| Codon no. | WT | Mutant 1 | Mutant 2 | Mutant 3 | Mutant 4 | Mutant 5 | Mutant 6 | Mutant 7 | No.of models |
|---|---|---|---|---|---|---|---|---|---|
| 1 | UUU | CUU | UCU | UUC | CCU | UCC | CUC | CCC | |
| | F | L | S | F | P | S | L | P | 3 |
| | Deviationat mutant site | - | - | WT | - | - | - | - | |
| | Off site deviation | 199(0.178) | 2(0.128) | WT | 2(0.128) | 2(0.128) | 199(0.178) | 2(0.128) | |
| 2 | CCU | UCU | UUU | UUC | CUU | CCC | CUC | UCC | |
| | P | S | F | F | L | P | L | S | 3 |
| | Deviationat mutant site | 0.082 | 0.087 | 0.087 | 0.076 | WT | 0.076 | 0.082 | |
| | Off site deviation | 141(0.2) | 141(0.184) | 141(0.184) | 141(0.182) | WT | 141(0.182) | 141(0.2) | |
| 3 | AAU | AGU | GAU | GGU | AGC | GAC | GGC | AAC | |
| | N | S | D | G | S | D | G | N | 3 |
| | Deviationat mutant site | 0.154 | 0.14 | 0.087 | 0.154 | 0.14 | 0.087 | WT | |
| | Off site deviation | 199(0.18) | 2(0.189) | 141(0.168) | 199(0.18) | 2(0.189) | 141(0.168) | WT | |
| 4 | AUU | GUU | ACC | AUC | ACU | GCU | GCC | GUC | |
| | I | V | T | I | T | A | A | V | 3 |
| | Deviationat mutant site | 0.098 | 0.127 | WT | 0.127 | 0.131 | 0.131 | 0.098 | |
| | Off site deviation | 141(0.218) | 141(0.179) | WT | 141(0.179) | 199(0.177) | 199(0.177) | 141(0.218) | |
| 5 | ACA | GCA | GCG | ACG | AUA | AUG | GUG | GUA | |
| | T | A | A | T | I | M | V | V | 4 |
| | Deviationat mutant site | 0.032 | 0.032 | WT | 0.04 | 0.025 | 0.016 | 0.016 | |
| | Off site deviation | 141(0.206) | 141(0.206) | WT | <0.04 | 141(0.204) | 141(0.194) | 141(0.194) | |
| 6 | AAC | GGC | GAC | AGC | AAU | GAU | AGU | GGU | |
| | N | G | D | S | N | D | S | G | 3 |
| | Deviationat mutant site | 0.086 | 0.045 | 0.021 | WT | 0.045 | 0.021 | 0.086 | |
| | Off site deviation | <0.086 | 32(0.068) | 7(0.035) | WT | 32(0.068) | 7(0.035) | <0.086 | |
| 7 | UUG | UUA | CUG | UCG | CCG | CUA | UCA | CCA | |
| | L | L | L | S | P | L | S | P | 2 |
| | Deviationat mutant site | WT | WT | 0.056 | 0.155 | WT | 0.056 | 0.155 | |
| | Off site deviation | WT | WT | 141(0.205) | 128(0.169) | WT | 141(0.205) | 128(0.169) | |
| 8 | UGC | UAC | CGC | UGU | CGU | CAC | UAU | CAU | |
| | C | Y | R | C | R | H | Y | H | 3 |
| | Deviationat mutant site | 0.495 | 0.435 | WT | 0.435 | 0.184 | 0.495 | 0.184 | |
| | Off site deviation | 30(0.816) | 35(0.469) | WT | 35(0.469) | 33(0.306) | 30(0.816) | 33(0.306) | |
| 9 | CCU | UCU | UUU | UUC | CUU | CCC | CUC | UCC | |
| | P | S | F | F | L | P | L | S | 3 |
| | Deviationat mutant site | 0.068 | 0.058 | 0.058 | 0.096 | WT | 0.096 | 0.068 | |
| | Off site deviation | 199(0.18) | 141(0.158) | 141(0.158) | <0.096 | WT | 9(0.096) | 199(0.18) | |
| 10 | UUU | CUU | UCU | UUC | CCU | UCC | CUC | CCC | |
| | F | L | S | F | P | S | L | P | 3 |
| | Deviationat mutant site | 0.028 | 0.047 | WT | 0.226 | 0.047 | 0.028 | 0.226 | |
| | Off site deviation | 141(0.205) | <0.047 | WT | <0.226 | <0.047 | 141(0.205) | <0.226 | |
| 11 | GGU | GGC | GAC | AGC | AAC | GAU | AGU | AAU | |
| | G | G | D | S | N | D | S | N | 3 |
| | Deviationat mutant site | WT | 0.093 | 0.036 | 0.037 | 0.093 | 0.036 | 0.037 | |
| | Off site deviation | WT | <0.093 | <0.036 | <0.037 | <0.093 | <0.093 | <0.037 | |
| 12 | GAA | GAG | AAA | GGA | GGG | AAG | AGA | AGG | |
| | E | E | K | G | G | K | R | R | 3 |
| | Deviationat mutant site | WT | 0.112 | 0.11 | 0.11 | 0.112 | 0.103 | 0.103 | |
| | Off site deviation | WT | <0.112 | <0.11 | <0.11 | <0.112 | 199(0.15) | 199(0.15) | |
| 13 | GUU | AUU | ACC | AUC | ACU | GCC | GUC | GCU | |
| | V | I | T | I | T | A | V | A | 3 |
| | Deviationat mutant site | 0.046 | 0.088 | 0.046 | 0.088 | 0.023 | WT | 0.023 | |
| | Off site deviation | 141(0.181) | 128(0.147) | 141(0.181) | 128(0.147) | 141(0.176) | WT | 141(0.176) | |
| 14 | UUU | CUU | UCU | UUC | CCU | UCC | CUC | CCC | |
| | F | L | S | F | P | S | L | P | 3 |
| | Deviationat mutant site | 0.278 | 0.04 | WT | 0.573 | 0.04 | 0.278 | 0.573 | |
| | Off site deviation | <0.278 | 141(0.177) | WT | <0.573 | 141(0.177) | <0.278 | <0.573 | |
| 15 | AAC | GGC | GAC | AGC | AAU | GAU | AGU | GGU | |
| | N | G | D | S | N | D | S | G | 3 |
| | Deviationat mutant site | 0.174 | 0.051 | 0.072 | WT | 0.051 | 0.072 | 0.174 | |
| | Off site deviation | 141(0.203) | 11(0.16) | 141(0.197) | WT | 11(0.16) | 141(0.197) | 141(0.203) | |
| 16 | GCC | ACC | AUC | AUU | ACU | GUU | GUC | GCU | |
| | A | T | I | I | T | V | V | A | 3 |
| | Deviationat mutant site | 0.044 | 0.153 | 0.153 | 0.044 | 0.092 | 0.092 | WT | |
| | Off site deviation | 12(0.179) | 12(0.25) | 12(0.25) | 12(0.179) | 12(0.225) | 12(0.225) | WT | |
| 17 | ACC | GCC | ACU | AUC | AUU | GCU | GUC | GUU | |
| | T | A | T | I | I | A | V | V | 3 |
| | Deviationat mutant site | 0.08 | WT | 0.079 | 0.079 | 0.08 | 0.025 | 0.025 | |
| | Off site deviation | 128(0.178) | WT | 141(0.198) | 141(0.198) | 128(0.178) | 16(0.028) | 16(0.028) | |
| 18 | AGA | AAG | AAA | GAA | GGG | GGA | AGG | GAG | |
| | R | K | K | E | G | G | R | E | 3 |
| | Deviationat mutant site | 0.063 | 0.063 | 0.078 | 0.074 | 0.074 | WT | 0.078 | |
| | Off site deviation | 199(0.181) | 199(0.181) | 141(0.214) | 141(0.207) | 141(0.207) | WT | 141(0.214) | |
| 19 | UUU | CUU | UCU | UUC | CCU | UCC | CUC | CCC | |
| | F | L | S | F | P | S | L | P | 3 |
| | Deviationat mutant site | 0.105 | 0.082 | WT | 0.261 | 0.082 | 0.105 | 0.261 | |
| | Off site deviation | 128(0.14) | 128(0.153) | WT | <0.261 | 128(0.153) | 128(0.14) | <0.261 | |
| 20 | GCA | ACG | ACA | GCG | AUG | GUA | AUA | GUG | |
| | A | T | T | A | M | V | I | V | 4 |
| | Deviationat mutant site | 0.329 | 0.329 | WT | 0.068 | 0.356 | 0.322 | 0.356 | |
| | Off site deviation | <0.329 | <0.329 | WT | 24(0.237) | <0.356 | <0.322 | <0.356 | |
| 21 | UCU | CCU | CUU | CCC | UCC | UUC | UUU | CUC | |
| | S | P | L | P | S | F | F | L | 3 |
| | Deviationat mutant site | 1.234 | 1.84 | 1.234 | WT | 0.909 | 0.909 | 1.84 | |
| | Off site deviation | 148(18.0.5) | 147(18.097) | 148(18.0.5) | WT | 153(18.182) | 153(18.182) | 147(18.097) | |
