGAGTGCCTCATTTGGGGAGCACCTGCATGCTGGCATGAGCACCCCTGTTCTTGGTCTAC
AGCAACAAGTGCCAGACCCCCCTGGGAATGGCCTCTGGCCACATCAGGGACTTCCAGATCACTGCCTCTGGC
CAGTATGGCCAGTGGGCCCCCAAGCTGGCCAGGCTCCACTACTCTGGATCCATCAATGCCTGGAGCACCAAG
GAGCCATTCAGCTGGATCAAAGTGGACCTGCTGGCCCCCATGATCATCCATGGCATCAAGACCCAGGGGGCC
AGGCAGAAGTTCTCCAGCCTGTACATCAGCCAGTTCATCATCATGTACAGCCTGGATGGCAAGAAATGGCAG
ACCTACAGAGGCAACTCCACTGGAACACTCATGGTCTTCTTTGGCAATGTGGACAGCTCTGGCATCAAGCAC
AACATCTTCAACCCCCCAATCATCGCCAGATACATCAGGCTGCACCCCCACCCACTACAGCATCCGCAGCACC
CTCAGGATGGAGCTGATGGGCTGTGACCTGAACTCCTGCAGCATGCCCCCTGGGCATGGAGAGCAAGGCCATT
TCTGATGCCCAGATCACTGCCTCCAGCTACTTCACCAACATGTTTGCCACCTGGAGCCCAAGCAAGGCCAGG
CTGCACCTCCAGGGAAGGAGCAATGCCTGGAGGCCCCAGGTCAACAACCCAAAGGAGTGGCTGCAGGTGGAC
TTCCAGAAGACCATGAAGGTCACTGGGGTGACACCCAGGGGGTCAAGAGCCTGCTCACCAGCATGTATGTG
AAGGAGTTCTGATCAGCTCCAGCCAGGATGGCCACCAGTGGACCCTCTTCTCCAGAATGGCAAGGTCAAG
GTGTTCCAGGGCAACCAGGACAGCTTCACCCCTGTGGTGAACAGCCTGGACCCCCCTCCTGACCAGATAC
CTGAGGATTCACCCCCAGAGCTGGGTCCACCAGATTGCCCTGAGGATGGAGGTCTTGGGATGTGAGGCCAG
GACCTGTACTGA (SEQ ID NO:9)

Figure 8B

CS04Δ(760-1667) - CS04-SC1-AA

MQIELSTCFFLCLLRFCFSATRRYYLGAVELSWDYMQSDLGELPVDARFPFRVPKSFPEFNTSVVYKK
TLFVEFTDHLFNI AKPRPPWMGLLGPTIQAEVYDTVVITLKNMASHPVSLHAVGVSYWKASEGAEYD
DQTSQREKEDDKVFPGGSHTYVWQVLKENGPMASDPLCLTYSYLSHVDLVKDLNSGLIGALLVCREG
SLAKEKTQTLHKFILLFAVFDEGKSWHSETKNSLMQDRDAASARAWPKMHTVNGYVNRSLPGLIGCH
RKSVMYWHVIGMGTTPPEVHSIFLEGHTFLVRNHRQASLEISPITFLTAQTLLMDLGQFLLFCHISSHQ
HDGMEAYVKVDSCPEEPQLRMKNNEEAEDYDDDLTDSEMDVVRFDNNSPSFIQIRSVAKKHPKTWV
HYIAAEEEDWDYAPLV LAPDDRSYKSQYLNNGPQRIGRKYKKVRFMAYTDETFKTREAIQHESGILG
PLLYGEVGD TLLIIIFKNQASRPYNIYPHGITDVRPLYSRRLPKGVKHLKDFPILPGEIFKYKWTVTV
EDGPTKSDPRCLTRYYSFVNMERDLASGLIGPLLCYKESVDQQRGNQIMSDKRNVLFSVFDENRS
WYLTENIQRFLPNPAGVQLEDPEFQASNIMHSINGYVFDSLQLSVCLHEVAYWYILSIGAQTDFLSV
FFSGYTFKHKMVYEDTLTLFPFSGETVFMSENPGLWILGCHNSDFRNRGMTALLKVSSCDKNTGDY
YEDSYEDISAYLLSKNNAIEPREITRTTLQSDQEEIDYDDTISVEMKKEDFDIYDEDENQSPRSFQK
KTRHYFIAAVERLWDYGMSSSPHVLNRNAQSGSVPQFKKVVFQEFTDGSFTQPLYRGELNEHLGLLG
PYIRAEVEDNIMVTFRNQASRPYSFYSSLSIYEEDQRQGAEPKNEFKPNETKTYFWKVQHMAPTK
DEFDCKAWAYFSDVDLEKDVHSGSLIGPLLVCHTNTLNPAHGRQVTVQEFALFFTIFDETKSWYFTEN
MERNCRAPCNIQMEDPTFKENYRFHAINGYIMDTLPGLVMAQDQRIRWYLLSMGSNENIHSIHFSGH
VFTVRKKEEYKMALYNLYPGVFETVEMLP SKAGIWRVECLIGEHLHAGMSTLFLVYSNKCQTPLGMA
SGHIRDFQITASGQYGQWAPKLARLHYSGSINAWSTKEPF SWIKVDLLAPMI IHGIKTQGARQKFSS
LYISQFIIMYSLDGKKWQTYRGNSTGTLMVFFGNVDSSGIKHNI FNPPIIARYIRLHPTHYSIRSTL
RMELMGCDLNSCSMPLGMESKAISDAQITASSYFTNMFATWSPSKARLHLQGRSNAWRPQVNNPKW
LQVDFQKTMKVTVGTQGVKSLLTSMYVKEFLISSQDGHQWTLFFQNGKVVFQGNQDSFTPVVNS
LDPPLLTRYLRHPQSWVHQIALRMEVLGCEAQDLY (SEQ ID NO:10)

Figure 9

CS04Δ(772-1667) - CS04-SC2-NA

ATGCAGATTGAGCTGAGCACCTGCTTCTTCTGCTGCTGAGGTTCTGCTTCTCTGCCACCAGG
AGATACTACCTGGGGGCTGTGGAGCTTTCTTGGGACTACATGCAGTCTGACCTGGGGGAGCTGCCT
GTGGATGCCAGGTTCCCAACCAGAGTGCCCAAATCCTTCCCATTCAACACCTCTGTGGTCTACAAG
AAGACCCTCTTTGTGGAGTTCACCTGACCACCTGTTCAACATTGCCAAACCCAGGCCACCCTGGATG
GGA CTCTGGGACCCACCATT CAGGCTGAGGTGTATGACACTGTGGTCATCACCTCAAGAACATG
GCCTCCCAACCCTGTGAGCCTGCATGCTGTGGGGGT CAGCTACTGGAAGGCCTCTGAGGGGGCTGAG
TATGATGACCAGACCTCCCAAGAGGAGAAGGAGGATGACAAAGTGTTCCCTGGGGGCAGCCACACC
TATGTGTGGCAGGTCTCAAGGAGAATGGCCCCATGGCCTCTGACCCACTCTGCCTGACCTACTCC
TACCTTTCTCATGTGGACCTGGTCAAGGACCTCAACTCTGGACTGATTGGGGCCCTGCTGGTGTGC
AGGGAGGGCTCCCTGGCCAAAGAGAAGACCCAGACCCTGCACAAGTTCATTCTCCTGTTTGCTGTC
TTTGATGAGGGCAAGAGCTGGCACTCTGAAACCAAGAACTCCCTGATGCAGGACAGGGATGCTGCC
TCTGCCAGGGCCTGGCCCAAGATGCACACTGTGAATGGCTATGTGAACAGGAGCCTGCCTGGACTC
ATTGGCTGCCACAGGAAATCTGTCTACTGGCATGTGATTGGCATGGGGACAACCCCTGAGGTGCAC
TCCATTTTCTGAGGGGCCACACCTTCCTGGT CAGGAACCAAGACAGGCCAGCCTGGAGATCAGC
CCCATCACCTTCCTCACTGCCCAGACCCTGCTGATGGACCTCGGACAGTTCCTGCTGTTCTGCCAC
ATCAGCTCCCACCAGCATGATGGCATGGAGGCCTATGTCAAGGTGGACAGCTGCCCTGAGGAGCCA
CAGCTCAGGATGAAGAACAATGAGGAGGCTGAGGACTATGATGATGACCTGACTGACTCTGAGATG
GATGTGGTCCGCTTTGATGATGACAACAGCCCATCCTTCATTCAGATCAGGTCTGTGGCCAAGAAA
CACCCCAAGACCTGGGTGCACTACATTGCTGCTGAGGAGGAGGACTGGGACTATGCCCCACTGGTC
CTGGCCCCCTGATGACAGGAGCTACAAGAGCCAGTACCTCAACAATGGCCCCACAGAGGATTGGACGC
AAGTACAAGAAAGTCAGGTTTCATGGCCTACACTGATGAAACCTTCAAGACCAGGGAGGCCATTCAG
CATGAGTCTGGCATCCTGGGCCCCTCCTGTATGGGGAGGTGGGGGACACCCTGCTCATCATCTTC
AAGAACCAGGCCTCCAGGCCCTACAACATCTACCCACATGGCATCACTGATGTGAGGCCCTGTAC
AGCCGCAGGCTGCCAAAGGGGGTGAAACACCTCAAGGACTTCCCCATTCTGCCTGGGGAGATCTTC
AAGTACAAGTGGACTGTCACTGTGGAGGATGGACCAACCAAATCTGACCCCAGGTGCCTCACCAGA
TACTACTCCAGCTTTGTGAACATGGAGAGGGACCTGGCCTCTGGCCTGATTGGCCCACTGCTCATC
TGCTACAAGGAGTCTGTGGACCAGAGGGGAAACCAGATCATGTCTGACAAGAGGAATGTGATTCTG
TTCTCTGTCTTTGATGAGAACAGGAGCTGGTACCTGACTGAGAACATTCAGCGCTTCCTGCCAAC
CCTGCTGGGGTGCAGCTGGAGGACCCTGAGTTCCAGGCCAGCAACATCATGCACTCCATCAATGGC
TATGTGTTTGACAGCCTCCAGCTTTCTGTCTGCCTGCATGAGGTGGCCTACTGGTACATTCTTTCT
ATTGGGGCCCAGACTGACTTCCTTTCTGTCTTCTTCTCTGGCTACACCTTCAAACACAAGATGGTG
TATGAGGACACCCTGACCCTCTTCCCATCTCTGGGGAGACTGTGTTTCATGAGCATGGAGAACCCT
GGCCTGTGGATTCTGGGATGCCACAACCTGACTTCCGCAACAGGGGCATGACTGCCCTGCTCAAA
GTCTCCTCCTGTGACAAGAACA CTGGGGACTACTATGAGGACAGCTATGAGGACATCTCTGCCTAC
CTGCTCAGCAAGAACAATGCCATTGAGCCCAGGAGCTTCAGCCAGAATTCAGACACCCCAGCACC
AGGGAGATCACCAGGACCACCCTCCAGTCTGACCAGGAGGAGATTGACTATGATGACACCATTTCT
GTGGAGATGAAGAAAGAGGACTTTGACATCTATGACGAGGACGAGAACCAGAGCCCAAGGAGCTTC

(Continued)

Figure 10A

CAGAAGAAGACCAGGCACTACTTCATTGCTGCTGTGGAGCGCCTGTGGGACTATGGCATGAGCTCC
AGCCCCCATGTCTCAGGAACAGGGCCAGTCTGGCTCTGTGCCACAGTTCAAGAAAGTGGTCTTC
CAAGAGTTCACTGATGGCAGCTTCACCCAGCCCCCTGTACAGAGGGGAGCTGAATGAGCACCTGGGA
CTCCTGGGCCCATACATCAGGGCTGAGGTGGAGGACAACATCATGGTGACCTTCCGCAACCAGGCC
TCCAGGCCCTACAGCTTCTACAGCTCCCTCATCAGCTATGAGGAGGACCAGAGGCAGGGGGCTGAG
CCACGCAAGAACTTTGTGAAACCCAATGAAACCAAGACCTACTTCTGGAAAGTCCAGCACCATG
GCCCCACCAAGGATGAGTTTGAAGTCAAGGCCTGGGCCTACTTCTCTGATGTGGACCTGGAGAAG
GATGTGCACTCTGGCCTGATTGGCCCACTCCTGGTCTGCCACACCAACACCCTGAACCCTGCCCCAT
GGAAGGCAAGTGACTGTGCAGGAGTTTGGCCTCTTCTTCACCATCTTTGATGAAACCAAGAGCTGG
TACTTCACTGAGAACATGGAGCGCAACTGCAGGGCCCCATGCAACATTCAGATGGAGGACCCACCC
TTCAAAGAGAACTACCGCTTCCATGCCATCAATGGCTACATCATGGACACCCTGCCTGGGCTTGTC
ATGGCCCAGGACCAGAGGATCAGGTGGTACCTGCTTTCTATGGGCTCCAATGAGAACATTCACTCC
ATCCACTTCTCTGGGCATGTCTTCACTGTGCGCAAGAAGGAGGAGTACAAGATGGCCCTGTACAAC
CTCTACCCTGGGGTCTTTGAGACTGTGGAGATGCTGCCCTCCAAAGCTGGCATCTGGAGGGTGGAG
TGCCTCATTTGGGGAGCACCTGCATGCTGGCATGAGCACCTGTTCTTGGTCTACAGCAACAAGTGC
CAGACCCCCCTGGGAATGGCCTCTGGCCACATCAGGGACTTCCAGATCACTGCCTCTGGCCAGTAT
GGCCAGTGGGCCCCCAAGCTGGCCAGGCTCCACTACTCTGGATCCATCAATGCCTGGAGCACCAAG
GAGCCATTCAGCTGGATCAAAGTGGACCTGCTGGCCCCCATGATCATCCATGGCATCAAGACCCAG
GGGGCCAGGCAGAAAGTTCTCCAGCCTGTACATCAGCCAGTTCATCATCATGTACAGCCTGGATGGC
AAGAAATGGCAGACCTACAGAGGCAACTCCACTGGAACACTCATGGTCTTCTTTGGCAATGTGGAC
AGCTCTGGCATCAAGCACAAACATCTTCAACCCCCCAATCATCGCCAGATACATCAGGCTGCACCCC
ACCCACTACAGCATCCGCAGCACCCCTCAGGATGGAGCTGATGGGCTGTGACCTGAACTCCTGCAGC
ATGCCCCCTGGGCATGGAGAGCAAGGCCATTTCTGATGCCCAGATCACTGCCTCCAGCTACTTCACC
AACATGTTTGCCACCTGGAGCCCAAGCAAGGCCAGGCTGCACCTCCAGGGAAGGAGCAATGCCTGG
AGGCCCCAGGTCAACAACCCAAAGGAGTGGCTGCAGGTGGACTTCCAGAAGACCATGAAGGTCACT
GGGGTGACCACCCAGGGGGTCAAGAGCCTGCTCACCAGCATGTATGTGAAGGAGTTCCTGATCAGC
TCCAGCCAGGATGGCCACCAGTGGACCCCTCTTCTTCCAGAAATGGCAAGGTCAAGGTGTTCCAGGGC
AACCAGGACAGCTTCACCCCTGTGGTGAACAGCCTGGACCCCCCCTCCTGACCAGATACCTGAGG
ATTACCCCCAGAGCTGGGTCCACCAGATTGCCCTGAGGATGGAGGTCCTGGGATGTGAGGCCAG
GACCTGTACTGA (SEQ ID NO:11)

Figure 10B

CS04Δ(772-1667) - CS04-SC2-AA

MQIELSTCFFLCLLRFCFSATRRYYLGAVELSWDYMQSDLGELPVDARFPFPRVPKSFPEFNTSVVYKK
TLFVEFTDHLFNIAPRPPWMGLLGPTIQAEVYDTVVITLKNMASHPVSLHAVGVSYWKASEGAEYD
DQTSQREKEDDKVFPGGSHTYVWQVLKENGPMASDPLCLTYSYLSHVDLVKDLNSGLIGALLVCREG
SLAKEKTQTLHKFILLFAVFDEGKSWHSETKNSLMQDRDAASARAWPKMHTVNGYVNRSLPGLIGCH
RKSVYWHVIGMGTTPREVHSIFLEGHTFLVRNHRQASLEISPITFLTAQTLLMDLGQFLLFCHISSHQ
HDGMEAYVKVDSCPPEEPQLRMKNNEEAEDYDDDLTDSEMDVVRFDDDNSPSFIQIRSVAKKHPKTWV
HYIAAEEEDWDYAPLV LAPDDRSYKSQYLNNGPQRIGRKYKKVRFMAYTDETFKTREAIQHESGILG
PLLYGEVGD TLLIIIFKNQASRPYNIYPHGITDVRPLYSRRLPKGVKHLKDFPILPGEIFKYKWTVTV
EDGPTKSDPRCLTRYYSFVNMERDLASGLIGPLLCYKESVDQQRGNQIMSDKRNVLFSVFDENRS
WYLTENIQRFLPNPAGVQLEDPEFQASNIMHSINGYVFDSLQLSVCLHEVAYWYILSIGAQTDFLSV
FFSGYTFKHKMVYEDTLTLFPFSGETVFMSENPGLWILGCHNSDFRNRGMTALLKVSSCDKNTGDY
YEDSYEDISAYLLSKNNAIEPRSFQNSRHPSTREITRTTLQSDQEEIDYDDTISVEMKKEDFDIYD
EDENQSPRSFQKKTRHYFIAAVERLWDYGMSSSPHVLNRNRAQSGSVPQFKKVVFQEFTDGSFTQPLY
RGELNEHLGLLGPYIRAEVEDNIMVTFRNQASRPYSFYSSLISYEEDQRQGAEPKRFVKNPNETKTY
FWKVQHMAPTKDEFDCKAWAYFSDVDLEKDVHSGLIGPLLVCHTNTLNPAHGRQVTVQEFALFFT
FDETKSWYFTENMERNCRAPCNIQMEDPTFKENYRFHAINGYIMDTLPGLVMAQDQQRIRWYLLSMGS
NENIHSIHFSGHVFTVRKKEEYKMALYNLYPGVFETVEMLPKAGIWRVECLIGEHLHAGMSTLFLV
YSNKCQTPLGMASGHIRDFQITASGQYGQWAPKLARLHYSGSINAWSTKEPFSWIKVDLLAPMIH
IKTQGARQKFSSLYISQFIIMYSLDGKKWQTYRGNSTGTLMVFFGNVDSSGIKHNI FNPPIIARYIR
LHPHYSIRSTLRMELMGCDLNSCSMPLGMESKAISDAQITASSYFTNMFATWSPSKARLHLQGRSN
AWRPQVNNPKEWLQVDFQKTMKVTGVTTQGVKSLLTSMYVKEFLISSQDGHQWTLFFQNGKVVFQ
GNQDSFTPVVNSLDPPLLTRYLRIHPQSWVHQIALRMEVLGCEAQDLY (SEQ ID NO:12)

Figure 11

CS01-FL-NA

ATGCAGATTGAGCTGTCCACCTGCTTCTTTCTGTGCCTGCTGAGATTCTGCTTCTCTGCCACCAGG
AGATACTACCTGGGGGCTGTGGAACCTTTCTTGGGACTACATGCAGTCTGACCTGGGAGAGCTGCCT
GTGGATGCCAGGTTCCCACCCAGAGTGCCCAAGTCCTTCCCATTCAACACCTCTGTGGTCTACAAG
AAGACACTCTTTGTGGAATTCAGTACCACCTGTTCAACATTGCAAAACCCAGACCACCCTGGATG
GGACTCCTGGGACCCACCATTGAGGCTGAGGTGTATGACACTGTGGTCATCACCCCTCAAGAACATG
GCATCCCACCCTGTGTCTCTGCATGCTGTGGGAGTCTCATACTGGAAAGCCTCTGAAGGGGCTGAG
TATGATGACCAGACATCCCAGAGAGAGAAAGAGGATGACAAGGTGTTCCCTGGGGGATCTCACACC
TATGTGTGGCAAGTCCTCAAGGAGAATGGACCCATGGCATCTGACCCACTCTGCCTGACATACTCC
TACCTTTCTCATGTGGACCTGGTCAAGGACCTCAACTCTGGACTGATTGGGGCACTGCTGGTGTGC
AGGGAAGGATCCCTGGCCAAGGAGAAAACCCAGACACTGCACAAGTTCATTCTCCTGTTTGCTGTC
TTTGATGAGGGCAAGTCTTGGCACTCTGAAACAAAGAACTCCCTGATGCAAGACAGGGATGCTGCC
TCTGCCAGGGCATGGCCCAAGATGCACACTGTGAATGGCTATGTGAACAGATCACTGCCTGGACTC
ATTGGCTGCCACAGGAAATCTGTCTACTGGCATGTGATTGGCATGGGGACAACCCCTGAAGTGCAC
TCCATTTTCTGAGGGGACACACCTTCTGGTCAAGAACACAGACAAGCCTCTCTGGAGATCTCT
CCCATCACCTTCTCTACTGCACAGACACTGCTGATGGACCTTGGACAGTTCTGCTGTTCTGCCAC
ATCTCTTCCCACCAGCATGATGGCATGGAAGCCTATGTCAAGGTGGACTCATGCCCTGAGGAACCA
CAGCTCAGGATGAAGAACAATGAGGAGGCTGAGGACTATGATGATGACCTGACTGACTCTGAGATG
GATGTGGTCAGATTTGATGATGACAACCTCTCCATCCTTCATTGATGAGGTCTGTGGCAAAGAAA
CACCCCAAGACATGGGTGCACTACATTGCTGCTGAGGAAGAGGACTGGGACTATGCACCACTGGTC
CTGGCCCCCTGATGACAGGAGCTACAAGTCTCAGTACCTCAACAATGGCCCACAAAGAATTGGAAGA
AAGTACAAGAAAGTCAGATTCATGGCCTACACTGATGAAACCTTCAAGACAAGAGAAGCCATTGAG
CATGAGTCTGGCATTCTGGGACCACTCCTGTATGGGGAAGTGGGAGACACCCTGCTCATCATCTTC
AAGAACCAGGCCCTCAGGCCCTACAACATCTACCCACATGGCATCACTGATGTCAGGCCCTGTAC
AGCAGGAGACTGCCAAAAGGGGTGAAACACCTCAAGGACTTCCCCATTCTGCCTGGAGAGATCTTC
AAGTACAAGTGGACTGTCACTGTGGAGGATGGACCAACAAAGTCTGACCCAGGTGCCTCACCAGA
TACTACTCCTCTTTTGTGAACATGGAGAGAGACCTGGCATCTGGACTGATTGGACCACTGCTCATC
TGCTACAAGGAGTCTGTGGACCAGAGAGGCAACCAGATCATGTCTGACAAGAGAAATGTGATTCTG
TTCTCTGTCTTTGATGAGAACAGATCATGGTACCTGACTGAGAACATTCAGAGATTCTGCCAAC
CCTGCTGGGGTGCAACTGGAAGACCCCTGAGTTCCAGGCAAGCAACATCATGCACTCCATCAATGGC
TATGTGTTTGACTCTCTCCAGCTTTCTGTCTGCCTGCATGAGGTGGCCTACTGGTACATTCTTTCT
ATTGGGGCACAACTGACTTCCTTTCTGTCTTCTTCTCTGGATACACCTTCAAGCACAAAGATGGTG
TATGAGGACACCCTGACACTCTTCCCATTCTCTGGGGAACTGTGTTTCATGAGCATGGAGAACCCT
GGACTGTGGATTCTGGGATGCCACAACCTCTGACTTCAGAAACAGGGGAATGACTGCACTGCTCAA
GTCTCCTCCTGTGACAAGAACACTGGGGACTACTATGAGGACTCTTATGAGGACATCTCTGCCTAC
CTGCTCAGCAAGAACAATGCCATTGAGCCCAGAAGCTTCTCTCAGAATCCACCTGTCTGAAGAGA
CACCAGAGAGAGATCACCAGGACAACCCTCCAGTCTGACCAGGAAGAGATTGACTATGATGACACC
ATTTCTGTGGAGATGAAGAAGGAGGACTTTGACATCTATGATGAGGACGAGAACCAGTCTCCAAGA
TCATTCCAGAAGAAGACAAGACACTACTTCATTGCTGCTGTGGAAAGACTGTGGGACTATGGCATG
TCTTCTCTCCCCATGTCTCAGGAACAGGGCACAGTCTGGCTCTGTGCCACAGTTCAAGAAAGTG
GTCTTCCAGGAGTTCACTGATGGCTCATTCACCCAGCCCCCTGTACAGAGGGGAACTGAATGAGCAC

(Continued)

Figure 12A

CTGGGACTCCTGGGACCATAACATCAGGGCTGAGGTGGAAGACAACATCATGGTGACATTTCAGAAAC
CAGGCCTCCAGGCCCTACAGCTTCTACTCTTCCCTCATCAGCTATGAGGAAGACCAGAGACAAGGG
GCTGAGCCAAGAAAGAACTTTGTGAAACCCAATGAAACCAAGACCTACTTCTGGAAAGTCCAGCAC
CACATGGCACCCACCAAGGATGAGTTTGACTGCAAGGCCTGGGCATACTTCTCTGATGTGGACCTG
GAGAAAGATGTGCACTCTGGCCTGATTGGCCCACTCCTGGTCTGCCACACCAACACCCTGAACCCT
GCACATGGAAGGCAAGTGACTGTGCAGGAGTTTGCCCTCTTCTTCACCATCTTTGATGAAACCAAG
TCATGGTACTTCACTGAGAACATGGAGAGAACTGCAGAGCACCATGCAACATTCAGATGGAAGAC
CCCACCTTCAAGGAGAAGTACAGGTTCCATGCCATCAATGGCTACATCATGGACACCCTGCCTGGG
CTTGTCATGGCACAGGACCAGAGAATCAGATGGTACCTGCTTTCTATGGGATCCAATGAGAACATT
CACTCCATCCACTTCTCTGGGCATGTCTTCACTGTGAGAAAGAAGGAGGAATACAAGATGGCCCTG
TACAACCTCTACCTGGGGTCTTTGAGACTGTGGAGATGCTGCCCTCCAAAGCTGGCATCTGGAGG
GTGGAATGCCTCATTTGGGGAGCACCTGCATGCTGGCATGTCAACCCCTGTTCTGGTCTACAGCAAC
AAGTGCCAGACACCCCTGGGAATGGCCTCTGGCCACATCAGGGACTTCCAGATCACTGCCTCTGGC
CAGTATGGCCAGTGGGCACCCAACTGGCCAGGCTCCACTACTCTGGCTCCATCAATGCATGGTCA
ACCAAGGAGCCATTCTCTTGGATCAAGGTGGACCTGCTGGCACCCATGATCATTCATGGCATCAAG
ACACAGGGGGCAAGACAGAAATTCTCCTCTCTGTACATCTCACAGTTCATCATCATGTACTCTCTG
GATGGCAAGAAGTGGCAGACATACAGAGGCAACTCCACTGGCACCCCTCATGGTCTTCTTTGGCAAT
GTGGACAGCTCTGGCATCAAGCACACATCTTCAACCCTCCCATCATTGCCAGATACATCAGGCTG
CACCCACCCACTACTCAATCAGATCAACCCTCAGGATGGAAGTATGGGATGTGACCTGAACTCC
TGCTCAATGCCCCTGGGAATGGAGAGCAAGGCCATTTCTGATGCCAGATCACTGCATCCTCTTAC
TTCACCAACATGTTTGCCACCTGGTCACCATCAAAAGCCAGGCTGCACCTCCAGGGAAGAAGCAAT
GCCTGGAGACCCAGGTCAACAACCCAAAGGAATGGCTGCAAGTGGACTTCCAGAAGACAATGAAA
GTCACTGGGGTGACAACCCAGGGGGTCAAGTCTCTGCTCACCTCAATGTATGTGAAGGAGTTCCTG
ATCTCTTCCTCACAGGATGGCCACCAGTGGACACTCTTCTTCCAGAATGGCAAAGTCAAGGTGTTT
CAGGGCAACCAGGACTCTTTCACACCTGTGGTGAAGTCACTGGACCCCCCTCCTGACAAGATAC
CTGAGAATTACCCCCAGTCTTGGGTCCACCAGATTGCCCTGAGAATGGAAGTCCTGGGATGTGAG
GCACAAGACCTGTACTGA (SEQ ID NO:13)