| 22 | GUU | AUU | ACC | AUC | ACU | GCC | GUC | GCU | |
| | V | I | T | I | T | A | V | A | 3 |
| | Deviationat mutant site | 0.027 | 0.493 | 0.027 | 0.493 | 0.124 | WT | 0.124 | |
| | Off site deviation | 199(0.149) | 153(18.524) | 199(0.149) | 153(18.524) | 141(0.177) | WT | 141(0.177) | |
| 23 | UAU | UGU | CAU | UAC | CAC | CGU | UGC | CGC | |
| | Y | C | H | Y | H | R | C | R | 3 |
| | Deviationat mutant site | 1.067 | 0.703 | WT | 0.703 | 1.24 | 1.067 | 1.24 | |
| | Off site deviation | 153(15.805) | 155(17.206) | WT | 155(17.206) | 155(17.244) | 153(15.805) | 155(17.244) | |
| 24 | GCU | AUC | ACC | AUU | GCC | GUC | GUU | ACU | |
| | A | I | T | I | A | V | V | T | 3 |
| | Deviationat mutant site | 0.817 | 3.933 | 0.817 | WT | 2.22 | 2.22 | 3.933 | |

| Codon no. | WT | Mutant 1 | Mutant 2 | Mutant 3 | Mutant 4 | Mutant 5 | Mutant 6 | Mutant 7 | No.of models |
|---|---|---|---|---|---|---|---|---|---|
| | Off site deviation | 153(21.223) | 153(16.534) | 153(21.223) | WT | 148(16.121) | 148(16.121) | 153(16.534) | |
| 25 | UGG | CGG | CAG | CGA | CAA | UAG | UGA | UAA | |
| | W | R | Q | R | Q | STOP | STOP | STOP | 3 |
| | Deviationat mutant site | 1.065 | 0.093 | 1.065 | 0.093 | - | - | - | |
| | Off site deviation | 153(18.31) | 136(0.183) | 153(18.31) | 136(0.183) | 21(0.514) | 21(0.514) | 21(0.514) | |
| 26 | AAC | GGC | GAC | AGC | AAU | GAU | AGU | GGU | |
| | N | G | D | S | N | D | S | G | 3 |
| | Deviationat mutant site | 0.041 | 0.056 | 0.037 | WT | 0.056 | 0.037 | 0.041 | |
| | Off site deviation | 27(0.056) | <0.056 | 128(0.159) | WT | <0.056 | 128(0.159) | 27(0.056) | |
| 27 | AGG | GAA | GAG | GGG | AAA | AGA | AAG | GGA | |
| | R | E | E | G | K | R | K | G | 3 |
| | Deviationat mutant site | 0.077 | 0.077 | 0.265 | 0.042 | WT | 0.042 | 0.265 | |
| | Off site deviation | 70(0.128) | 70(0.128) | <0.265 | 141(0.179) | WT | 141(0.179) | <0.265 | |
| 28 | AAG | GAG | AGG | AAA | GGG | AGA | GAA | GGA | |
| | K | E | R | K | G | R | E | G | 3 |
| | Deviationat mutant site | 0.036 | 0.045 | WT | 0.127 | 0.045 | 0.036 | 0.127 | |
| | Off site deviation | 141(0.213) | 141(0.207) | WT | 128(0.166) | 141(0.207) | 141(0.213) | 128(0.166) | |
| 29 | AGA | AAG | AAA | GAA | GGG | GGA | AGG | GAG | |
| | R | K | K | E | G | G | R | E | 3 |
| | Deviationat mutant site | 0.051 | 0.051 | 0.028 | 0.055 | 0.055 | WT | 0.028 | |
| | Off site deviation | <0.051 | <0.051 | 31(0.151) | 128(0.128) | 128(0.128) | WT | 31(0.151) | |
| 30 | AUC | GUC | GCC | GUU | ACC | AUU | ACU | GCU | |
| | I | V | A | V | T | I | T | A | 3 |
| | Deviationat mutant site | 0.047 | 0.058 | 0.047 | 0.059 | WT | 0.059 | 0.058 | |
| | Off site deviation | <0.047 | 29(0.059) | <0.047 | 141(0.211) | WT | 141(0.211) | 29(0.059) | |
| 31 | AGC | GAC | AAC | GGC | AGU | GAU | AAU | GGU | |
| | S | D | N | G | S | D | N | G | 3 |
| | Deviationat mutant site | 0.157 | 0.051 | 0.042 | WT | 0.157 | 0.051 | 0.042 | |
| | Off site deviation | <0.157 | <0.051 | 128(0.111) | WT | <0.157 | <0.051 | 128(0.111) | |
| 32 | AAC | GGC | GAC | AGC | AAU | GAU | AGU | GGU | |
| | N | G | D | S | N | D | S | G | 3 |
| | Deviationat mutant site | 0.033 | 0.05 | 0.037 | WT | 0.05 | 0.037 | 0.033 | |
| | Off site deviation | 128(0.109) | <0.05 | 141(0.204) | WT | <0.05 | 141(0.204) | 128(0.109) | |
| 33 | UGU | UAU | CGU | CGC | UGC | CAU | CAC | UAC | |
| | C | Y | R | R | C | H | H | Y | 3 |
| | Deviationat mutant site | 0.478 | 0.17 | 0.17 | WT | 0.188 | 0.188 | 0.478 | |
| | Off site deviation | <0.478 | 6(0.254) | 6(0.254) | WT | <0.188 | <0.188 | <0.478 | |
| 34 | GUU | AUU | ACC | AUC | ACU | GCC | GUC | GCU | |
| | V | I | T | I | T | A | V | A | 3 |
| | Deviationat mutant site | 0.032 | 0.03 | 0.032 | 0.03 | 0.047 | WT | 0.047 | |
| | Off site deviation | 4(0.088) | 4(0.039) | 4(0.088) | 4(0.039) | 141(0.185) | WT | 141(0.185) | |
| 35 | GCU | AUC | ACC | AUU | GCC | GUC | GUU | ACU | |
| | A | I | T | I | A | V | V | T | 3 |
| | Deviationat mutant site | 0.187 | 0.18 | 0.187 | WT | 0.256 | 0.256 | 0.18 | |
| | Off site deviation | 196(0.467) | <0.18 | 196(0.467) | WT | <0.256 | <0.256 | <0.18 | |
| 36 | GAU | AAU | GGU | AGU | GAC | AAC | GGC | AGC | |
| | D | N | G | S | D | N | G | S | 3 |
| | Deviationat mutant site | 0.041 | 0.129 | 0.075 | WT | 0.041 | 0.129 | 0.075 | |
| | Off site deviation | 141(0.209) | <0.129 | 198(0.158) | WT | 141(0.209) | <0.129 | 198(0.158) | |
| 37 | UAU | UGU | CAU | UAC | CAC | CGU | UGC | CGC | |
| | Y | C | H | Y | H | R | C | R | 3 |
| | Deviationat mutant site | 0.063 | 0.048 | WT | 0.048 | 0.072 | 0.063 | 0.072 | |
| | Off site deviation | 141(0.206) | 141(0.16) | WT | 141(0.16) | 35(0.127) | 141(0.206) | 35(0.127) | |
| 38 | UCU | CCU | CUU | CCC | UCC | UUC | UUU | CUC | |
| | S | P | L | P | S | F | F | L | 3 |
| | Deviationat mutant site | 0.251 | 0.094 | 0.251 | WT | 0.139 | 0.139 | 0.094 | |
| | Off site deviation | 36(0.314) | <0.094 | 36(0.314) | WT | 36(0.195) | 36(0.195) | <0.094 | |
| 39 | GUC | AUC | ACC | AUU | ACU | GCC | GCU | GUU | |
| | V | I | T | I | T | A | A | V | 3 |
| | Deviationat mutant site | 0.043 | 0.013 | 0.043 | 0.013 | 0.031 | 0.031 | WT | |
| | Off site deviation | <0.043 | 141(0.209) | <0.043 | 141(0.209) | 141(0.206) | 141(0.206) | WT | |
| 40 | CUA | CUG | UUA | UCG | UCA | CCG | CCA | UUG | |
| | L | L | L | S | S | P | P | L | 2 |
| | Deviationat mutant site | WT | WT | 0.02 | 0.02 | 0.118 | 0.118 | WT | |
| | Off site deviation | WT | WT | 38(0.067) | 38(0.067) | <0.118 | <0.118 | WT | |
| 41 | UAU | UGU | CAU | UAC | CAC | CGU | UGC | CGC | |
| | Y | C | H | Y | H | R | C | R | 3 |
| | Deviationat mutant site | 0.039 | 0.055 | WT | 0.055 | 0.019 | 0.039 | 0.019 | |
| | Off site deviation | 94(0.044) | <0.055 | WT | <0.055 | 57(0.125) | 94(0.044) | 57(0.125) | |
| 42 | AAU | AGU | GAU | GGU | AGC | GAC | GGC | AAC | |
| | N | S | D | G | S | D | G | N | 3 |
| | Deviationat mutant site | 0.088 | 0.05 | 0.058 | 0.088 | 0.05 | 0.058 | WT | |
| | Off site deviation | 128(0.175) | 38(0.085) | <0.058 | 128(0.175) | 38(0.085) | <0.058 | WT | |
| 43 | UCC | CUU | CCU | CCC | UUC | UUU | CUC | UCU | |
| | S | L | P | P | F | F | L | S | 3 |
| | Deviationat mutant site | 0.042 | 0.455 | 0.455 | 0.028 | 0.028 | 0.042 | WT | |
| | Off site deviation | 45 (0.214) | 44 (0.453) | 44 (0.453) | 141 (0.161) | 141 (0.161) | 45 (0.214) | WT | |
| 44 | GCA | GAC | ACA | GCG | GCA | GUA | AUA | GUG | |
| | A | D | T | A | A | V | I | V | 4 |
| | Deviationat mutant site | 0.081 | 0.063 | WT | WT | 0.055 | 0.026 | 0.055 | |
| | Off site deviation | <0.081 | 141 (0.204) | WT | WT | <0.055 | 141 (0.039) | <0.055 | |
| 45 | UCA | UCG | CCA | CUA | UUA | CCG | CUG | UUG | |
| | S | S | P | L | L | P | L | L | 2 |
| | Deviationat mutant site | WT | 0.314 | 0.054 | 0.054 | 0.314 | 0.054 | 0.054 | |
| | Off site deviation | WT | <0.314 | <0.054 | <0.054 | <0.314 | <0.054 | <0.054 | |
| 46 | UUU | CUU | UCU | UUC | CCU | UCC | CUC | CCC | |
| | F | L | S | F | P | S | L | P | 3 |
| | Deviationat mutant site | 0.093 | 0.099 | WT | 0.249 | 0.099 | 0.093 | 0.249 | |
| | Off site deviation | 128 (0.136) | <0.099 | WT | <0.249 | <0.099 | 128 (0.136) | <0.249 | |
| 47 | UCC | CUU | CCU | CCC | UUC | UUU | CUC | UCU | |
| | S | L | P | P | F | F | L | S | 3 |
| | Deviationat mutant site | 0.059 | 0.567 | 0.567 | 0.077 | 0.077 | 0.059 | WT | |
| | Off site deviation | 128 (0.14) | <0.567 | <0.567 | 141 (0.14) | 141 (0.14) | 128 (0.14) | WT | |
| 48 | ACU | GCU | GCC | GUU | GUC | ACC | AUU | AUC | |
| | T | A | A | V | V | T | I | I | 3 |

| Codon no. | WT | Mutant 1 | Mutant 2 | Mutant 3 | Mutant 4 | Mutant 5 | Mutant 6 | Mutant 7 | No.of models |
|---|---|---|---|---|---|---|---|---|---|
| | Deviationat mutant site | 0.084 | 0.084 | 0.039 | 0.039 | WT | 0.054 | 0.054 | |
| | Off site deviation | 128 (0.143) | 128 (0.143) | 141 (0.205) | 141 (0.205) | WT | <0.054 | <0.054 | |
| 49 | UUU | CUU | UCU | UUC | CCU | UCC | CUC | CCC | |
| | F | L | S | F | P | S | L | P | 3 |
| | Deviationat mutant site | 0.084 | 0.072 | WT | 0.183 | 0.072 | 0.084 | 0.183 | |
| | Off site deviation | 41 (0.151) | 141 (0.185) | WT | <0.183 | 141 (0.185) | 41 (0.151) | <0.183 | |
| 50 | AAG | GAG | AGG | AAA | GGG | AGA | GAA | GGA | |
| | K | E | R | K | G | R | E | G | 3 |
| | Deviationat mutant site | 0.09 | 0.056 | WT | 0.168 | 0.056 | 0.09 | 0.168 | |
| | Off site deviation | 128 (0.124) | 48 (0.058) | WT | <0.168 | 48 (0.058) | 128 (0.124) | <0.168 | |
| 51 | UGU | UAU | CGU | CGC | UGC | CAU | CAC | UAC | |
| | C | Y | R | R | C | H | H | Y | 3 |
| | Deviationat mutant site | 0.229 | 0.148 | 0.148 | WT | 0.174 | 0.174 | 0.229 | |
| | Off site deviation | 104 (0.502) | 104 (0.623) | 104 (0.623) | WT | 56 (0.397) | 56 (0.397) | 104 (0.502) | |
| 52 | UAU | UGU | CAU | UAC | CAC | CGU | UGC | CGC | |
| | Y | C | H | Y | H | R | C | R | 3 |
| | Deviationat mutant site | 0.053 | 0.042 | WT | 0.042 | 0.047 | 0.053 | 0.047 | |
| | Off site deviation | <0.053 | 141 (0.202) | WT | 141 (0.202) | 141 (0.212) | <0.053 | 141 (0.212) | |
| 53 | GGA | GAA | GGG | AAA | AGA | AAG | AGG | GAG | |
| | G | E | G | K | R | K | R | E | 3 |
| | Deviationat mutant site | 0.563 | WT | 0.594 | 0.562 | 0.594 | 0.562 | 0.563 | |
| | Off site deviation | 102 (0.594) | WT | 102 (0.67) | 102 (0.703) | 102 (0.67) | 102 (0.703) | 102 (0.594) | |
| 54 | GUG | AUG | AUA | GUA | GCG | ACG | ACA | GCA | |
| | V | M | I | V | A | T | T | A | 4 |
| | Deviationat mutant site | 0.042 | 0.167 | WT | 0.108 | 0.086 | 0.086 | 0.108 | |
| | Off site deviation | 128(0.122) | <0.167 | WT | 128(0.155) | <0.086 | <0.086 | 128(0.155) | |
| 55 | UCU | CCU | CUU | CCC | UCC | UUC | UUU | CUC | |
| | S | P | L | P | S | F | F | L | 3 |
| | Deviationat mutant site | 0.061 | 0.031 | 0.061 | WT | 0.022 | 0.022 | 0.031 | |
| | Off site deviation | 141(0.203) | 141(0.169) | 141(0.203) | WT | 141(0.169) | 141(0.169) | 141(0.169) | |
| 56 | CCU | UCU | UUU | UUC | CUU | CCC | CUC | UCC | |
| | P | S | F | F | L | P | L | S | 3 |
| | Deviationat mutant site | 0.048 | 0.188 | 0.188 | 0.318 | WT | 0.318 | 0.048 | |
| | Off site deviation | 141(0.183) | 57(0.202) | 57(0.202) | <0.318 | WT | <0.318 | 141(0.183) | |
| 57 | ACU | GCU | GCC | GUU | GUC | ACC | AUU | AUC | |
| | T | A | A | V | V | T | I | I | 3 |
| | Deviationat mutant site | 0.067 | 0.067 | 0.037 | 0.037 | WT | 0.06 | 0.06 | |
| | Off site deviation | 141(0.187) | 141(0.187) | <0.037 | <0.037 | WT | 128(0.135) | 128(0.135) | |
| 58 | AAA | GAA | AGA | AAG | GGA | AGG | GAG | GGG | |
| | K | E | R | K | G | R | E | G | 3 |
| | Deviationat mutant site | 0.031 | 0.024 | WT | 0.045 | 0.024 | 0.031 | 0.045 | |
| | Off site deviation | 141(0.211) | 141(0.193) | WT | 128(0.11) | 141(0.193) | 141(0.211) | 128(0.11) | |
| 59 | UUA | UUG | UCG | CCG | CUG | UCA | CCA | CUA | |
| | L | L | S | P | L | S | P | L | 2 |
| | Deviationat mutant site | WT | 0.131 | 0.425 | WT | 0.131 | 0.425 | WT | |
| | Off site deviation | WT | 141(0.204) | <0.425 | WT | 141(0.204) | <0.425 | WT | |
| 60 | AAU | AGU | GAU | GGU | AGC | GAC | GGC | AAC | |
| | N | S | D | G | S | D | G | N | 3 |
| | Deviationat mutant site | 0.098 | 0.185 | 0.056 | 0.098 | 0.185 | 0.056 | WT | |
| | Off site deviation | 128(0.141) | <0.185 | 37(0.075) | 128(0.141) | <0.185 | 37(0.075) | WT | |
| 61 | GAU | AAU | GGU | AGU | GAC | AAC | GGC | AGC | |
| | D | N | G | S | D | N | G | S | 3 |
| | Deviationat mutant site | 0.017 | 0.104 | 0.029 | WT | 0.017 | 0.104 | 0.029 | |
| | Off site deviation | 128(0.129) | <0.104 | 114(0.18) | WT | 128(0.129) | <0.104 | 114(0.18) | |
| 62 | CUC | UUC | CCC | CCU | CUU | UCU | UUU | UCC | |
| | L | F | P | P | L | S | F | S | 3 |
| | Deviationat mutant site | 0.029 | 0.454 | 0.454 | WT | 0.109 | 0.029 | 0.109 | |
| | Off site deviation | 61(0.045) | <0.454 | <0.454 | WT | 114(0.165) | 61(0.045) | 114(0.165) | |
| 63 | UGC | UAC | CGC | UGU | CGU | CAC | UAU | CAU | |