Figure 12B

CS08-FL-NA

ATGCAGATCGAACTGAGCACTTGCTTCTTCTCTGTGTCTCCTGCGCTTTTGCTTCTCCGCCACAAGG
AGATACTATCTCGGTGCCGTGGAGCTCAGCTGGGACTACATGCAGAGCGACTTGGGTGAACTGCCT
GTGGACGCCAGGTTTCCACCCCGCGTGCCCAAGAGTTTCCCGTTCAACACCAGTGTCTGTGTACAAG
AAAACCCCTCTTCGTGGAATTCACCGACCACCTGTTCAACATCGCCAAACCGCGCCCTCCCTGGATG
GGGCTGCTCGGCCCGACGATCCAGGCTGAGGTCTATGACACGGTGGTGATTACCCTCAAGAACATG
GCTAGCCACCCGGTGAGCCTGCACGCCGTGGGCGTGTCTATTGGAAAGCGTCCGAGGGTGCGGAG
TACGATGACCAGACTTCACAGCGGGAGAAGGAAGACGACAAAGTGTTCGCCGGGGGTTCCACACC
TATGTCTGGCAGGTCCTGAAGGAGAATGGTCCTATGGCCTCCGACCCATTGTGCCTCACCTACTCT
TACCTAAGCCATGTGGATCTCGTCAAGGACCTGAACTCGGGGCTGATCGGCGCCCTGCTCGTGTGC
CGGGAGGGGCTCACTGGCCAAGGAGAAGACCCAAACTCTGCACAAGTTCATCCTGCTGTTTCGCGGTA
TTCGACGAGGGGAAGTCTTGGCACTCCGAGACCAAGAACAGCCTGATGCAGGACCGCGACGCAGCC
TCGGCCCGTGCGTGGCCAAAGATGCACACCGTGAACGGCTACGTTAACAGGAGCCTACCCGGCCTG
ATCGGCTGCCACCGCAAATCGGTCTACTGGCATGTGATCGGAATGGGCACAACGCCCCGAGGTCCAC
AGTATCTTCTCGAGGGGCCACACTTTCTGGTCCGGAATCACCGCCAGGCCAGCCTGGAGATCAGC
CCCATAACCTTTCTGACGGCGCAGACCTTACTCATGGATCTCGGCCAGTTCCTCCTGTTCTGCCAC
ATTTCTGTCACCGACGACGATGGGATGGAAGCATATGTGAAAGTGGACTCCTGCCCGAGGAACCC
CAGCTTAGGATGAAGAACAATGAGGAGGCGGAGGACTACGACGATGACCTTACCGATTTCAGAAATG
GACGTAGTACGCTTTGACGACGACAACCTCTCCATCCTTCATACAGATTTCGCTCCGTGCCAAGAAG
CACCTAAGACTTGGGTGCACTACATCGCGGCCGAGGAGGAGGACTGGGATTATGCTCCCTGGTG
CTGGCCCCCGACGACCGCAGCTACAAGAGCCAGTACCTGAATAACGGGCCCCAGCGCATCGGCCGG
AAGTACAAGAAAGTGCGGTTTCATGGCTTACACGGACGAGACCTTCAAGACCCGGGAGGCTATCCAG
CATGAGAGCGGCATCTTGGGGCCCCCTCCTGTACGGCGAAGTTGGAGACACACTGCTGATCATCTTC
AAGAACCAGGCGAGCAGGCCCTACAACATCTACCCCCACGGCATTACCGATGTCCGGCCGTTGTAC
AGCCGACGGCTGCCCAAGGGCGTGAAGCACCTGAAGGACTTTCCGATCCTGCCGGGCGAGATCTTC
AAGTACAAGTGGACTGTGACCGTGGAGGATGGGCCGACCAAGAGCGATCCGCGCTGCCTGACCCGT
TACTACTCCAGCTTTGTCAATATGGAGCGCGACCTCGCTAGCGGCTTGATTGGCCCTCTGCTGATC
TGCTACAAGGAGTCCGTGGACCAGAGGGGGAATCAGATCATGAGTGACAAGAGGAACGTGATCCTG
TTCTCCGTGTTTCGACGAAAACCGCAGCTGGTATCTCACCGAGAATATCCAGCGCTTCTGCCCAAC
CCGGCCGGTGTGCAGCTGGAGGACCCCGAGTTTCAGGCCAGCAACATCATGCATTCATCAACGGA
TATGTGTTTGATTCCCTGCAGCTCTCAGTGTGTCTGCACGAGGTGCCTACTGGTATATCCTCAGC
ATTGGGGCACAGACCGACTTCCTGAGCGTGTTCTTCTCCGGGTATACCTTCAAGCACAAGATGGTG
TACGAGGATACCCTGACCCGTGTTCCCTTTAGCGGCGAAACCGTGTTTATGTCTATGGAGAACCCC
GGGCTCTGGATCCTTGGCTGCCATAACTCCGACTTCCGCAACCGCGGAATGACCGCGCTCCTGAAA
GTGTCGAGTTGTGACAAGAACACCGGCGACTATTACGAGGACAGTTACGAGGACATCTCTGCGTAC
CTCCTTAGCAAGAATAACGCCATCGAGCCAAGATCCTTCAGCCAGAACCCCCAGTGCTGAAGAGG
CATCAGCGGGAGATCACCCGCACGACCCTGCAGTCGGATCAGGAGGAGATTGATTACGACGACACG
ATCAGTGTGGAGATGAAGAAGGAGGACTTCGACATCTACGACGAAGATGAAAACAGTCCCCTCGG
TCCTTCCAAAAGAAGACCCGGCACTACTTCATCGCCGCTGTGGAACGCCTGTGGGACTATGGAATG

(Continued)

Figure 13A

TCTTCTAGCCCTCACGTTTTGAGGAACCGCGCCCAGTCGGGCAGCGTGCCCCAGTTCAAGAAAGTG
GTGTTCCAGGAGTTACCGACGGCTCCTTCACCCAGCCACTTTACCGGGGCGAGCTCAATGAACAT
CTGGGCCTGCTGGGACCCCTACATCAGGGCTGAGGTGGAGGACAACATCATGGTGACATTCGGGAAT
CAGGCCAGCAGACCATAACAGTTTCTACAGTTCACTCATCTCCTACGAGGAGGACCAGCGCCAGGGG
GCTGAACCCCGTAAGAACTTCGTGAAGCCAAACGAAACAAAGACCTACTTCTGGAAGGTCCAGCAC
CACATGGCACCTACCAAGGACGAGTTCGATTGCAAGGCCTGGGCCTACTTCTCCGACGTGGACCTG
GAGAAAGATGTGCACAGCGGCCTGATTGGCCCTCTGCTGGTGTGTACACGAACACACTCAACCCT
GCACACGGGCGGCAGGTCACTGTGCAGGAATTCGCCCTGTTCTTTACCATCTTTGATGAGACGAAG
TCCTGGTATTTACCGAAAACATGGAGAGGAACTGCCGCGCACCCCTGCAACATCCAGATGGAAGAT
CCGACATTCAAGGAGAACTACCGGTTCCATGCCATCAATGGCTACATCATGGACACCCCTGCCTGGC
CTCGTGATGGCCCAAGACCAGCGTATCCGCTGGTATCTGCTGTGATGGGCTCCAACGAGAACATC
CATAGTATCCACTTCAGCGGGCATGTCTTCACGGTGAGGAAAAAGGAGGAGTACAAGATGGCACTG
TACAACCTCTATCCCGGCGTGTTGAGACCGTGAGATGCTGCCCTCCAAGGCCGGCATCTGGAGA
GTGGAATGCCTGATCGGCGAGCACCTCCACGCTGGGATGTCCACGCTGTTCTCGTTTACAGCAAT
AAGTGCCAGACCCCTCTGGGCATGGCGAGCGGCCACATCCGCGACTTCCAGATTACAGCCAGCGGC
CAGTACGGTCAGTGGGCTCCAAAGCTGGCCCGTCTGCACTACTCCGGATCCATCAACGCCTGGTCC
ACCAAGGAACCGTTCTCCTGGATCAAAGTAGACCTGCTAGCCCCCATGATCATTCACGGCATCAAG
ACACAAGGCGCCCGACAGAAGTTCTCGAGCCTCTATATCTCCAGTTCATCATCATGTATAGCCTG
GACGGAAAGAAGTGGCAGACTTACCGCGGAAACTCGACAGGGACCCTGATGGTATTCTTCGGTAAC
GTGGACAGCTCCGGAATCAAGCACAAACATCTTCAACCCACCCATTATCGCCCGCTACATCCGCCTG
CACCCCACTCACTATAGCATTAGGTCCACCCTGCGAATGGAGCTCATGGGCTGTGACCTGAACAGC
TGTAGCATGCCCCCTCGGCATGGAGTCTAAGGCGATCTCCGACGCACAGATAACGGCATCATCCTAC
TTTACCAACATGTTTCGCTACCTGGTCCCCCTCCAAGGCCGACTCCACCTGCAAGGGAGATCCAAC
GCCTGGCGGGCCACAGGTCAACAATCCCAAGGAGTGGCTGCAAGTGGACTTTCAGAAAACCTATGAAA
GTCACCGGAGTGACCACACAGGGAGTGAAGTCTCTGCTGACCAGCATGTACGTGAAGGAGTTCCTC
ATCTCCAGTTCGCAGGATGGCCACCAGTGGACGTTGTCTTCCAAAACGGTAAAGTCAAAGTCTTC
CAAGGGAACCAGGACAGCTTTACACCCGTCGTGAACTCCCTGGACCCCCCGCTTCTCACTAGATAC
CTCCGCATCCACCCTCAGAGCTGGGTGCACCAGATTGCCCTGCGCATGGAGGTTCTGGGGTGTGAA
GCCCAGGACCTGTACTAA (SEQ ID NO:14)

Figure 13B

CS10-FL-NA

ATGCAGATTGAGCTCTCCACCTGCTTCTTTCTCTGCCTTCTTCGCTTCTGCTTTTCTGCCACACGC
AGGTACTATTTGGGAGCAGTGGAAGTCTGAGCTGGGATTACATGCAGAGTGACCTTGGTGAACCTCCT
GTGGACGCTCGTTTTCCACCTAGAGTTCCCAAGTCCTTCCCCTTCAACACCTCAGTGGTCTACAAG
AAAACGCTGTTTGTGGAGTTCACTGACCACCTCTTCAACATTGCCAAACCAAGACCCCTTGGATG
GGATTGCTGGGACCCACAATACAAGCAGAAGTCTACGACACGGTGGTGAATTACCCTGAAGAACATG
GCGTCACACCCTGTTTCACTTCACGCTGTTGGGGTTCAGTTATTGGAAAGCCTCAGAGGGTGCGGAA
TACGATGATCAAACCAGCCAGAGGGGAGAAGGAAGATGACAAGGTCTTTCCTGGGGGTAGCCATACC
TATGTTTGGCAGGTGCTGAAAGAGAATGGGCCTATGGCCTCTGATCCCTTGTGCCTCACATACTCT
TACCTGAGTCACGTCGACCTGGTGAAAGACCTGAATAGCGGTCTGATTGGTGCAGTCTGTTTGT
AGAGAGGGGAGTTTGGCCAAGGAGAAAACCTCAGACTCTCCACAAGTTTATCCTCCTGTTTGTGTG
TTCGACGAGGGCAAGTCTTGGCACTCTGAAACAAAGAACTCCCTGATGCAGGACAGAGATGCTGCA
TCTGCAAGGGCTTGGCCAAAATGCACACAGTGAACGGCTATGTGAATCGATCACTGCCAGGACTG
ATAGGCTGTCATCGCAAGTCAGTGTATTGGCACGTTATCGGGATGGGAACAACTCCAGAAGTGCAC
AGCATCTTCCTTGAGGGCCACACTTTCCTGGTTCGGAATCATAGACAGGCCAGCCTTGAGATCAGC
CCAATCACCTTTCTGACTGCCCAAACCTTGCTGATGGATCTGGGACAGTTCCTCCTGTTTGTAC
ATCTCCTCCCACCAACATGACGGGATGGAGGCTTATGTGAAGGTGATAGCTGTCCGGAGGAACCA
CAACTGAGGATGAAGAACAACGAAGAGGCAGAGGACTATGACGACGATCTGACTGACAGTGAAATG
GACGTGGTTCGGTTCGACGATGACAATTCTCCTTCATTTATCCAGATCCGTTCCGTGGCCAAGAAG
CACCCCAAGACTTGGGTTTATTACATCGCTGCTGAGGAGGAGGATTGGGACTACGCGCCCTTGGTG
TTGGCCCCAGACGATCGCTCATAACAAGAGCCAGTACCTTAACAATGGTCCACAAAGGATCGGCCGG
AAGTACAAGAAGGTTAGATTTATGGCTTATACCGACGAGACTTTTAAACTAGGGAAGCAATTCAG
CATGAAAGTGGCATTCTTGGACCCCTGCTGTATGGCGAGGTTGGCGACACCCTGCTGATTATCTTT
AAGAACCAGGCAAGCCGGCCCTACAACATCTACCCGCACGGCATAACCGATGTACGACCCCTGTAC
AGTCGCAGACTTCTTAAAGGGGTGAAACACCTGAAGGACTTCCAATTCTGCCCGGGGAGATCTTC
AAGTATAAATGGACCGTGACGGTTGAGGATGGTCCCACAAAGTCCGATCCGAGATGCCTTACCCGA
TATTATTCCAGCTTCGTGAACATGGAAAGGGACCTGGCCAGCGGGCTGATTGGCCCACTGCTGATT
TGTTACAAGGAGTCTGTGATCAAAGAGGAAACCAATAATGAGCGACAAACGTAACGTCATCCTG
TTCAGCGTCTTTGATGAGAATAGAAGCTGGTACCTCACAGAAAATATTCAGCGGTTTCTGCCTAAC
CCCGCAGGCGTCCAGCTGGAAGATCCCGAGTTCCAAGCCTCAAACATCATGCATAGCATCAACGGA
TACGTATTCGATAGCCTGCAGCTGTCCGTCTGTCTCCATGAAGTGGCATATTGGTACATCCTGAGT
ATCGGGGCGCAGACCGACTTCCTGAGCGTGTTCTTTTCTGGATACACGTTCAAACACAAAATGGTC
TATGAAGATACCCTGACTCTGTTTCCATTCTCAGGAGAGACAGTCTTTATGAGTATGGAAAATCCT
GGACTGTGGATCCTGGGCTGTCACAATTCTGATTTTCGGAACAGAGGCATGACAGCCCTGCTTAAA
GTGAGCTCATGCGACAAGAACACCGGTGATTACTACGAAGATAGCTATGAGGACATCAGTGCGTAT
TTGCTCTCCAAGAACAACGCTATCGAGCCACGGTCTTTCAGTCAGAATCCTCCCGTTCTGAAGCGG
CATCAGCGCGAAATAACACGCACAACCCTTCAGTCAGACCAAGAGGAAATCGACTACGATGATACT
ATCTCTGTGGAGATGAAGAAGGAGGATTTTCGACATTTACGACGAGGACGAGAATCAGTCCCCAAGG
AGCTTTCAGAAGAAAACAAGACACTATTTTCATTGCCGCCGTGGAGCGACTGTGGGACTACGGCATG