| | C | Y | R | C | R | H | Y | H | 3 |
| | Deviationat mutant site | 0.153 | 0.204 | WT | 0.204 | 0.186 | 0.153 | 0.186 | |
| | Off site deviation | 194(0.348) | 141(0.248) | WT | 141(0.248) | 194(0.262) | 194(0.348) | 194(0.262) | |
| 64 | UUU | CUU | UCU | UUC | CCU | UCC | CUC | CCC | |
| | F | L | S | F | P | S | L | P | 3 |
| | Deviationat mutant site | 0.088 | 0.213 | WT | 0.376 | 0.213 | 0.088 | 0.376 | |
| | Off site deviation | <0.088 | <0.213 | WT | 148(0.475) | <0.213 | <0.088 | 148(0.475) | |
| 65 | ACU | GCU | GCC | GUU | GUC | ACC | AUU | AUC | |
| | T | A | A | V | V | T | I | I | 3 |
| | Deviationat mutant site | 0.076 | 0.076 | 0.071 | 0.071 | WT | 0.074 | 0.074 | |
| | Off site deviation | 141(0.21) | 141(0.21) | 141(0.216) | 141(0.216) | WT | 192 (0.121) | 192 (0.121) | |
| 66 | AAU | AGU | GAU | GGU | AGC | GAC | GGC | AAC | |
| | N | S | D | G | S | D | G | N | 3 |
| | Deviationat mutant site | 0.141 | 0.045 | 0.087 | 0.141 | 0.045 | 0.087 | WT | |
| | Off site deviation | <0.141 | 30 (0.055) | 141 (0.191) | <0.141 | 30 (0.055) | 141 (0.191) | WT | |
| 67 | GUC | AUC | ACC | AUU | ACU | GCC | GCU | GUU | |
| | V | I | T | I | T | A | A | V | 3 |
| | Deviation at mutant site | 0.245 | 0.059 | 0.245 | 0.059 | 0.04 | 0.04 | WT | |
| | Off site deviation | <0.245 | <0.059 | <0.245 | <0.059 | 141 (0.156) | 141 (0.156) | WT | |
| 68 | UAU | UGU | CAU | UAC | CAC | CGU | UGC | CGC | |
| | Y | C | H | Y | H | R | C | R | 3 |
| | Deviation at mutant site | 0.041 | 0.037 | WT | 0.037 | 0.03 | 0.041 | 0.03 | |
| | Off site deviation | 141 (0.185) | 141 (0.199) | WT | 141 (0.199) | 29 (0.164) | 141 (0.185) | 29 (0.164) | |
| 69 | GCA | ACG | ACA | GCG | AUG | GUA | AUA | GUG | |
| | A | T | T | A | M | V | I | V | 4 |
| | Deviation at mutant site | 0.159 | 0.159 | WT | 0.209 | 0.304 | 0.295 | 0.304 | |
| | Off site deviation | 28 (0.2) | 28 (0.2) | WT | 13 (0.382) | <0.304 | 13 (0.414) | <0.304 | |
| 70 | GAU | AAU | GGU | AGU | GAC | AAC | GGC | AGC | |
| | D | N | G | S | D | N | G | S | 3 |
| | Deviationat mutant site | 0.098 | 0.182 | 0.106 | WT | 0.098 | 0.182 | 0.106 | |
| | Off site deviation | 141 (0.199 | 0.182 | <0.106 | WT | 141 (0.199 | 0.182 | <0.106 | |
| 71 | UCA | UCG | CCA | CUA | UUA | CCG | CUG | UUG | |
| | S | S | P | L | L | P | L | L | 2 |
| | Deviationat mutant site | WT | 0.363 | 0.163 | 0.163 | 0.363 | 0.163 | 0.163 | |
| | Off site deviation | WT | <0.363 | 13 (0.23) | 13 (0.23) | <0.363 | 13 (0.23) | 13 (0.23) | |
| 72 | UUU | CUU | UCU | UUC | CCU | UCC | CUC | CCC | |

| Codon no. | WT | Mutant 1 | Mutant 2 | Mutant 3 | Mutant 4 | Mutant 5 | Mutant 6 | Mutant 7 | No.of models |
|---|---|---|---|---|---|---|---|---|---|
| | F | L | S | F | P | S | L | P | 3 |
| | Deviationat mutant site | 0.098 | 0.108 | WT | 0.2 | 0.108 | 0.098 | 0.2 | |
| | Off site deviation | 25 (0.146) | <0.108 | WT | <0.2 | <0.108 | 25 (0.146) | <0.2 | |
| 73 | GUA | AUA | GUG | AUG | GCA | ACA | GCG | ACG | |
| | V | I | V | M | A | T | A | T | 4 |
| | Deviationat mutant site | 0.096 | WT | 0.105 | 0.115 | 0.067 | 0.115 | 0.067 | |
| | Off site deviation | 181 (0.139) | WT | 114 (0.184) | <0.115 | 141 (0.216) | <0.115 | 141 (0.216) | |
| 74 | AUU | GUU | ACC | AUC | ACU | GCU | GCC | GUC | |
| | I | V | T | I | T | A | A | V | 3 |
| | Deviationat mutant site | 0.067 | 0.111 | WT | 0.111 | 0.116 | 0.116 | 0.067 | |
| | Off site deviation | 141 (0.207) | <0.111 | WT | <0.111 | 128 (0.148) | 128 (0.148) | 141 (0.207) | |
| 75 | AGA | AAG | AAA | GAA | GGG | GGA | AGG | GAG | |
| | R | K | K | E | G | G | R | E | 3 |
| | Deviationat mutant site | 0.075 | 0.075 | 0.127 | 0.143 | 0.075 | WT | 0.127 | |
| | Off site deviation | 128(0.139) | 128(0.139) | <0.127 | 141 (0.211) | 128 (0.139) | WT | <0.127 | |
| 76 | GGU | GGC | GAC | AGC | AAC | GAU | AGU | AAU | |
| | G | G | D | S | N | D | S | N | 3 |
| | Deviationat mutant site | WT | 0.297 | 0.185 | 0.225 | 0.297 | 0.185 | 0.225 | |
| | Off site deviation | WT | 176 (0.329) | 176 (0.36) | 176 (0.339) | 176 (0.329) | 176 (0.36) | 176 (0.339) | |
| 77 | GAU | AAU | GGU | AGU | GAC | AAC | GGC | AGC | |
| | D | N | G | S | D | N | G | S | 3 |
| | Deviationat mutant site | 0.086 | 0.109 | 0.152 | WT | 0.086 | 0.109 | 0.152 | |
| | Off site deviation | <0.086 | <0.109 | 141 (0.181) | WT | <0.086 | <0.109 | 141 (0.181) | |
| 78 | GAA | GAG | AAA | GGA | GGG | AAG | AGA | AGG | |
| | E | E | K | G | G | K | R | R | 3 |
| | Deviationat mutant site | WT | 0.032 | 0.109 | 0.109 | 0.032 | 0.032 | 0.032 | |
| | Off site deviation | WT | 141 (0.186) | 128 (0.122) | 128 (0.122) | 141 (0.186) | 77 (0.125) | 77 (0.125) | |
| 79 | GUC | AUC | ACC | AUU | ACU | GCC | GCU | GUU | |
| | V | I | T | I | T | A | A | V | 3 |
| | Deviationat mutant site | 0.103 | 0.03 | 0.103 | 0.03 | 0.055 | 0.055 | WT | |
| | Off site deviation | 141 (0.178) | 76 (0.049) | 141 (0.178) | 76 (0.049) | 141 (0.193) | 141 (0.193) | WT | |
| 80 | AGA | AAG | AAA | GAA | GGG | GGA | AGG | GAG | |
| | R | K | K | E | G | G | R | E | 3 |
| | Deviation at mutant site | 0.028 | 0.028 | 0.049 | 0.043 | 0.043 | WT | 0.049 | |
| | Off site deviation | 141 (0.207) | 141 (0.207) | 128 (0.163) | 141 (0.202) | 141 (0.202) | WT | 128 (0.163) | |
| 81 | CAA | CGA | CAG | CGG | UGA | UAG | UGG | UAA | |
| | Q | R | Q | R | Stop | Stop | W | Stop | 3 |
| | Deviation at mutant site | 0.031 | WT | 0.031 | - | - | 0.08 | - | |
| | Off site deviation | 82 (0.113) | WT | 82 (0.113) | 63 (0.229) | 63 (0.229) | 90 (0.117) | 63 (0.229) | |
| 82 | AUC | GUC | GCC | GUU | ACC | AUU | ACU | GCU | |
| | I | V | A | V | T | I | T | A | 3 |
| | Deviation at mutant site | 0.081 | 0.113 | 0.081 | 0.093 | WT | 0.093 | 0.113 | |
| | Off site deviation | 141 (0.182) | <0.113 | 141 (0.182) | 141 (0.218) | WT | 141 (0.218) | <0.113 | |
| 83 | GCU | AUC | ACC | AUU | GCC | GUC | GUU | ACU | |
| | A | I | T | I | A | V | V | T | 3 |
| | Deviationat mutant site | 0.146 | 0.225 | 0.146 | WT | 0.1 | 0.1 | 0.225 | |