(Continued)

Figure 14A

TCTAGCTCTCCGCATGTACTTAGAAATAGGGGCACAAAGCGGATCCGTGCCTCAGTTTAAGAAAGTT
GTCTTTCAGGAGTTTACAGATGGCTCCTTCACCCAGCCCTTGTATCGCGGGGAACCTCAATGAACAC
CTGGGCCTCCTGGGTCTTATATTAGGGCCGAAGTCGAGGACAATATCATGGTGACCTTTAGGAAC
CAGGCATCTAGACCTTACTCTTTCTACTCCTCCCTGATATCCTATGAGGAGGACCAGCGGCAAGGC
GCTGAGCCTCGGAAGAACTTTGTGAAGCCAAATGAAACCAAACATACTTTTGGAAGTTTCAGCAC
CACATGGCTCCCACGAAGGACGAATTTGACTGTAAAGCCTGGGCCTACTTCTCAGATGTAGATCTC
GAGAAAGACGTGCACTCAGGGCTCATTGGTCCCCTCCTGGTCTGTCATACTAATACCCTCAATCCA
GCACACGGACGTCAGGTAACCGTCCAGGAATTTGCCCTGTTCTTTACCATTTTCGATGAGACTAAA
TCCTGGTACTTTACCGAAAACATGGAGAGGAATTGCAGAGCCCCATGCAACATCCAGATGGAGGAC
CCTACCTTCAAAGAGAACTATCGCTTCCATGCCATTAACGGTTACATTATGGATACTCTCCAGGA
CTTGTGATGGCACAGGATCAGCGGATAAGATGGTATCTGTTGAGCATGGGCTCCAACGAGAATATT
CACAGCATCCATTTCTCCGGTCACGTGTTTACAGTGAGAAAGAAAGAAGAGTACAAGATGGCTCTG
TATAATCTCTATCCAGGCGTATTTCGAAACGGTGGAGATGTTGCCCTAGCAAGGCCGGCATTGCGCA
GTAGAATGCCTTATCGGGGAACATCTGCATGCCGGAATGAGCACGCTCTTCCTGGTGTATAGTAAC
AAGTGCCAGACTCCGCTGGGCATGGCATCTGGCCATATACGGGACTTTCAGATTACGGCTAGCGGG
CAGTATGGGCAGTGGGCACCCAACTTGCGCGACTGCACTATTTCAGGCTCTATCAATGCATGGTCC
ACCAAGGAACCCTTCTCTTGGATTAAAGGTGGACCTTTTGGCGCCCATGATAATCCATGGGATCAAA
ACCCAGGGCGCTCGTCAGAAATTCTCATCACTCTACATCTCTCAGTTCATAATAATGTATTCCTG
GATGGGAAGAAATGGCAGACTTACAGAGGAAACAGCACCGGGACGCTGATGGTGTCTTTGGCAAC
GTGGACAGCAGCGGCATCAAACACAACATCTTCAATCCTCCCATTATTGCCCGTTATATTAGACTG
CATCCCACCTCACTACTCTATACGCAGCACACTTAGGATGGAGCTCATGGGATGCGACCTGAACAGT
TGTAAGTATGCCCTTGGGGATGGAGTCCAAAGCTATAAGCGACGCACAAATTACAGCTAGCTCTTAC
TTTACGAATATGTTCCGCCACGTGGAGCCCAAGCAAAGCCCGGCTGCATTTGCAGGGTCGGAGTAAT
GCTTGGCGCCACAGGTGAATAACCCTAAGGAATGGTTGCAAGTAGATTTCAGAAAACCTATGAAG
GTAACCGGCGTCACTACACAGGGAGTCAAGTCCCTCTTGACCTCTATGTACGTCAAGGAGTTCCTG
ATTAGCAGCAGTCAGGATGGGCACCAATGGACACTGTTCTTCCAGAATGGGAAAGTTAAAGTATTT
CAGGGTAACCAGGACTCCTTTACACCTGTGGTGAATAGCCTCGACCCACCCCTGCTGACACGATAC
CTCCGCATCCACCCTCAGTCTTGGGTGCATCAAATTGCCCTGCGAATGGAGGTGTTGGGATGCGAA
GCTCAGGACCTCTACTGA (SEQ ID NO:15)

Figure 14B

CS11-FL-NA

ATGCAGATCGAACTCTCTACTTGGCTTCTTCCTGTGCCTTCTGAGGTTCTGCTTCTCTGCCACTCGC
CGATATTACCTCGGGGCGGTGGAGTTGAGTTGGGACTACATGCAATCAGATCTGGGCGAACTCCCT
GTGGATGCCCCGATTCCCACCGCGCGTGCCCAAGTCTTTCCCATTTAATACTTCTGTGGTGTACAAG
AAGACATTGTTTGTGGAGTTTACCGATCACCTGTTCAACATCGCCAAACCGCGGCCCCCATGGATG
GGTCTGCTTGGGCCCACCATTCAGCGGAGGTCTATGATACAGTGGTGATAACGCTTAAGAACATG
GCGAGCCACCCAGTGTCTCTGCATGCCGTTGGTGTATCATATTGGAAGGCCAGCGAAGGAGCGGAG
TACGATGACCAGACCTCTCAGAGAGAGAAGGAAGACGATAAGGTTTTTCTGGCGGAAGTCATACA
TATGTATGGCAGGTCTTGAAGAGAATGGGCCGATGGCTTCTGACCCCTTTGTCTTACCTATAGT
TATCTGAGCCACGTGGACCTGGTCAAGGACCTCAACAGTGGTCTGATTGGGGCTCTGCTTGTGTGT
AGAGAGGGTAGCTTGGCTAAGGAGAAAACCCAAACACTCCATAAGTTCATTTTGCTGTTTCGCGGTG
TTCGACGAGGGAAAGAGTTGGCACAGCGAAACAAAGAATTCAGTATGCAAGACAGGGACGCCGCT
TCCGCAAGGGCTTGGCCTAAGATGCATACGGTGAATGGGTATGTGAACCGGAGCCTCCCGGGGCTG
ATCGGGTGCCATCGCAAGTCTGTTTACTGGCACGTTCATTGGAATGGGGACAACGCCAGAGGTACAT
AGTATATTTCTTGAAGGCCACACGTTCTCGTACGGAACACCGACAGGCTTCCCTGGAGATAAGC
CCCATTACCTTTCTGACCGCTCAGACTCTGCTGATGGACCTTGGCCAGTTTCTCCTGTTCTGCCAT
ATTAGCAGCCACCAGCACGACGGTATGGAAGCATACGTGAAAGTCGATAGCTGTCTGAGGAGCCT
CAGCTCAGAATGAAGAACAACGAGGAGGCCGAAGACTATGACGATGACCTTACAGATTCCGAGATG
GACGTGGTGCCTTTGACGACGATAACAGTCTTAGTTCATTCAAATCAGATCCGTAGCCAAAAG
CATCCAAAGACATGGGTGCATTACATTGCAGCCGAAGAGGAGGATTGGGATTATGCGCCCTTGTT
CTGGCTCCAGATGACAGGAGCTATAAGTCCCAGTACTTGAACAACGGGGCCACAGCGAATCGGTAGA
AAATATAAGAAGGTAAGATTCATGGCCTACACTGACGAAACATTTAAAACAGGGAAGCTATCCAA
CACGAATCTGGAATTTCTCGGCCCTCTGCTCTACGGTGAGGTGGGGGACACCTTGCTGATCATTTTC
AAAAATCAGGCATCCAGGCCTTACAACATATAACCCCATGGCATCACCGATGTCCGCCCGCTGTAT
TCCAGAAGACTCCCCAAGGGAGTGAAACATCTGAAAGATTTTCCCATCCTGCCGGGCGAGATCTTT
AAATACAAATGGACTGTGACTGTAGAGGACGGGCCTACAAAATCAGACCCACGGTGCCTGACAAGG
TATTACAGTAGCTTCGTCAACATGGAACGCGACCTCGCCAGCGGACTCATTGGCCCCACTGTTGATC
TGTTACAAAGAGTCAGTGGATCAGAGGGGAAATCAGATCATGAGCGATAAGAGAAACGTTATCCTG
TTTAGTGTCTTCGACGAGAACCGGTCTTGGTACCTTACTGAGAACATCCAGAGGTTTCTGCCGAAT
CCGGCTGGCGTTCAGCTCGAGGACCCAGAGTTCCAGGCCAGTAATATAATGCACTCAATCAACGGT
TATGTGTTTCGATAGCCTGCAGCTGAGCGTCTGCCTCCACGAGGTAGCCTATTGGTACATATTGTCC
ATCGGGGCTCAGACCGATTTTCTGTCCGTGTTCTTTAGCGGGTATACCTTTAAACATAAAAATGGTC
TATGAAGACACCCTGACCCTGTTCCCATTCTCCGGTGAGACTGTGTTTCATGTCCATGGAGAACCCA
GGGCTGTGGATCCTGGGGTGTCACAATAGTGACTTTAGGAATCGGGGAATGACGGCACTGCTGAAG
GTGAGTTCTTGCGATAAAAAATACAGGAGATTACTATGAGGATAGTTACGAGGATATCAGTGCCTAT
CTGCTTTCAAAAAACAACGCAATTGAGCCCCGGTCTTTCTCACAAAACCCCCGGTGCTGAAGCGC
CACCAGCGCGAAATTACCCGACAACCTTGCAGTCCGACCAGGAGGAAATCGATTATGACGATACT
ATCAGTGTAGAAATGAAAAAGGAGGATTTTGATATTTACGACGAAGACGAGAACCAGTCTCCGCGA

(Continued)

Figure 15A

AGTTTTTCAGAAGAAAACGCGACACTACTTTTATAGCTGCCGTGGAACGACTCTGGGATTATGGCATG
TCCTCCAGCCCTCATGTCCTTAGGAATCGAGCGCAGAGTGGCTCTGTGCCTCAGTTCAAAAAGGTT
GTGTTCCAGGAATTCACCGACGGCTCATTTACCCAGCCGCTGTACAGAGGCGAACTCAACGAACAC
CTTGGGCTGCTTGGGCCATATATTCGAGCAGAGGTGGAAGATAATATCATGGTAACCTTTAGAAAC
CAGGCGTCAAGACCCTATTCCTTCTACAGTTCTCTGATCAGCTACGAGGAGGACCAAAGACAGGGA
GCTGAACCCAGGAAGAACTTTGTGAAACCTAATGAGACCAAGACCTACTTCTGGAAGGTCCAGCAC
CATATGGCCCCAACTAAAGATGAATTCGATTGCAAGGCCTGGGCTTATTTTCAGCGACGTGGATCTC
GAAAAGGATGTGCACAGCGGGTTGATCGGACCGCTTTTGGTGTGCCACACAAATACCCTCAATCCT
GCCACGGGCGGCAGGTCACAGTTCAAGAGTTTGCACCTCTTCTTTACAATATTTGACGAGACAAAG
TCATGGTATTTTACAGAGAATATGGAGAGAAATTGTCGCGCACCTTGCAACATTTCAGATGGAGGAC
CCCACATTTAAGGAGAATTACAGATTTTCATGCTATCAATGGGTACATTATGGATACTCTGCCTGGT
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ACCAAGGAACCCTTCTCTTGGATTAAGGTGGACCTGCTGGCGCCAATGATCATTCACGGCATAAAA
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GATGGAAAGAAGTGGCAGACGTACAGGGGCAATTCTACAGGAACACTTATGGTGTTTTTTGGGAAT
GTCGATTCCAGCGGGATCAAACATAACATCTTCAATCCTCCTATTATCGCCCGATATATCCGCCTG
CACCCTACGCATTACTCCATCAGGTCCACATTGAGAATGGAAGTATGGGGTGCGACCTGAATAGT
TGTAATATGCCACTGGGCATGGAGTCTAAAGCCATCAGCGATGCACAGATCACTGCCAGCTCTTAC
TTCACCAACATGTTTGCAACTTGGTCCCCCTCTAAAGCTCGCCTGCATCTGCAGGGACGCTCAAAT
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Figure 15B

CS40-FL-NA

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GTGGACGCAAGATTTCCCTCCTAGAGTGCCAAAATCTTTTCCATTCAACACCTCAGTCGTGTACAAA
AAGACTCTGTTTGTAGAATTCACGGATCACCTTTTCAACATCGCTAAGCCAAGGCCACCCTGGATG
GGTCTGCTAGGTCCATCCAGGCTGAGGTTTATGATACAGTGGTCATTACACTTAAGAACATG
GCTTCCCATCCTGTCAGTCTTCATGCTGTTGGTGTATCCTACTGGAAAGCTTCTGAGGGAGCTGAA
TATGATGATCAGACCAGTCAAAGGGGAGAAAGAAGATGATAAAGTCTTCCCTGGTGAAGCCATACA
TATGTCTGGCAGGTCCCTGAAAGAGAATGGTCCAATGGCCTCTGACCCACTGTGCCTTACCTACTCA
TATCTTTCTCATGTGGACCTGGTAAAAGACTTGAATTCAGGCCTCATTTGGAGCCCTACTAGTATGT
AGAGAAGGGAGTCTGGCCAAGGAAAAGACACAGACCTTGCACAAATTTATACTACTTTTTTGCTGTA
TTTGATGAAGGGAAAAGTTGGCACTCAGAAACAAAGAAGTCTTGATGCAGGATAGGGATGCTGCA
TCTGCTCGGGCCTGGCCTAAAATGCACACAGTCAATGGTTATGTAAACAGGTCTCTGCCAGGTCTG
ATTGGATGCCACAGGAAATCAGTCTATTGGCATGTGATTGGAATGGGCACCACTCCTGAAGTGCAC
TCAATATTCCCTCGAAGGTACACATTTCTTGTGAGGAACCATCGCCAGGCGTCCCTTGAAATCTCG
CCAATAACTTTTCTTACTGCTCAAACACTCTTGATGGACCTTGGACAGTTTCTACTGTTTTGTGTCAT
ATCTCTTCCCACCAACATGATGGCATGGAAGCTTATGTCAAAGTAGACAGCTGTCCAGAGGAACCC
CAACTACGAATGAAAAATAATGAAGAAGCGGAAGACTATGATGATGATCTTACTGATTCTGAAATG
GATGTGGTCAGGTTTGATGATGACAACCTCTCCTTCTTTATCCAAATTCGCTCAGTTGCCAAGAAG
CATCCTAAAAGTTGGGTACATTACATTGCTGCTGAAGAGGAGGACTGGGACTATGCTCCCTTAGTC
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CATGAATCAGGAATCTTGGGACCTTTACTTTTATGGGGAAGTTGGAGACACACTGTTGATTATATTT
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TATTACTCTAGTTTCGTTAATATGGAGAGAGATCTAGCTTCAGGACTCATTGGCCCTCTCCTCATC
TGCTACAAAGAATCTGTAGATCAAAGAGGAAACCAGATAATGTCAGACAAGAGGAATGTCATCCTG
TTTTCTGTATTTGATGAGAACCGAAGCTGGTACCTCACAGAGAATATACAACGCTTTCTCCCAAT
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(Continued)

Figure 16A

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CAGGCCTCTCGTCCCTATTCTTCTATTCTAGCCTTATTTCTTATGAGGAAGATCAGAGGCAAGGA
GCAGAACCTAGAAAAAACTTTGTCAAGCCTAATGAAACCAAACTTACTTTTGGAAAGTGCAACAT
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GCACAGGACCTCTACTGA (SEQ ID NO:17)

Figure 16B

CH25-FL-NA

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GTGGACGCCCCGGTTCCCCCCCAGAGTGCCCAAGAGCTTCCCCTTCAACACCAGCGTGGTGTACAAG
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GGCCTGCTGGGCCCCACCATCCAGGCCGAGGTGTACGACACCGTGGTGATCACCTGAAGAACATG
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TACCTGAGCCACGTGGACCTGGTGAAGGACCTGAACAGCGGGCTGATTGGGGCCCTGCTGGTCTGC
CGGGAGGGCAGCCTGGCCAAAGAGAAAACCCAGACCCTGCACAAGTTCATCCTGCTGTTTCGCCGTG
TTCGACGAGGGCAAGAGCTGGCACAGCGAGACCAAGAACAGCCTGATGCAGGACCGGGACGCCGCC
TCTGCCAGAGCCTGGCCCAAGATGCACACCGTGAACGGCTACGTGAACAGAAGCCTGCCCGGCCCTG
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GACGTGGTGCGGTTCGACGACGACAACAGCCCCAGCTTCATCCAGATCAGAAGCGTGGCCAAGAAG
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GTGTCCAGCTGCGACAAGAACACCGGCGACTACTACGAGGACAGCTACGAGGATATCAGCGCCTAC
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(Continued)

Figure 17A

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CACCCACCCACTACAGCATCAGATCCACCCTGCGGATGGAAGTGTGGGCTGCGACCTGAACTCC
TGCAGCATGCCTCTGGGCATGGAAAGCAAGGCCATCAGCGACGCCAGATCACAGCCAGCAGCTAC
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GCCTGGCGGCCTCAGGTGAACAACCCCAAGAATGGCTGCAGGTGGACTTTCAGAAAACCATGAAG
GTGACCGGCGTGACCACCCAGGGCGTGAAAAGCCTGCTGACCAGCATGTACGTGAAAGAGTTTCTG
ATCAGCAGCAGCCAGGACGGCCACCAGTGGACCCTGTTCTTTCAGAACGGCAAGGTGAAAGTGTTT
CAGGGCAACCAGGACTCCTTCACCCCCGTGGTGAAGTCCCTGGACCCCCCCTGCTGACCCGCTAC
CTGCGGATCCACCCCAGTCTTGGGTGCACCAGATCGCCCTGAGGATGGAAGTGTGGGATGTGAG
GCCCAGGATCTGTACTGA (SEQ ID NO:18)

Figure 17B

FVIII-FL-AA

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evlgceaqdl y (SEQ ID NO:19)

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Figure 18

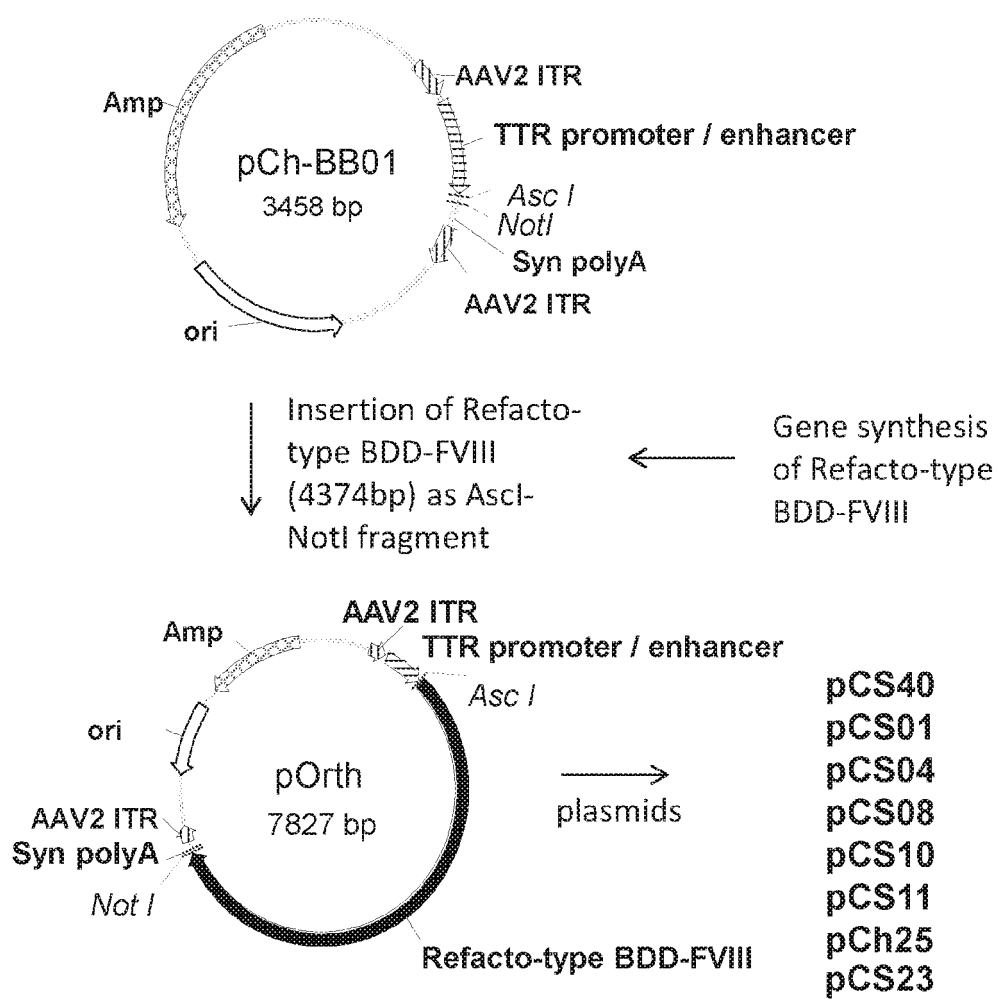


Figure 19

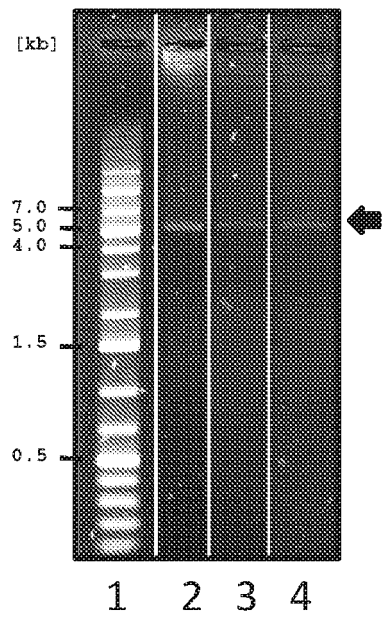


Figure 20

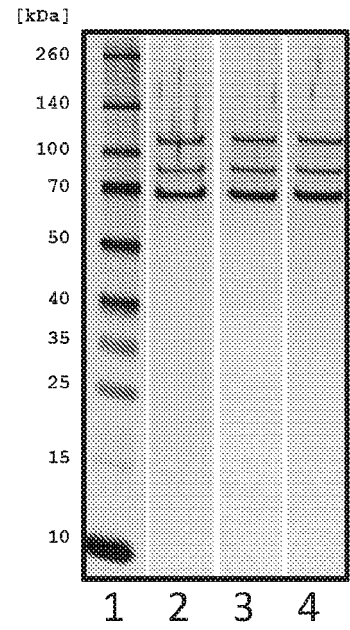


Figure 21

CS23-FL-NA

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(Continued)

Figure 22A

atcagcgtggagatgaagaaggaggacttcgacatctacgacgaggacgagaaccagagccccagg
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agcagcagccccacgtgctgaggaacagggcccagagcggcagcgtgccccagttcaagaagggtg
gtgttccaggagttcaccgacggcagcttcacccagccccctgtacagagggcagctgaacgagcac
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cacatggccccccaccaaggacgagttcgactgcaaggcctgggcctacttctctgatgtggacctg
gagaaggacgtgcacagcggcctgatcgccccctgctggtgtgccacaccaacacctgaacccc
gcccacggcagggcaggtgacctgacaggagttcgccctgttcttcaccatcttcgacgagaccaag
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cacagcatccacttcagcggccacgtgttcaccgtgaggaagaaggaggagtacaagatggccctg
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aagtgccagacccccctgggcattggccagcggccacatcagggacttccagatcacccgctctggc
cagtacggccagtgggcccccaagctggccaggctgcactacagcggcagcatcaacgcctggagc
accaaggagcccttcagctggatcaagggtggacctgctggcccccatgatcatccacggcatcaag
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gacggcaagaagtggcagacctacaggggcaacagcaaccggcacccctgatggtgttcttcggcaac
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caccaccactacagcatcaggagcacctgcggtatggaactgatgggctgcgacctgaacagc
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gtgaccggcgtgaccacccagggcgtgaagagcctgctgaccagcatgtacgtgaaggagttcctg
atcagcagcagccaggacggccaccagtggacctgttcttccagaacggcacaagtgaagggtgttc
cagggcaaccaggacagcttcacCcccggtggtgaacagcctggacccccccctgctgaccaggtat
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gcccaggacctgtactga (SEQ ID NO:20)