| | Off site deviation | 86 (0.863) | <0.225 | 86 (0.863) | WT | 86 (0.217) | 86 (0.217) | <0.225 | |
| 84 | CCA | CCG | UUA | CUA | UCA | UUG | UCG | CUG | |
| | P | P | L | L | S | L | S | L | 2 |
| | Deviationat mutant site | WT | 0.479 | 0.479 | 0.14 | 0.479 | 0.14 | 0.479 | |
| | Off site deviation | WT | 101 (0.687) | 101 (0.687) | 89 (0.237) | 101 (0.687) | 89 (0.237) | 101 (0.687) | |
| 85 | GGG | AAA | GAG | GAA | AGG | AAG | GGA | AGA | |
| | G | K | E | E | R | K | G | R | 3 |
| | Deviationat mutant site | 0.111 | 0.085 | 0.085 | 0.135 | 0.111 | WT | 0.135 | |
| | Off site deviation | <0.111 | 128(0.132) | 128(0.132) | 128(0.138) | <0.111 | WT | 128(0.138) | |
| 86 | CAA | CGA | CAG | CGG | UGA | UAG | UGG | UAA | |
| | Q | R | Q | R | Stop | Stop | W | Stop | 3 |
| | Deviationat mutant site | 0.055 | WT | 0.055 | - | - | 0.105 | - | |
| | Off site deviation | <0.055 | WT | <0.055 | 85(1.284) | 85(1.284) | 83(0.169) | 85(1.284) | |
| 87 | ACU | GCU | GCC | GUU | GUC | ACC | AUU | AUC | |
| | T | A | A | V | V | T | I | I | 3 |
| | Deviationat mutant site | 0.063 | 0.063 | 0.037 | 0.037 | WT | 0.046 | 0.046 | |
| | Off site deviation | 128(0.179) | 128(0.179) | 141(0.171) | 141(0.171) | WT | <0.046 | <0.046 | |
| 88 | GGA | GAA | GGG | AAA | AGA | AAG | AGG | GAG | |
| | G | E | G | K | R | K | R | E | 3 |
| | Deviationat mutant site | 0.117 | WT | 0.139 | 0.127 | 0.139 | 0.127 | 0.117 | |
| | Off site deviation | 87(0.239) | WT | 87(0.217) | 87(0.242) | 87(0.217) | 87(0.242) | 87(0.239) | |
| 89 | AAG | GAG | AGG | AAA | GGG | AGA | GAA | GGA | |
| | K | E | R | K | G | R | E | G | 3 |
| | Deviationat mutant site | 0.909 | 0.704 | WT | 1.481 | 0.704 | 0.909 | 1.481 | |
| | Off site deviation | 154 (18.114) | 145 (13.627) | WT | 155 (15.661) | 145 (13.627) | 154 (18.114) | 155 (15.661) | |
| 90 | AUU | GUU | ACC | AUC | ACU | GCU | GCC | GUC | |
| | I | V | T | I | T | A | A | V | 3 |
| | Deviationat mutant site | 0.05 | 0.186 | WT | 0.186 | 0.041 | 0.041 | 0.05 | |
| | Off site deviation | 94(0.06) | <0.186 | WT | <0.186 | 89(0.056) | 89(0.056) | 94(0.06) | |
| 91 | GCU | AUC | ACC | AUU | GCC | GUC | GUU | ACU | |
| | A | I | T | I | A | V | V | T | 3 |
| | Deviationat mutant site | 0.281 | 0.099 | 0.281 | WT | 0.262 | 0.262 | 0.099 | |
| | Off site deviation | 87(0.359) | 86(0.162) | 87(0.359) | WT | 87(0.406) | 87(0.406) | 86(0.162) | |
| 92 | GAU | AAU | GGU | AGU | GAC | AAC | GGC | AGC | |
| | D | N | G | S | D | N | G | S | 3 |
| | Deviationat mutant site | 0.554 | 1.237 | 0.214 | WT | 0.554 | 1.237 | 0.214 | |
| | Off site deviation | <0.554 | (154)15.921 | <0.214 | WT | <0.554 | (154)15.921 | <0.214 | |
| 93 | UAU | UGU | CAU | UAC | CAC | CGU | UGC | CGC | |
| | Y | C | H | Y | H | R | C | R | 3 |
| | Deviationat mutant site | 0.825 | 1.434 | WT | 1.434 | 1.996 | 0.825 | 1.996 | |
| | Off site deviation | (155)17.257 | (153)18.039 | WT | (153)18.039 | (156)16.905 | (155)17.257 | (156)16.905 | |
| 94 | AAU | AGU | GAU | GGU | AGC | GAC | GGC | AAC | |
| | N | S | D | G | S | D | G | N | 3 |
| | Deviationat mutant site | 1.146 | 0.756 | 1.012 | 1.146 | 0.756 | 1.012 | WT | |
| | Off site deviation | (153)20.175 | (146)13.856 | (156)14.767 | (153)20.175 | (146)13.856 | (156)14.767 | WT | |
| 95 | UAU | UGU | CAU | UAC | CAC | CGU | UGC | CGC | |
| | Y | C | H | Y | H | R | C | R | 3 |
| | Deviationat mutant site | 0.072 | 0.061 | WT | 0.061 | 0.035 | 0.072 | 0.035 | |
| | Off site deviation | <0.072 | 128(0.15) | WT | 128(0.15) | 71(0.068) | <0.072 | 71(0.068) | |

| Codon no. | WT | Mutant 1 | Mutant 2 | Mutant 3 | Mutant 4 | Mutant 5 | Mutant 6 | Mutant 7 | No.of models |
|---|---|---|---|---|---|---|---|---|---|
| 96 | AAA | GAA | AGA | AAG | GGA | AGG | GAG | GGG | |
| | K | E | R | K | G | R | E | G | 3 |
| | Deviationat mutant site | 0.183 | 0.035 | WT | 0.235 | 0.035 | 0.183 | 0.235 | |
| | Off site deviation | 92(0.482) | 99(0.147) | WT | 92(0.567) | 99(0.147) | 92(0.482) | 92(0.567) | |
| 97 | UUA | UUG | UCG | CCG | CUG | UCA | CCA | CUA | |
| | L | L | S | P | L | S | P | L | 2 |
| | Deviationat mutant site | WT | 0.138 | 0.155 | WT | 0.138 | 0.155 | WT | |
| | Off site deviation | WT | <0.138 | <0.155 | WT | <0.138 | <0.155 | WT | |
| 98 | CCA | CCG | UUA | CUA | UCA | UUG | UCG | CUG | |
| | P | P | L | L | S | L | S | L | 2 |
| | Deviationat mutant site | WT | 0.17 | 0.17 | 0.016 | 0.17 | 0.016 | 0.17 | |
| | Off site deviation | WT | <0.17 | <0.17 | 141(0.188) | <0.17 | 141(0.188) | <0.17 | |
| 99 | GAU | AAU | GGU | AGU | GAC | AAC | GGC | AGC | |
| | D | N | G | S | D | N | G | S | 3 |
| | Deviationat mutant site | 0.169 | 0.348 | 0.213 | WT | 0.169 | 0.348 | 0.213 | |
| | Off site deviation | 141(0.204) | <0.348 | <0.213 | WT | 141(0.204) | <0.348 | <0.213 | |
| 100 | GAU | AAU | GGU | AGU | GAC | AAC | GGC | AGC | |
| | D | N | G | S | D | N | G | S | 3 |
| | Deviation at mutant site | 0.054 | 0.059 | 0.149 | WT | 0.054 | 0.059 | 0.149 | |
| | Off site deviation | <0.054 | <0.059 | <0.149 | WT | <0.054 | <0.059 | <0.149 | |
| 101 | UUU | CUU | UCU | UUC | CCU | UCC | CUC | CCC | |
| | F | L | S | F | P | S | L | P | 3 |
| | Deviation at mutant site | 0.144 | 0.206 | WT | 0.421 | 0.206 | 0.144 | 0.421 | |
| | Off site deviation | <0.144 | <0.206 | WT | <0.421 | <0.206 | <0.144 | <0.421 | |
| 102 | ACA | GCA | GCG | ACG | AUA | AUG | GUG | GUA | |
| | T | A | A | T | I | M | V | V | 4 |
| | Deviation at mutant site | 0.058 | 0.058 | WT | 0.084 | 0.058 | 0.067 | 0.067 | |
| | Off site deviation | 128(0.173) | 128(0.173) | WT | 141(0.207) | 128(0.173) | 141(0.203) | 141(0.203) | |
| 103 | GGC | AGC | AAC | GAC | GGU | AGU | AAU | GAU | |
| | G | S | N | D | G | S | N | D | 3 |
| | Deviation at mutant site | 0.207 | 0.248 | 0.261 | WT | 0.207 | 0.248 | 0.261 | |
| | Off site deviation | 185(0.404) | 185(0.399) | 104(0.456) | WT | 185(0.404) | 185(0.399) | 104(0.456) | |
| 104 | UGC | UAC | CGC | UGU | CGU | CAC | UAU | CAU | |