Figure 22B

CS23-FL-AA

MQIELSTCFFLCLLRFCFSATTRYYLGAVELSWDYMQSDLGELPVDAR' FPPRVPKSFPFNTSVVYK
KTLFVEFTDHLFNIAPRPPWMGLLGPTIQAEVYDTVVITLKNMASHPVSLHAVGVSYWKASEGAEY
DDQTSQREKEDDKVFPGGSHTYVWQVLKENGPMASDPLCLTYSYLSHVLDLVKDLNSGLIGALLVCRE
GSLAKEKTQTLHKFILLFAVFDEGKSWHSETKNSLMQDRDAASARAWPKMHTVNGYVNRSLPGLIGC
HRKSVYWHVIGMGTTPEVHSIFLEGHTFLVRNHRQASLEISPITFLTAQTLLMDLGQFLLFCHISSH
QHDGMEAYVKVDSCEEPQLRMKNNEEAEDYDDDLTDSEMDVVRFDDDNSPSFIQIRSVAKKHPKTW
VHYIAAEEDWDYAPLVLAPDDRSYKSQYLNNGPQRIGRKYKKVRFMAYTDETFKTREAIQHESGIL
GPLLYGEVGD TLLII FKNQASRPYNIYPHGITDVRPLYSRRLPKGVKHLKDFPILPGEIFKYKWTVT
VEDGPTKSDPRCLTRYSSFVNMERDLASGLIGPLLCYKESVDQQRGNQIMSDKRNVILFSVFDENR
SWYLTENIQRFPLNPAGVQLEDPEFQASNIMHSINGYVFDLSQLSVCLHEVAYWYILSIGAQTDFLS
VFFSGYTFKHKMVYEDTLTLFPFSGETVFMSENPGLWILGCHNSDFRNRGMTALLKVSSCDKNTGD
YYEDSYEDISAYLLSKNNAIEPRSFQNPVLRHQREITRTTLQSDQEEIDYDDTISVEMKKEDFD
IYDEDENQSPRSFQKKTRHYFIAAVERLWDYGMSSSPHVLRNRAQSGSVPQFKKVVFQEFDTGDSFTQ
PLYRGELNEHLGLLGPYIRAEVEDNIMVTFRNQASRPYSFYSSLSIYEEDQQRQAEPRKNFVKPNET
KTYFWKVQHMAPTKDEFDCKAWAYFSDVDLEKDVHSGLIGPLLVCHTNTLNPAHGRQVTVQEFALF
FTIFDETKSWYFTENMERNCRAPCNIQMEDPTFKENYRFHAINGYIMDTLPGLVMAQDQIRWYLLS
MGSNENIHSIHFSGHVFTVRKKEEYKMALYNLYPGVFETVEMLPSKAGIWRVECLIGEHLHAGMSTL
FLVYSNKCQTPLGMASGHIRDFQITASGQYGQWAPKLARLHYSGSINAWSTKEPFSWIKVDLLAPMI
IHGIKTQGARQKFSSLYISQFIIMYSLDGKKWQTYRGNSTGTLMVFFGNVDSSGIKHNIENPPIIAR
YIRLHPHTHYSIRSTLRMELMGCDLNSCSMPLGMESKAISDAQITASSYFTNMFATWSPSKARLHLQG
RSNAWRPQVNNPKEWLQVDFQKTMKVTGVTQGVKSLTSMYVKEFLISSSQDGHQWTLFFQNGKVK
VFQGNQDSFTPVVNSLDPPLLTRYLRIHPQSWVHQIALRMEVLGCEAQDLY (SEQ ID NO:21)

Figure 23

CS23-HC-NA

gcc

```

accaggagat actacctggg cgccgtggag ctgagctggg actacatgca gtctgacctg
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acctcagtgg tgtacaagaa gacctgttc gtggagttca ccgaccacct gttcaacatc
gccaaagcca ggccccctg gatgggctg ctgggcccc ccatccaggc cgaggtgtac
gacaccgtgg tgateaccct gaagaacatg gccagccacc cctgtagcct gcacgccgtg
ggcgtgagct actggaaggc ctctgagggc gccgagtatg acgaccagac cagccagagg
gagaaggagg acgacaaggt gttccccggc ggcagccaca cctacgtgtg gcaggtgctg
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aggcaggcca gcctggagat cagccccatc accttctctga ccgcccagac cctgctgatg
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aacaggagct ggtatctgac cgagaacatc cagaggttcc tgcccaacct cgccggcgtg
cagctggagg accccgagtt ccaggccagc aacatcatgc acagcatcaa cggctacgtg
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atggagaacc ccggcctgtg gatcctgggc tgccacaaca gcgacttcag gaacaggggc
atgaccgccc tgctgaaagt cagcagctgc gacaagaaca ccggcgacta ctacgaggac
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(SEQ ID NO:22)

Figure 24

CS23-LC-NA

```

                                g agatcaccag gaccaccctg
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gacttcgaca tctacgacga ggacgagaac cagagcccca ggagcttcca gaagaagacc
aggcactact tcatcgccgc cgtggagagg ctgtgggact atggcatgag cagcagcccc
cacgtgctga ggaacagggc ccagagcggc agcgtgcccc agttcaagaa ggtggtgttc
caggagttca ccgacggcag cttcaccacg cccctgtaca gaggcgagct gaacgagcac
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cagaggcagg gcgccgagcc caggaagaac ttcgtgaagc ccaacgagac caagacctac
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tacgtgaagg agttcctgat cagcagcagc caggacggcc accagtggac cctgttcttc
cagaacggca aagtgaagggt gttccagggc aaccaggaca gcttcacccc cgtggtgaac
agcctggacc cccccctgct gaccaggat ctgaggatcc acccccagag ctgggtgcac
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(SEQ ID NO:23)

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Figure 25

CS01-HC-NA

gcc

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accaggagat actacctggg ggctgtggaa ctttcttggg actacatgca gtctgacctg
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acctctgtgg tctacaagaa gacactcttt gtggaattca ctgaccacct gttcaacatt
gcaaaacca gaccacctg gatgggactc ctgggacca ccattcaggo tgagggtgat
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gctgcctctg ccagggcatg gcccaagatg cacactgtga atggctatgt gaacagatca
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agacaagcct ctctggagat ctctcccac accctcctca ctgcacagac actgctgatg
gaccttggac agttcctgct gttctgccac atctcttccc accagcatga tggcatggaa
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aagtacaaga aagtcagatt catggcctac actgatgaaa cttcaagac aagagaagcc
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atggagaacc ctggactgtg gattctggga tgccacaact ctgacttcag aaacagggga
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(SEQ ID NO:24)

Figure 26

CS01-LC-NA

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                                g agatcaccag gacaaccctc
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agacactact tcattgctgc tgtggaaaga ctgtgggact atggcatgtc ttcctctccc
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caggagttca ctgatggctc attcaccag cccctgtaca gaggggaact gaatgagcac
ctgggactcc tgggaccata catcagggct gaggtggaag acaacatcat ggtgacattc
agaaaccagg cctccaggcc ctacagcttc tactcttccc tcatcagcta tgagggaagac
cagagacaag gggctgagcc aagaaagaac tttgtgaaac ccaatgaaac caagacctac
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gcatacttct ctgatgtgga cctggagaaa gatgtgcact ctggcctgat tggcccactc
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tacaggttcc atgccatcaa tggctacatc atggacaccc tgcctgggct tgtcatggca
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atccacttct ctgggcatgt cttcactgtg agaaagaagg aggaatacaa gatggccctg
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cagatcactg cctctggcca gtatggccag tgggcaccca aactggccag gctccactac
tctggctcca tcaatgcatg gtcaaccaag gagccattct cttggatcaa ggtggacctg
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ctgtacatct cacagttcat catcatgtac tctctggatg gcaagaagtg gcagacatac
agaggcaact ccactggcac cctcatggtc ttctttggca atgtggacag ctctggcatc
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tactcaatca gatcaaccct caggatggaa ctgatgggat gtgacctgaa ctctgtctca
atgcccctgg gaatggagag caaggccatt tctgatgccc agatcactgc atcctcttac
ttcaccaaca tgtttgccac ctggtcacca tcaaaagcca ggctgcacct ccagggaaga
agcaatgcct ggagacccca ggtcaacaac ccaaaggaaat ggctgcaagt ggacttccag
aagacaatga aagtcaactg ggtgacaacc caggggggtca agtctctgct cacctcaatg
tatgtgaagg agttcctgat ctcttctca caggatggcc accagtggac actcttcttc
cagaatggca aagtcaaggt gttccagggc aaccaggact ctttcacacc tgtggtgaac
tactggacc cccctctct gacaagatac ctgagaatte acccccagtc ttgggtccac
cagattgccc tgagaatgga agtctctgga tgtgaggcac aagacctgta c
(SEQ ID NO:25)

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Figure 27

CS01Δ(760-1667) - CS01-SC1-NA

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TTCCCACCCAGAGTGCCCCAAGTCCTTCCCATTCAACACCTCTGTGGTCTACAAGAAGACACTCTTTGTGGAA
TTCACCTGACCACCTGTTCACATTGCAAAACCCAGACCACCTGGATGGGACTCCTGGGACCCACCATTTCAG
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GACAAGGTGTTCCCTGGGGGATCTCACACCTATGTGTGGCAAGTCCTCAAGGAGAATGGACCCATGGCATCT
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GAGGTGAGGACTATGATGATGACCTGACTGACTCTGAGATGGATGTGGTCAGATTGTGATGACAACCTCT
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AACAGATCATGGTACCTGACTGAGAACATTTCAGAGATTCTGCCCCAACCTGCTGGGGTGCAACTGGAAGAC
CCTGAGTTCCAGGCAAGCAACATCATGCACTCCATCAATGGCTATGTGTTTGACTCTCTCCAGCTTTCTGTC
TGCCTGCATGAGGTGGCCTACTGGTACATTCTTTCTATTGGGGCACAACTGACTTCCTTTCTGTCTTCTTC
TCTGGATACACCTTCAAGCACAGATGGTGTATGAGGACACCCTGACACTCTTCCCATTCTCTGGGGAACT
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GACCAGGAAGAGATTGACTATGATGACACCATTTCTGTGGAGATGAAGAAGGAGGACTTTGACATCTATGAT
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CTGTGGGACTATGGCATGTCTTCCCTCTCCCCATGTCTCAGGAACAGGGCACAGTCTGGCTCTGTGCCACAG
TTCAAGAAAGTGGTCTTCCAGGAGTTCACTGATGGCTCATTCACCCAGCCCCTGTACAGAGGGGAACTGAAT
GAGCACCTGGGACTCCTGGGACCATAACATCAGGGCTGAGGTGGAAGACAACATCATGGTGACATTTCAGAAAC
CAGGCCTCCAGGCCCTACAGCTTCTACTCTTCCCTCATCAGCTATGAGGAAGACCAGAGACAAGGGGCTGAG
CCAAGAAAGAACTTTGTGAAACCAATGAAACCAAGACCTACTTCTGGAAGTCCAGCACCATGGCACCC

(Continued)

Figure 28A

ACCAAGGATGAGTTTGA CTGCAAGGCCTGGGCATACTTCTCTGATGTGGACCTGGAGAAAGATGTGCACTCT
GGCCTGATTGGCCCACTCCTGGTCTGCCACACCAACACCCTGAACCCTGCACATGGAAGGCAAGTGACTGTG
CAGGAGTTTGGCCCTCTTCTTCACCATCTTTGATGAAACCAAGTCATGGTACTTCACTGAGAACATGGAGAGA
AACTGCAGAGCACCATGCAACATTCAGATGGAAGACCCACCTTCAAGGAGAACTACAGGTTCCATGCCATC
AATGGCTACATCATGGACACCCCTGCCTGGGCTTGTTCATGGCACAGGACCAGAGAATCAGATGGTACCTGCTT
TCTATGGGATCCAATGAGAACATTCCTCCATCCACTTCTCTGGGCATGTCTTCACTGTGAGAAAGAAGGAG
GAATACAAGATGGCCCTGTACAACCTCTACCCTGGGGTCTTTGAGACTGTGGAGATGCTGCCCTCCAAAGCT
GGCATCTGGAGGGTGGAAATGCCTCATTTGGGAGCACCTGCATGCTGGCATGTCAACCCTGTTCTGCTGTAC
AGCAACAAGTGCCAGACACCCCTGGGAATGGCCTCTGGCCACATCAGGGACTTCCAGATCACTGCCTCTGGC
CAGTATGGCCAGTGGGCACCCAACTGGCCAGGCTCCACTACTCTGGCTCCATCAATGCATGGTCAACCAAG
GAGCCATTCTCTTGATCAAGGTGGACCTGCTGGCACCCATGATCATTCATGGCATCAAGACACAGGGGGCA
AGACAGAAATTCTCCTCTCTGTACATCTCACAGTTCATCATCATGTACTCTCTGGATGGCAAGAAGTGGCAG
ACATACAGAGGCAACTCCACTGGCACCCCTCATGGTCTTCTTTGGCAATGTGGACAGCTCTGGCATCAAGCAC
AACATCTTCAACCCTCCCATCATTTGCCAGATACATCAGGCTGCACCCCACTACTCAATCAGATCAACC
CTCAGGATGGAAGTGAATGGGATGTGACCTGAACTCCTGCTCAATGCCCCTGGGAATGGAGAGCAAGGCCATT
TCTGATGCCCAGATCACTGCATCCTCTTACTTCACCAACATGTTTGCCACCTGGTCACCATCAAAAGCCAGG
CTGCACCTCCAGGGAAGAAGCAATGCCTGGAGACCCAGGTCAACAACCCAAAGGAATGGCTGCAAGTGGAC
TTCCAGAAGACAATGAAAGTCACTGGGGTGACAACCCAGGGGGTCAAGTCTCTGCTCACCTCAATGTATGTG
AAGGAGTTCTGATCTCTTCTCCTCACAGGATGGCCACCAGTGGACACTCTTCTTCCAGAATGGCAAAGTCAAG
GTGTTCCAGGGCAACCAGGACTCTTTCACACCTGTGGTGAACCTCACTGGACCCCCCTCCTGACAAGATAC
CTGAGAATTCACCCCACTCTTGGGTCCACCAGATTGCCCTGAGAATGGAAGTCTTGGGATGTGAGGCACAA
GACCTGTACTGA (SEQ ID NO:26)

Figure 28B

CS01Δ(772-1667) - CS01-SC2-NA

ATGCAGATTGAGCTGTCCACCTGCTTCTTTCTGTGCCTGCTGAGATTCTGCTTCTCTGCCACCAGG
AGATACTACCTGGGGGCTGTGGAACCTTTCTTGGGACTACATGCAGTCTGACCTGGGAGAGCTGCCT
GTGGATGCCAGGTTCCCAACCAGAGTGCCCAAGTCCTTCCCATTCAACACCTCTGTGGTCTACAAG
AAGACACTCTTTGTGGAATTCAGTACACCTGTTCAACATTGCAAAACCCAGACCACCCTGGATG
GGAATCCTGGGACCCACCATTGAGGCTGAGGTGTATGACACTGTGGTCATCACCTCAAGAACATG
GCATCCCAACCCTGTGTCTCTGCATGCTGTGGGAGTCTCATACTGGAAAGCCTCTGAAGGGGCTGAG
TATGATGACCAGACATCCAGAGAGAGAAAGAGGATGACAAGGTGTTCCCTGGGGGATCTCACACC
TATGTGTGGCAAGTCTCAAGGAGAATGGACCCATGGCATCTGACCCACTCTGCCTGACATACTCC
TACCTTTCTCATGTGGACCTGGTCAAGGACCTCAACTCTGGACTGATTGGGGCACTGCTGGTGTGC
AGGGAAGGATCCCTGGCCAAGGAGAAAACCCAGACACTGCACAAGTTCATTCTCCTGTTTGCTGTC
TTTGATGAGGGCAAGTCTTGGCACTCTGAAACAAAGAACTCCCTGATGCAAGACAGGGATGCTGCC
TCTGCCAGGGCATGGCCCAAGATGCACACTGTGAATGGCTATGTGAACAGATCACTGCCTGGACTC
ATTGGCTGCCACAGGAAATCTGTCTACTGGCATGTGATTGGCATGGGGACAACCCCTGAAGTGCAC
TCCATTTTCTTGGAGGGACACACCTTCCCTGGTCAGGAACACAGACAAGCCTCTCTGGAGATCTCT
CCCATCACCTTCCCTCACTGCACAGACACTGCTGATGGACCTTGGACAGTTCCTGCTGTTCTGCCAC
ATCTCTTCCCAACCAGCATGATGGCATGGAAGCCTATGTCAAGGTGGACTCATGCCCTGAGGAACCA
CAGCTCAGGATGAAGAACAATGAGGAGGCTGAGGACTATGATGATGACCTGACTGACTCTGAGATG
GATGTGGTCAGATTTGATGATGACAACTCTCCATCCTTCATTCAGATCAGGTCTGTGGCAAAGAAA
CACCCCAAGACATGGGTGCACTACATTGCTGCTGAGGAAGAGGACTGGGACTATGCACCACTGGTC
CTGGCCCTGATGACAGGAGCTACAAGTCTCAGTACCTCAACAATGGCCCAAGAAATGGAAGA
AAGTACAAGAAAGTCAGATTCATGGCCTACACTGATGAAACCTTCAAGACAAGAGAAGCCATTCAG
CATGAGTCTGGCATTCTGGGACCACTCCTGTATGGGGAAGTGGGAGACACCCTGCTCATCATCTTC
AAGAACCAGGCCTCCAGGCCCTACAACATCTACCCACATGGCATCACTGATGTGAGGCCCTGTAC
AGCAGGAGACTGCCAAAAGGGGTGAAACACCTCAAGGACTTCCCCATTCTGCCTGGAGAGATCTTC
AAGTACAAGTGGACTGTCACTGTGGAGGATGGACCAACAAAGTCTGACCCCAAGTGCCTCACCAGA
TACTACTCCTCTTTTGTGAACATGGAGAGAGACCTGGCATCTGGACTGATTGGACCACTGCTCATC
TGCTACAAGGAGTCTGTGGACCAGAGAGGCAACCAGATCATGTCTGACAAGAGAAATGTGATTCTG
TTCTCTGTCTTTGATGAGAACAGATCATGGTACCTGACTGAGAACATTGAGAGATTCCTGCCAAC
CCTGCTGGGGTGCAACTGGAAGACCCTGAGTTCCAGGCAAGCAACATCATGCACTCCATCAATGGC
TATGTGTTTGACTCTCTCCAGCTTTCTGTCTGCCTGCATGAGGTGGCCTACTGGTACATTCTTTCT
ATTGGGGCACAACTGACTTCCCTTTCTGTCTTCTTCTCTGGATACACCTTCAAGCACAAAGATGGTG
TATGAGGACACCCTGACACTCTTCCATTCTCTGGGGAACTGTGTTTCATGAGCATGGAGAACCCT
GGACTGTGGATTCTGGGATGCCCAACTCTGACTTCAGAAACAGGGGAATGACTGCACTGCTCAAA
GTCTCCTCCTGTGACAAGAACAAGTGGGGACTACTATGAGGACTCTTATGAGGACATCTCTGCCTAC
CTGCTCAGCAAGAACAATGCCATTGAGCCCAGAAGCTTCTCTCAGAATTCAGACACCCCAAGCACC
AGGGAGATCACCAGGACAACCCTCCAGTCTGACCAGGAAGAGATTGACTATGATGACACCATTTCT
GTGGAGATGAAGAAGGAGGACTTTGACATCTATGATGAGGACGAGAACCAGTCTCCAAGATCATTC

(Continued)

Figure 29A

CAGAAGAAGACAAGACACTACTTCATTGCTGCTGTGGAAAGACTGTGGGACTATGGCATGTCTTCC
TCTCCCCATGTCTCAGGAACAGGGCACAGTCTGGCTCTGTGCCACAGTTCAAGAAAGTGGTCTTC
CAGGAGTTCATGATGGCTCATTCACCCAGCCCCCTGTACAGAGGGGAACTGAATGAGCACCTGGGA
CTCCTGGGACCATACATCAGGGCTGAGGTGGAAGACAACATCATGGTGACATTGAGAAACCAGGCC
TCCAGGCCCTACAGCTTCTACTCTTCCCTCATCAGCTATGAGGAAGACCAGAGACAAGGGGCTGAG
CCAAGAAAGAACTTTGTGAAACCCAATGAAACCAAGACCTACTTCTGGAAAGTCCAGCACCATG
GCACCCACCAAGGATGAGTTTGACTGCAAGGCCTGGGCATACTTCTCTGATGTGGACCTGGAGAAA
GATGTGCACTCTGGCCTGATTGGCCCACTCCTGGTCTGCCACACCAACACCCTGAACCCTGCACAT
GGAAGGCAAGTGACTGTGCAGGAGTTTGCCCTCTTCTTCACCATCTTTGATGAAACCAAGTCATGG
TACTTCACTGAGAACATGGAGAGAACTGCAGAGCACCATGCAACATTCAGATGGAAGACCCACCC
TTCAAGGAGAACTACAGGTTCCATGCCATCAATGGCTACATCATGGACACCCTGCCTGGGCTTGTC
ATGGCACAGGACCAGAGAATCAGATGGTACCTGCTTTCTATGGGATCCAATGAGAACATTCACTCC
ATCCACTTCTCTGGGCATGTCTTCACTGTGAGAAAGAAGGAGGAATACAAGATGGCCCTGTACAAC
CTCTACCCTGGGGTCTTTGAGACTGTGGAGATGCTGCCCTCCAAAGCTGGCATCTGGAGGGTGGAA
TGCCTCATTTGGGGAGCACCTGCATGCTGGCATGTCAACCCTGTTCTTGGTCTACAGCAACAAGTGC
CAGACACCCCTGGGAATGGCCTCTGGCCACATCAGGGACTTCCAGATCACTGCCTCTGGCCAGTAT
GGCCAGTGGGCACCCAACTGGCCAGGCTCCACTACTCTGGCTCCATCAATGCATGGTCAACCAAG
GAGCCATTCTCTTGATCAAGGTGGACCTGCTGGCACCCATGATCATTCATGGCATCAAGACACAG
GGGGCAAGACAGAAATTCTCCTCTCTGTACATCTCACAGTTCATCATCATGTACTCTCTGGATGGC
AAGAAGTGGCAGACATACAGAGGCAACTCCACTGGCACCCCTCATGGTCTTCTTTGGCAATGTGGAC
AGCTCTGGCATCAAGCACAAACATCTTCAACCCTCCCATCATTGCCAGATACATCAGGCTGCACCCC
ACCCACTACTCAATCAGATCAACCCTCAGGATGGAAGTATGGGATGTGACCTGAACTCCTGCTCA
ATGCCCCCTGGGAATGGAGAGCAAGGCCATTTCTGATGCCAGATCACTGCATCCTCTTACTTCACC
AACATGTTTGCCACCTGGTCACCATCAAAAGCCAGGCTGCACCTCCAGGGAAGAAGCAATGCCTGG
AGACCCCAAGTCAACAACCCAAAGGAATGGCTGCAAGTGGACTTCCAGAAGACAATGAAAGTCACT
GGGGTGACAACCCAGGGGGTCAAGTCTCTGCTCACCTCAATGTATGTGAAGGAGTTCCTGATCTCT
TCCTCACAGGATGGCCACCAGTGGACACTCTTCTTCCAGAAATGGCAAAGTCAAGGTGTTCCAGGGC
AACCAGGACTCTTTCACACCTGTGGTGAACCTCACTGGACCCCCCCTCCTGACAAGATACCTGAGA
ATTCACCCCCAGTCTTGGGTCCACCAGATTGCCCTGAGAATGGAAGTCCTGGGATGTGAGGCACAA
GACCTGTACTGA (SEQ ID NO:27)

Figure 29B

CS23Δ(760-1667) - CS23-SC1-NA

ATGCAGATTGAGCTGAGCACCTGCTTCTTCTGTGCCTGCTGAGGTTCTGCTTCTCTGCCACCAGGAGATAC
TACCTGGGCGCCGTGGAGCTGAGCTGGGACTACATGCAGTCTGACCTGGGCGAGCTGCCTGTGGACGCCAGG
TTCCCCCCCAGAGTGCCCCAAGAGCTTCCCCTTCAACACCTCAGTGGTGTACAAGAAGACCCCTGTTTCGTGGAG
TTCACCGACCACCTGTTCAACATCGCCAAGCCCAGGCCCCCTGGATGGGCCTGCTGGGCCCCACCATCCAG
GCCGAGGTGTACGACACCGTGGTGATCACCTGAAGAACATGGCCAGCCACCCCGTGAGCCTGCACGCCGTG
GGCGTGAGCTACTGGAAGCCCTCTGAGGGCGCCGAGTATGACGACCAGACCAGCCAGAGGGAGAAGGAGGAC
GACAAGGTGTTCCCCGGCGGCAGCCACACCTACGTGTGGCAGGTGCTGAAGGAGAACGGCCCCATGGCCAGC
GACCCCTGTGCCTGACCTACAGCTACCTGAGCCACGTGGACCTGGTGAAGGACCTGAACTCTGGCCTGATC
GGCGCCCTGCTGGTGTGCAGGGAGGGCAGCCTGGCCAAGGAGAAGACCCAGACCCTGCACAAAGTTCATCCTG
CTGTTCCGCGTGTTCGATGAGGGCAAGAGCTGGCACAGCGAGACCAAGAACAGCCTGATGCAGGACAGGGAT
GCCGCTCTGCCAGGGCCTGGCCCCAAGATGCACACCGTGAACGGCTACGTGAACAGGAGCCTGCCCGGCCTG
ATCGGCTGCCACAGGAAGTCTGTGTACTGGCACGTGATCGGCATGGGCACCAACCCCGAGGTGCACAGCATC
TTCTTGGAGGGCCACACCTTCTGGTGAGGAACACAGGCAGGCCAGCCTGGAGATCAGCCCCATCACCTTC
CTGACCGCCCAGACCCTGCTGATGGACCTGGGCCAGTTTCTGCTGTTCTGCCACATCAGCAGCCACCAGCAC
GACGGCATGGAGGCCTACGTGAAGGTGGACAGCTGCCCCGAGGAGCCCCAGCTGAGGATGAAGAACAACGAG
GAGGCCGAGGACTATGATGATGACCTGACCGACTCTGAGATGGACGTGGTGAGGTTTATGATGACAACAGC
CCCAGCTTCATCCAGATCAGGTCTGTGGCCAAGAAGCACCCCAAGACCTGGGTGCACTACATCGCCGCCGAG
GAGGAGGACTGGGACTACGCCCCCTGGTGTGGCCCCGACGACAGGAGCTACAAGAGCCAGTACCTGAAC
AACGGCCCCCAGAGGATCGGCAGGAAGTACAAGAAGGTGAGATTTCATGGCCTACACCGACGAGACCTTCAAG
ACCAGGGAGGCCATCCAGCACGAGTCTGGCATCCTGGGCCCCCTGCTGTACGGCGAGGTGGGCGACACCCTG
CTGATCATCTTCAAGAACCAGGCCAGCAGGCCCTACAACATCTACCCCCACGGCATCACCGATGTGAGGCC
CTGTACAGCAGGAGGCTGCCCAAGGGCGTGAAGCACCTGAAGGACTTCCCCATCCTGCCCGGCGAGATCTTC
AAGTACAAGTGGACCGTGACCGTGGAGGATGGCCCCACCAAGTCTGACCCAGGTGCCTGACCAGGTACTAC
AGCAGCTTCGTGAACATGGAGAGGGACCTGGCCTCTGGCCTGATCGGCCCCCTGCTGATCTGCTACAAGGAG
AGCGTGGACCAGAGGGGCAACCAGATCATGTCTGACAAGAGGAACGTGATCCTGTTCTCTGTGTTTCGATGAG
AACAGGAGCTGGTATCTGACCGAGAACATCCAGAGGTTCTTGGCCAACCCCGCCGGCGTGCAGCTGGAGGAC
CCCGAGTTCCAGGCCAGCAACATCATGCACAGCATCAACGGCTACGTGTTTCGACAGCCTGCAGCTGTCTGTG
TGCCTGCACGAGGTGGCCTACTGGTACATCCTGAGCATCGGCGCCCAGACCGACTTCCTGTCTGTGTTCTTC
TCTGGCTACACCTTCAAGCACAGATGGTGTACGAGGACACCCTGACCCTGTTCCCCTTCAGCGGCGAGACC
GTGTTTCATGAGCATGGAGAACCCCGGCCTGTGGATCCTGGGCTGCCACAACAGCGACTTCAGGAACAGGGGC
ATGACCGCCCTGCTGAAAGTCAGCAGCTGCGACAAGAACACCGGCGACTACTACGAGGACAGCTACGAGGAC
ATCAGCGCCTACCTGCTGAGCAAGAACAACGCCATCGAGCCCAGGGAGATCACCAGGACCACCCTGCAGAGC
GACCAGGAGGAGATCGACTATGATGACACCATCAGCGTGGAGATGAAGAAGGAGGACTTCGACATCTACGAC
GAGGACGAGAACCAGAGCCCCAGGAGCTTCAGAGAAGAAGACCAGGCACTACTTCATCGCCGCCGTGGAGAGG
CTGTGGGACTATGGCATGAGCAGCAGCCCCACGTGCTGAGGAACAGGGCCCAGAGCGGCAGCGTGCCCCAG
TTCAAGAAGGTGGTGTTCAGGAGTTACCGACGGCAGCTTCACCCAGCCCCTGTACAGAGGCGAGCTGAAC
GAGCACCTGGGCCTGCTGGGCCCCCTACATCAGGGCCGAGGTGGAGGACAACATCATGGTGACCTTCAGGAAC
CAGGCCAGCAGGCCCTACAGCTTCTACAGCAGCCTGATCAGCTACGAGGAGGACCAGAGGCAGGGCGCCGAG