| | C | Y | R | C | R | H | Y | H | 3 |
| | Deviation at mutant site | 0.237 | 0.255 | WT | 0.255 | 0.13 | 0.237 | 0.13 | |
| | Off site deviation | 51(0.381) | 51(0.291) | WT | 51(0.291) | 51(0.261) | 51(0.381) | 51(0.261) | |
| 105 | GUU | AUU | ACC | AUC | ACU | GCC | GUC | GCU | |
| | V | I | T | I | T | A | V | A | 3 |
| | Deviation at mutant site | 0.065 | 0.074 | 0.065 | 0.074 | 0.014 | WT | 0.014 | |
| | Off site deviation | 184(0.085) | 141(0.204) | 184(0.085) | 141(0.204) | 141(0.171) | WT | 141(0.171) | |
| 106 | AUA | GUG | AUG | GUA | ACA | GCG | ACG | GCA | |
| | I | V | M | V | T | A | T | A | 4 |
| | Deviation at mutant site | 0.036 | 0.081 | 0.036 | 0.028 | 0.028 | 0.028 | 0.028 | |
| | Off site deviation | 195(0.039) | 106(0.081) | 195(0.039) | 107(0.028) | 141(0.201) | 107(0.028) | 141(0.201) | |
| 107 | GCU | AUC | ACC | AUU | GCC | GUC | GUU | ACU | |
| | A | I | T | I | A | V | V | T | 3 |
| | Deviation at mutant site | 0.193 | 0.096 | 0.193 | WT | 0.113 | 0.113 | 0.096 | |
| | Off site deviation | 48 (0.329) | <0.096 | 48 (0.329) | WT | 48 (0.301) | 48 (0.301) | <0.096 | |
| 108 | UGG | CGG | CAG | CGA | CAA | UAG | UGA | UAA | |
| | W | R | Q | R | Q | STOP | STOP | STOP | 3 |
| | Deviation at mutant site | 0.12 | 0.177 | 0.12 | 0.177 | - | - | - | |
| | Off site deviation | 48 (0.31) | 48 (0.309) | 48 (0.31) | 48 (0.309) | 92 (0.533) | 92 (0.533) | 92 (0.533) | |
| 109 | AAU | AGU | GAU | GGU | AGC | GAC | GGC | AAC | |
| | N | S | D | G | S | D | G | N | 3 |
| | Deviation at mutant site | 0.071 | 0.177 | 0.105 | 0.071 | 0.177 | 0.105 | WT | |
| | Off site deviation | 48 (0.318) | 48 (0.3) | 48 (0.32) | 48 (0.318) | 48 (0.3) | 48 (0.32) | WT | |
| 110 | UCU | CCU | CUU | CCC | UCC | UUC | UUU | CUC | |
| | S | P | L | P | S | F | F | L | 3 |
| | Deviation at mutant site | 0.626 | 0.18 | 0.626 | WT | 0.317 | 0.317 | 0.18 | |
| | Off site deviation | 117 (4.088) | 48 (0.329) | 117 (4.088) | WT | 117 (4.102) | 117 (4.102) | 48 (0.329) | |
| 111 | AAC | GGC | GAC | AGC | AAU | GAU | AGU | GGU | |
| | N | G | D | S | N | D | S | G | 3 |
| | Deviation at mutant site | 0.118 | 0.098 | 0.103 | WT | 0.098 | 0.103 | 0.118 | |
| | Off site deviation | 141 (0.195) | 141(0.193) | 117 (4.164) | WT | 141(0.193) | 117 (4.164) | 141 (0.195) | |
| 112 | AAU | AGU | GAU | GGU | AGC | GAC | GGC | AAC | |
| | N | S | D | G | S | D | G | N | 3 |
| | Deviation at mutant site | 0.015 | 0.128 | 0.229 | 0.015 | 0.128 | 0.229 | WT | |
| | Off site deviation | 172 (0.117) | 141 (0.209) | 118 (4.667) | 172 (0.117) | 141 (0.209) | 118 (4.667) | WT | |
| 113 | CUU | CUC | CCU | CCC | UCC | UUU | UCU | UUC | |
| | L | L | P | P | S | F | S | F | 3 |
| | Deviation at mutant site | WT | 0.379 | 0.379 | 0.923 | 0.059 | 0.923 | 0.059 | |
| | Off site deviation | WT | 117 (1.314) | 117 (1.314) | 153(18.302) | 117 (1.313) | 153(18.302) | 117 (1.313) | |
| 114 | GAU | AAU | GGU | AGU | GAC | AAC | GGC | AGC | |
| | D | N | G | S | D | N | G | S | 3 |
| | Deviation at mutant site | 0.11 | 0.271 | 0.957 | WT | 0.11 | 0.271 | 0.957 | |
| | Off site deviation | <0.11 | 117 (0.426) | 154 (18.109) | WT | <0.11 | 117 (0.426) | 154 (18.109) | |
| 115 | UCU | CCU | CUU | CCC | UCC | UUC | UUU | CUC | |
| | S | P | L | P | S | F | F | L | 3 |
| | Deviation at mutant site | 2.289 | 1.573 | 2.289 | WT | 1.814 | 1.814 | 1.573 | |
| | Off site deviation | 117 (3.493) | 114 (2.332) | 117 (3.493) | WT | 118 (5.153) | 118 (5.153) | 114 (2.332) | |
| 116 | AAG | GAG | AGG | AAA | GGG | AGA | GAA | GGA | |
| | K | E | R | K | G | R | E | G | 3 |
| | Deviation at mutant site | 0.859 | 1.475 | WT | 2.144 | 1.475 | 0.859 | 2.144 | |
| | Off site deviation | 115 (0.1601) | 153(18.305) | WT | 154 (18.126) | 153(18.305) | 115 (0.1601) | 154 (18.126) | |
| 117 | GUU | AUU | ACC | AUC | ACU | GCC | GUC | GCU | |
| | V | I | T | I | T | A | V | A | 3 |
| | Deviation at mutant site | 0.053 | 3.96 | 0.053 | 3.96 | 5.093 | WT | 5.093 | |
| | Off site deviation | 128 (0.164) | <3.96 | 128 (0.164) | <3.96 | 154 (18.056) | WT | 154 (18.056) | |
| 118 | GGU | GGC | GAC | AGC | AAC | GAU | AGU | AAU | |
| | G | G | D | S | N | D | S | N | 3 |
| | Deviation at mutant site | WT | 1.581 | 1.929 | 1.926 | 1.581 | 1.929 | 1.926 | |
| | Off site deviation | WT | 117 (3.736) | 117 (3.898) | 117 (3.9) | 117 (3.736) | 117 (3.898) | 117 (3.9) | |
| 119 | GGU | GGC | GAC | AGC | AAC | GAU | AGU | AAU | |
| | G | G | D | S | N | D | S | N | 3 |
| | Deviation at mutant site | WT | 2.402 | 1.741 | 2.508 | 2.402 | 1.741 | 2.508 | |

| Codon no. | WT | Mutant 1 | Mutant 2 | Mutant 3 | Mutant 4 | Mutant 5 | Mutant 6 | Mutant 7 | No.of models |
|---|---|---|---|---|---|---|---|---|---|
| | Off site deviation | WT | 154 (18.052) | 154 (18.025) | 155 (14.677) | 154 (18.052) | 154 (18.025) | 155 (14.677) | |
| 120 | AAU | AGU | GAU | GGU | AGC | GAC | GGC | AAC | |
| | N | S | D | G | S | D | G | N | 3 |
| | Deviation at mutant site | 1.341 | 1.354 | 1.302 | 1.341 | 1.354 | 1.302 | WT | |
| | Off site deviation | 154 (18.11) | 154 (18.095) | 153 (18.304) | 154 (18.11) | 154 (18.095) | 153 (18.304) | WT | |
| 121 | UAU | UGU | CAU | UAC | CAC | CGU | UGC | CGC | |
| | Y | C | H | Y | H | R | C | R | 3 |
| | Deviation at mutant site | 0.656 | 0.639 | WT | 0.639 | 0.594 | 0.656 | 0.594 | |
| | Off site deviation | 151 (9.284) | 156 (17.552) | WT | 156 (17.552) | 156 (17.557) | 151 (9.284) | 156 (17.557) | |
| 122 | AAU | AGU | GAU | GGU | AGC | GAC | GGC | AAC | |
| | N | S | D | G | S | D | G | N | 3 |
| | Deviation at mutant site | 2.004 | 0.955 | 2.431 | 2.004 | 0.955 | 2.431 | WT | |
| | Off site deviation | 146 (13.423) | 154 (17.931) | 148 (21.328) | 146 (13.423) | 154 (17.931) | 148 (21.328) | WT | |
| 123 | UAC | UGC | CGC | CGU | UGU | CAC | CAU | UAU | |
| | Y | C | R | R | C | H | H | Y | 3 |
| | Deviation at mutant site | 1.364 | 0.39 | 0.39 | 1.364 | 1.068 | 1.068 | WT | |
| | Off site deviation | 154 (20.422) | 153 (17.029) | 153 (17.029) | 154 (20.422) | 154 (18.114) | 154 (18.114) | WT | |