(Continued)

Figure 30A

CCCAGGAAGAACTTCGTGAAGCCCAACGAGACCAAGACCTACTTCTGGAAGGTGCAGCACCACATGGCCCCC
ACCAAGGACGAGTTCGACTGCAAGGCCTGGGCCTACTTCTCTGATGTGGACCTGGAGAAGGACGTGCACAGC
GGCCTGATCGGCCCCCTGCTGGTGTGCCACACCAACACCCTGAACCCCGCCCACGGCAGGCAGGTGACCGTG
CAGGAGTTCGCCCCTGTTCTTCACCATCTTCGACGAGACCAAGAGCTGGTACTTCACCGAGAACATGGAGAGG
AACTGCAGGGGCCCCCTGCAACATCCAGATGGAGGACCCCCACCTTCAAGGAGAACTACAGGTTCCACGCCATC
AACGGCTACATCATGGACACCCTGCCCGGCCTGGTGATGGCCCAGGACCAGAGGATCAGGTGGTATCTGCTG
AGCATGGGCAGCAACGAGAACATCCACAGCATCCACTTCAGCGGCCACGTGTTACCGTGAGGAAGAAGGAG
GAGTACAAGATGGCCCTGTACAACCTGTACCCCGGCGTGTTGAGACCGTGAGATGCTGCCCAGCAAGGCC
GGCATCTGGAGGGTGGAGTGCTGATCGGCGAGCACCTGCACGCCGGCATGAGCACCCCTGTTCCCTGGTGTAC
AGCAACAAGTGCCAGACCCCCCTGGGCATGGCCAGCGGCCACATCAGGGACTTCCAGATCACCGCCTCTGGC
CAGTACGGCCAGTGGGCCCCCAAGCTGGCCAGGCTGCACTACAGCGGCAGCATCAACGCCTGGAGCACCAAG
GAGCCCTTCAGCTGGATCAAGGTGGACCTGCTGGCCCCCATGATCATCCACGGCATCAAGACCCAGGGCGCC
AGGCAGAAGTTCAGCAGCCTGTACATCAGCCAGTTCATCATCATGTACAGCCTGGACGGCAAGAAGTGGCAG
ACCTACAGGGGCAACAGCACCGGCACCCCTGATGGTGTCTTCGGCAACGTGGACAGCAGCGGCATCAAGCAC
AACATCTTCAACCCCCCATCATCGCCAGGTACATCAGGCTGCACCCCAACCACTACAGCATCAGGAGCACC
CTGCGGATGGAAGTGTATGGGCTGCGACCTGAACAGCTGCAGCATGCCCCCTGGGCATGGAGAGCAAGGCCATC
TCTGACGCCCAGATCACCGCCAGCAGCTACTTCACCAACATGTTGCGCCACCTGGAGCCCCAGCAAGGCCAGG
CTGCACCTGCAGGGCAGGAGCAACGCCTGGAGGCCCCAGGTGAACAACCCCAAGGAGTGGCTGCAGGTGGAC
TTCCAGAAGACCATGAAGGTGACCGGCGTGACCACCCAGGGCGTGAAGAGCCTGCTGACCAGCATGTACGTG
AAGGAGTTCCTGATCAGCAGCAGCCAGGACGGCCACCAGTGGACCCTGTTCTTCCAGAACGGCAAAGTGAAG
GTGTTCCAGGGCAACCAGGACAGCTTCACCCCGTGGTGAACAGCCTGGACCCCCCTGCTGACCAGGTAT
CTGAGGATCCACCCCCAGAGCTGGGTGCACCAGATCGCCCTGAGAATGGAAGTGCTGGGATGCGAGGCCAG
GACCTGTACTGA (SEQ ID NO:28)

Figure 30B

CS23Δ(772-1667) - CS23-SC2-NA

ATGCAGATTGAGCTGAGCACCTGCTTCTTCCTGTGCCTGCTGAGGTTCTGCTTCTCTGCCACCAGG
AGATACTACCTGGGCGCCGTGGAGCTGAGCTGGGACTACATGCAGTCTGACCTGGGCGAGCTGCCT
GTGGACGCCAGGTTCCCCCCCAGAGTGCCCAAGAGCTTCCCCTTCAACACCTCAGTGGTGTACAAG
AAGACCCTGTTTCGTGGAGTTCACCGACCACCTGTTCAACATCGCCAAGCCCAGGCCCCCCCTGGATG
GGCCTGCTGGGCCCCACCATCCAGGCCGAGGTGTACGACACCGTGGTGATCACCTGAAGAACATG
GCCAGCCACCCCGTGAGCCTGCACGCCGTGGGCGTGAGCTACTGGAAGGCCCTCTGAGGGCGCCGAG
TATGACGACCAGACCAGCCAGAGGGAGAAGGAGGACGACAAGGTGTTCCCCGGCGGCAGCCACACC
TACGTGTGGCAGGTGCTGAAGGAGAACGGCCCCATGGCCAGCGACCCCCCTGTGCCTGACCTACAGC
TACCTGAGCCACGTGGACCTGGTGAAGGACCTGAACTCTGGCCTGATCGGCGCCCTGCTGGTGTGC
AGGGAGGGCAGCCTGGCCAAGGAGAAGACCCAGACCCTGCACAAGTTCATCCTGCTGTTCCGCGTG
TTCGATGAGGGCAAGAGCTGGCACAGCGAGACCAAGAACAGCCTGATGCAGGACAGGGATGCCGCC
TCTGCCAGGGCCTGGCCCAAGATGCACACCGTGAACGGCTACGTGAACAGGAGCCTGCCCCGGCCTG
ATCGGCTGCCACAGGAAGTCTGTGTACTGGCACGTGATCGGCATGGGCACCACCCCCGAGGTGCAC
AGCATCTTCCTGGAGGGCCACACCTTCCTGGTGAAGAACACAGGCAGGCCAGCCTGGAGATCAGC
CCCATCACCTTCCTGACCGCCCAGACCCTGCTGATGGACCTGGGCCAGTTCCTGCTGTTCTGCCAC
ATCAGCAGCCACCAGCACGACGGCATGGAGGCCTACGTGAAGGTGGACAGCTGCCCCGAGGAGCCC
CAGCTGAGGATGAAGAACAACGAGGAGGCCGAGGACTATGATGATGACCTGACCGACTCTGAGATG
GACGTGGTGAAGTTTGATGATGACAACAGCCCCAGCTTCATCCAGATCAGGTCTGTGGCCAAGAAG
CACCCCAAGACCTGGGTGCACTACATCGCCGCCGAGGAGGAGGACTGGGACTACGCCCCCTGGTG
CTGGCCCCCGACGACAGGAGCTACAAGAGCCAGTACCTGAACAACGGCCCCCAGAGGATCGGCAGG
AAGTACAAGAAGGTGAGATTTCATGGCCTACACCGACGAGACCTTCAAGACCAGGGAGGCCATCCAG
CACGAGTCTGGCATCCTGGGCCCCCTGCTGTACGGCGAGGTGGGCGACACCCTGCTGATCATCTTC
AAGAACCAGGCCAGCAGGCCCTACAACATCTACCCCCACGGCATCACCGATGTGAGGCCCTGTAC
AGCAGGAGGCTGCCCAAGGGCGTGAAGCACCTGAAGGACTTCCCCATCCTGCCCGGCGAGATCTTC
AAGTACAAGTGGACCGTGACCGTGGAGGATGGCCCCACCAAGTCTGACCCCAGGTGCCTGACCAGG
TACTACAGCAGCTTCGTGAACATGGAGAGGGACCTGGCCTCTGGCCTGATCGGCCCCCTGCTGATC
TGCTACAAGGAGAGCGTGGACCAGAGGGGCAACCAGATCATGTCTGACAAGAGGAACGTGATCCTG
TTCTCTGTGTTTCGATGAGAACAGGAGCTGGTATCTGACCGAGAACATCCAGAGGTTCTTGCCCAAC
CCCGCCGGCGTGCAGCTGGAGGACCCCGAGTTCAGGGCCAGCAACATCATGCACAGCATCAACGGC
TACGTGTTTCGACAGCCTGCAGCTGTCTGTGTGCCTGCACGAGGTGGCCTACTGGTACATCCTGAGC
ATCGGCGCCCAGACCGACTTCCTGTCTGTGTTCTTCTCTGGCTACACCTTCAAGCACAAGATGGTG
TACGAGGACACCCTGACCCTGTTCCCCCTCAGCGGCGAGACCGTGTTTCATGAGCATGGAGAACCCC
GGCCTGTGGATCCTGGGCTGCCACAACAGCGACTTCAGGAACAGGGGCATGACCGCCCTGCTGAAA
GTCAGCAGCTGCGACAAGAACACCGGCGACTACTACGAGGACAGCTACGAGGACATCAGCGCCTAC
CTGCTGAGCAAGAACAACGCCATCGAGCCCAGGAGCTTCAGCCAGAACTCCAGACACCCCAGCACC

(Continued)

Figure 31A

AGGGAGATCACCAGGACCACCCTGCAGAGCGACCAGGAGGAGATCGACTATGATGACACCATCAGC
GTGGAGATGAAGAAGGAGGACTTCGACATCTACGACGAGGACGAGAACCAGAGCCCCAGGAGCTTC
CAGAAGAAGACCAGGGCACTACTTCATCGCCGCCGTGGAGAGGCTGTGGGACTATGGCATGAGCAGC
AGCCCCCACGTGCTGAGGAACAGGGCCCAGAGCGGCAGCGTGCCCCAGTTCAAGAAGGTGGTGTTC
CAGGAGTTCACCGACGGCAGCTTCACCCAGCCCCCTGTACAGAGGCGAGCTGAACGAGCACCTGGGC
CTGCTGGGCCCCCTACATCAGGGCCGAGGTGGAGGACAACATCATGGTGACCTTCAGGAACCAGGCC
AGCAGGCCCCCTACAGCTTCTACAGCAGCCTGATCAGCTACGAGGAGGACCAGAGGCAGGGCGCCGAG
CCCAGGAAGAAGTTCGTGAAGCCCAACGAGACCAAGACCTACTTCTGGAAGGTGCAGCACCATG
GCCCCACCAAGGACGAGTTCGACTGCAAGGCCTGGGCCTACTTCTCTGATGTGGACCTGGAGAAG
GACGTGCACAGCGGCCTGATCGGGCCCCCTGCTGGTGTGCCACACCAACACCCTGAACCCCCGCCAC
GGCAGGCAGGTGACCGTGCAGGAGTTCGCCCTGTTCTTCACCATCTTCGACGAGACCAAGAGCTGG
TACTTCACCGAGAACATGGAGAGGAACTGCAGGGCCCCCTGCAACATCCAGATGGAGGACCCACC
TTCAAGGAGAACTACAGGTTCACGCCATCAACGGCTACATCATGGACACCCTGCCCGGCCTGGTG
ATGGCCCAGGACCAGAGGATCAGGTGGTATCTGCTGAGCATGGGCAGCAACGAGAACATCCACAGC
ATCCACTTCAGCGGCCACGTGTTACCCGTGAGGAAGAAGGAGGAGTACAAGATGGCCCTGTACAAC
CTGTACCCCGGCGTGTTTCGAGACCGTGGAGATGCTGCCAGCAAGGCCGGCATCTGGAGGGTGGAG
TGCCTGATCGGCGAGCACCTGCACGCCGGCATGAGCACCTGTTCTTGGTGTACAGCAACAAGTGC
CAGACCCCCCTGGGCATGGCCAGCGGCCACATCAGGGACTTCCAGATCACCGCCTCTGGCCAGTAC
GGCCAGTGGGCCCCCAAGCTGGCCAGGCTGCACTACAGCGGCAGCATCAACGCCTGGAGCACCAAG
GAGCCCTTCAGCTGGATCAAGGTGGACCTGCTGGCCCCCATGATCATCCACGGCATCAAGACCCAG
GGCGCCAGGCAGAAAGTTCAGCAGCCTGTACATCAGCCAGTTCATCATCATGTACAGCCTGGACGGC
AAGAAGTGGCAGACCTACAGGGGCAACAGCACCGGCACCCTGATGGTGTTCCTTCGGCAACGTGGAC
AGCAGCGGCATCAAGCACAAACATCTTCAACCCCCCATCATCGCCAGGTACATCAGGCTGCACCCC
ACCCACTACAGCATCAGGAGCACCTGCGGATGGAAGTATGATGGGCTGCGACCTGAACAGCTGCAGC
ATGCCCCCTGGGCATGGAGAGCAAGGCCATCTCTGACGCCAGATCACCGCCAGCAGCTACTTCACC
AACATGTTTCGCCACCTGGAGCCCCAGCAAGGCCAGGCTGCACCTGCAGGGCAGGAGCAACGCCTGG
AGGCCCCAGGTGAACAACCCCAAGGAGTGGCTGCAGGTGGACTTCCAGAAGACCATGAAGGTGACC
GGCGTGACCACCCAGGGCGTGAAGAGCCTGCTGACCAGCATGTACGTGAAGGAGTTCCTGATCAGC
AGCAGCCAGGACGGCCACCAGTGGACCCCTGTTCTTCCAGAACGGCAAAGTGAAGGTGTTCCAGGGC
AACCAGGACAGCTTCACCCCCGTGGTGAACAGCCTGGACCCCCCTGCTGACCAGGTATCTGAGG
ATCCACCCCCAGAGCTGGGTGCACCAGATCGCCCTGAGAATGGAAGTGCTGGGATGCGAGGCCAG
GACCTGTACTGA (SEQ ID NO:29)

Figure 31B