| 124 | CUG | CUA | UCG | UCA | UUA | CCG | CCA | UUG | |
| | L | L | S | S | L | P | P | L | 2 |
| | Deviation at mutant site | WT | 0.494 | 0.494 | WT | 0.1779 | 0.1779 | WT | |
| | Off site deviation | WT | 155 (16.581) | 155 (16.581) | WT | 154 (17.589) | 154 (17.589) | WT | |
| 125 | UAU | UGU | CAU | UAC | CAC | CGU | UGC | CGC | |
| | Y | C | H | Y | H | R | C | R | 3 |
| | Deviation at mutant site | 1.106 | 2.378 | WT | 2.378 | 0.373 | 1.106 | 0.373 | |
| | Off site deviation | 156 (18.996) | 153 (21.877) | WT | 153 (21.877) | 155 (16.501) | 156 (18.996) | 155 (16.501) | |
| 126 | AGA | AAG | AAA | GAA | GGG | GGA | AGG | GAG | |
| | R | K | K | E | G | G | R | E | 3 |
| | Deviation at mutant site | 0.972 | 0.972 | 0.714 | 1.116 | 1.116 | WT | 0.714 | |
| | Off site deviation | 151 (9.576) | 151 (9.576) | 147 (16.486) | 154 (16.938) | 154 (16.938) | WT | 147 (16.486) | |
| 127 | UUG | UUA | CUG | UCG | CCG | CUA | UCA | CCA | |
| | L | L | L | S | P | L | S | P | 2 |
| | Deviation at mutant site | WT | WT | 1.637 | 2.732 | WT | 1.637 | 2.732 | |
| | Off site deviation | WT | WT | 153 (19.069) | 153 (16.857) | WT | 153 (19.069) | 153 (16.857) | |
| 128 | UUU | CUU | UCU | UUC | CCU | UCC | CUC | CCC | |
| | F | L | S | F | P | S | L | P | 3 |
| | Deviation at mutant site | 1.893 | 1.668 | WT | 1.848 | 1.668 | 1.893 | 1.848 | |
| | Off site deviation | 154 (20.067) | 154 (19.026) | WT | 155 (16.196) | 154 (19.026) | 154 (20.067) | 155 (16.196) | |
| 129 | AGG | GAA | GAG | GGG | AAA | AGA | AAG | GGA | |
| | R | E | E | G | K | R | K | G | 3 |
| | Deviation at mutant site | 1.66 | 1.66 | 1.463 | 1.944 | WT | 1.944 | 1.463 | |
| | Off site deviation | 146 (17.839) | 146 (17.839) | 153 (18.203) | 153 (15.732) | WT | 153 (15.732) | 153 (18.203) | |
| 130 | AAG | GAG | AGG | AAA | GGG | AGA | GAA | GGA | |
| | K | E | R | K | G | R | E | G | 3 |
| | Deviation at mutant site | 1.759 | 2.598 | WT | 1.321 | 2.598 | 1.759 | 1.321 | |
| | Off site deviation | 153(17.601) | 154(16.458) | WT | 153(16.264) | 154(16.458) | 153(17.601) | 153(16.264) | |
| 131 | UCU | CCU | CUU | CCC | UCC | UUC | UUU | CUC | |
| | S | P | L | P | S | F | F | L | 3 |
| | Deviation at mutant site | 3.49 | 2.482 | 3.49 | WT | 1.003 | 1.003 | 2.482 | |
| | Off site deviation | 153(19.302) | 154(22.587) | 153(19.302) | WT | 153(14.798) | 153(14.798) | 154(22.587) | |
| 132 | AAU | AGU | GAU | GGU | AGC | GAC | GGC | AAC | |
| | N | S | D | G | S | D | G | N | 3 |
| | Deviation at mutant site | 0.685 | 1.495 | 2.162 | 0.685 | 1.495 | 2.162 | WT | |
| | Off site deviation | 156(17.704) | 156(13.419) | 148(13.782) | 156(17.704) | 156(13.419) | 148(13.782) | WT | |
| 133 | CUC | UUC | CCC | CCU | CUU | UCU | UUU | UCC | |
| | L | F | P | P | L | S | F | S | 3 |
| | Deviation at mutant site | 1.765 | 1.216 | 1.216 | WT | 1.554 | 1.765 | 1.554 | |
| | Off site deviation | 145(13.622) | 148(15.246) | 148(15.246) | WT | 156(15.787) | 145(13.622) | 156(15.787) | |
| 134 | AAA | GAA | AGA | AAG | GGA | AGG | GAG | GGG | |
| | K | E | R | K | G | R | E | G | 3 |
| | Deviation at mutant site | 1.828 | 0.087 | WT | 0.374 | 0.087 | 1.828 | 0.374 | |
| | Off site deviation | 155(20.81) | 132(0.139) | WT | 151(11.308) | 132(0.139) | 155(20.81) | 151(11.308) | |
| 135 | CCU | UCU | UUU | UUC | CUU | CCC | CUC | UCC | |
| | P | S | F | F | L | P | L | S | 3 |
| | Deviation at mutant site | 0.076 | 1.534 | 1.534 | 1.524 | WT | 1.524 | 0.076 | |
| | Off site deviation | 141(0.205) | 153(16.156) | 153(16.156) | 153(16.147) | WT | 153(16.147) | 141(0.205) | |
| 136 | UUU | CUU | UCU | UUC | CCU | UCC | CUC | CCC | |
| | F | L | S | F | P | S | L | P | 3 |
| | Deviation at mutant site | 0.028 | 1.158 | WT | 0.192 | 1.158 | 0.028 | 0.192 | |
| | Off site deviation | 98(0.033) | 153(18.309) | WT | <0.192 | 153(18.309) | 98(0.033) | <0.192 | |
| 137 | GAG | AGA | AAG | GAA | GGG | AGG | GGA | AAA | |
| | E | R | K | E | G | R | G | K | 3 |
| | Deviation at mutant site | 0.046 | 0.129 | WT | 1.623 | 0.046 | 1.623 | 0.129 | |
| | Off site deviation | 92(0.642) | 92(0.614) | WT | 153(18.934) | 92(0.642) | 153(18.934) | 92(0.614) | |
| 138 | AGA | AAG | AAA | GAA | GGG | GGA | AGG | GAG | |
| | R | K | K | E | G | G | R | E | 3 |
| | Deviation at mutant site | 2.037 | 2.037 | 1.515 | 1.341 | 1.341 | WT | 1.515 | |
| | Off site deviation | 153(21.476) | 153(21.476) | 153(20.243) | 153(20.162) | 153(20.162) | WT | 153(20.243) | |
| 139 | GAU | AAU | GGU | AGU | GAC | AAC | GGC | AGC | |
| | D | N | G | S | D | N | G | S | 3 |
| | Deviation at mutant site | 1.608 | 0.631 | 1.153 | WT | 1.608 | 0.631 | 1.153 | |
| | Off site deviation | 155(15.023) | 148(16.056) | 147(15.585) | WT | 155(15.023) | 148(16.056) | 147(15.585) | |
| 140 | AUU | GUU | ACC | AUC | ACU | GCU | GCC | GUC | |
| | I | V | T | I | T | A | A | V | 3 |
| | Deviation at mutant site | 2.457 | 1.76 | WT | 1.76 | 0.658 | 0.658 | 2.457 | |
| | Off site deviation | 153(17.811) | 154(20.4) | WT | 154(20.4) | 156(17.197) | 156(17.197) | 153(17.811) | |
| 141 | UCA | UCG | CCA | CUA | UUA | CCG | CUG | UUG | |
| | S | S | P | L | L | P | L | L | 2 |
| | Deviation at mutant site | WT | 3.994 | 4.586 | 4.586 | 3.994 | 4.586 | 4.586 | |
| | Off site deviation | WT | 153(20.887) | 153(17.333) | 153(17.333) | 153(20.887) | 153(17.333) | 153(17.333) | |
| 142 | ACU | GCU | GCC | GUU | GUC | ACC | AUU | AUC | |
| | T | A | A | V | V | T | I | I | 3 |
| | Deviation at mutant site | 4.428 | 4.428 | 4.962 | 4.962 | WT | 1.694 | 1.694 | |
| | Off site deviation | 156(13.201) | 156(13.201) | 156(12.374) | 156(12.374) | WT | 153(19.596) | 153(19.596) | |
| 143 | GAA | GAG | AAA | GGA | GGG | AAG | AGA | AGG | |
| | E | E | K | G | G | K | R | R | 3 |

| Codon no. | WT | Mutant 1 | Mutant 2 | Mutant 3 | Mutant 4 | Mutant 5 | Mutant 6 | Mutant 7 | No.of models |
|---|---|---|---|---|---|---|---|---|---|
| | Deviation at mutant site | WT | 10.369 | 3.436 | 3.436 | 10.369 | 5.148 | 5.148 | |
| | Off site deviation | WT | 154(16.871) | 156(12.405) | 156(12.405) | 154(16.871) | 156(20.313) | 156(20.313) | |
| 144 | AUC | GUC | GCC | GUU | ACC | AUU | ACU | GCU | |
| | I | V | A | V | T | I | T | A | 3 |
| | Deviation at mutant site | 8.753 | 4.432 | 8.753 | 12.886 | WT | 12.886 | 4.432 | |
| | Off site deviation | 155(16.777) | 153(18.144) | 155(16.777) | 153(20.312) | WT | 153(20.312) | 153(18.144) | |
| 145 | UAU | UGU | CAU | UAC | CAC | CGU | UGC | CGC | |
| | Y | C | H | Y | H | R | C | R | 3 |
| | Deviation at mutant site | 8.057 | 3.531 | WT | 3.531 | 6.714 | 8.057 | 6.714 | |
| | Off site deviation | 155(16.872) | 148(13.922) | WT | 148(13.922) | 153(14.417) | 155(16.872) | 153(14.417) | |
| 146 | CAG | CGA | CGG | CAA | UAG | UGA | UGG | UAA | |
| | Q | R | R | Q | Stop | Stop | W | Stop | 3 |
| | Deviation at mutant site | 8.28 | 8.28 | WT | - | - | 10.707 | - | |
| | Off site deviation | 153(19.9) | 153(19.9) | WT | 117(5.443) | 117(5.443) | 153(20.029) | 117(5.443) | |
| 147 | GCC | ACC | AUC | AUU | ACU | GUU | GUC | GCU | |
| | A | T | I | I | T | V | V | A | 3 |
| | Deviation at mutant site | 16.288 | 6.413 | 6.413 | 16.288 | 13.026 | 13.026 | WT | |
| | Off site deviation | 156(18.175) | 143(19.746) | 143(19.746) | 156(18.175) | 154(18.89) | 154(18.89) | WT | |
| 148 | GGU | GGC | GAC | AGC | AAC | GAU | AGU | AAU | |
| | G | G | D | S | N | D | S | N | 3 |
| | Deviation at mutant site | WT | 10.301 | 6.652 | 1.697 | 10.301 | 6.652 | 1.697 | |
| | Off site deviation | WT | 153(21.451) | 153(17.215) | 153(20.483) | 153(21.451) | 153(17.215) | 153(20.483) | |
| 149 | AGC | GAC | AAC | GGC | AGU | GAU | AAU | GGU | |
| | S | D | N | G | S | D | N | G | 3 |
| | Deviation at mutant site | 5.854 | 6.563 | 5.111 | WT | 5.854 | 6.563 | 5.111 | |
| | Off site deviation | 145(15.3) | 153(19.588) | 146(13.398) | WT | 145(15.3) | 153(19.588) | 146(13.398) | |
| 150 | ACA | GCA | GCG | ACG | AUA | AUG | GUG | GUA | |
| | T | A | A | T | I | M | V | V | 4 |
| | Deviation at mutant site | 7.732 | 7.732 | WT | 7.47 | 9.213 | 15.325 | 15.325 | |
| | Off site deviation | 154(19.333) | 154(19.333) | WT | 155(19.31) | 153(20.458) | 148(23.791) | 148(23.791) | |
| 151 | CCU | UCU | UUU | UUC | CUU | CCC | CUC | UCC | |
| | P | S | F | F | L | P | L | S | 3 |
| | Deviation at mutant site | 8.107 | 8.27 | 8.27 | 12.139 | WT | 12.139 | 8.107 | |
| | Off site deviation | (153)18.623 | (153)14 | (153)14 | (156)16.497 | WT | (156)16.497 | (153)18.623 | |
| 152 | UGU | UAU | CGU | CGC | UGC | CAU | CAC | UAC | |
| | C | Y | R | R | C | H | H | Y | 3 |
| | Deviation at mutant site | 13.957 | 6.744 | 6.744 | WT | 14.057 | 14.057 | 13.957 | |
| | Off site deviation | (153)20.896 | (148)19.558 | (148)19.558 | WT | (153)17.848 | (153)17.848 | (153)20.896 | |
| 153 | AAU | AGU | GAU | GGU | AGC | GAC | GGC | AAC | |
| | N | S | D | G | S | D | G | N | 3 |
| | Deviation at mutant site | 10.133 | 18.299 | 14.794 | 10.133 | 18.299 | 14.794 | WT | |
| | Off site deviation | (152)14.144 | (152)16.177 | (148)18.649 | (152)14.144 | (152)16.177 | (148)18.649 | WT | |
| 154 | GGU | GGC | GAC | AGC | AAC | GAU | AGU | AAU | |
| | G | G | D | S | N | D | S | N | 3 |
| | Deviation at mutant site | WT | 16.834 | 11.695 | 11.643 | 16.834 | 11.695 | 11.643 | |
| | Off site deviation | WT | (153)18.038 | (156)16.737 | (153)13.372 | (153)18.038 | (156)16.737 | (153)13.372 | |
| 155 | GUU | AUU | ACC | AUC | ACU | GCC | GUC | GCU | |
| | V | I | T | I | T | A | V | A | 3 |
| | Deviation at mutant site | 15.197 | 14.446 | 15.197 | 14.446 | 13.045 | WT | 13.045 | |
| | Off site deviation | (153)18.382 | (153)19.815 | (153)18.382 | (153)19.815 | (154)15.266 | WT | (154)15.266 | |
| 156 | GAA | GAG | AAA | GGA | GGG | AAG | AGA | AGG | |
| | E | E | K | G | G | K | R | R | 3 |
| | Deviation at mutant site | WT | 3.272 | 20.838 | 20.838 | 3.272 | 14.132 | 14.132 | |
| | Off site deviation | WT | (153)11.41 | (155)22.075 | (155)22.075 | (153)11.41 | (153)18.598 | (153)18.598 | |
| 157 | GGU | GGC | GAC | AGC | AAC | GAU | AGU | AAU | |
| | G | G | D | S | N | D | S | N | 3 |
| | Deviation at mutant site | WT | 12.066 | 13.547 | 3.41 | 12.066 | 13.547 | 3.41 | |
| | Off site deviation | WT | (153)16.579 | (156)15.128 | (152)10.643 | (153)16.579 | (156)15.128 | (152)10.643 | |
| 158 | UUU | CUU | UCU | UUC | CCU | UCC | CUC | CCC | |
| | F | L | S | F | P | S | L | P | 3 |
| | Deviation at mutant site | 5.738 | 10.66 | WT | 2.019 | 10.66 | 5.738 | 2.019 | |
| | Off site deviation | (153)20.887 | (156)12.232 | WT | (153)15.097 | (156)12.232 | (153)20.887 | (153)15.097 | |
| 159 | AAU | AGU | GAU | GGU | AGC | GAC | GGC | AAC | |
| | N | S | D | G | S | D | G | N | 3 |
| | Deviation at mutant site | 7.912 | 5.371 | 7.136 | 7.912 | 5.371 | 7.136 | WT | |
| | Off site deviation | 153 (19.659) | 155 (16.565) | 146 (15.298) | 153 (19.659) | 155 (16.565) | 146 (15.298) | WT | |
| 160 | UGU | UAU | CGU | CGC | UGC | CAU | CAC | UAC | |
| | C | Y | R | R | C | H | H | Y | 3 |
| | Deviation at mutant site | 3.575 | 2.044 | 2.044 | WT | 2.044 | 2.044 | 3.575 | |
| | Off site deviation | (151) 17.532 | (153) 20.381 | (153) 20.381 | WT | (151) 12.657 | (151) 12.657 | (151) 17.532 | |
| 161 | UAC | UGC | CGC | CGU | UGU | CAC | CAU | UAU | |
| | Y | C | R | R | C | H | H | Y | 3 |
| | Deviation at mutant site | 2.26 | 0.871 | 0.871 | 2.26 | 0.603 | 0.603 | WT | |
| | Off site deviation | (154) 17.893 | (153) 18.639 | (153) 18.639 | (154) 17.893 | (150) 11.541 | (150) 11.541 | WT | |
| 162 | UUU | CUU | UCU | UUC | CCU | UCC | CUC | CCC | |
| | F | L | S | F | P | S | L | P | 3 |
| | Deviation at mutant site | 1.323 | 2.703 | WT | 1.901 | 2.703 | 1.323 | 1.901 | |
| | Off site deviation | (151) 17.861 | (156) 13.464 | WT | (154) 17.62 | (156) 13.464 | (151) 17.861 | (154) 17.62 | |
| 163 | CCU | UCU | UUU | UUC | CUU | CCC | CUC | UCC | |
| | P | S | F | F | L | P | L | S | 3 |
| | Deviation at mutant site | 0.934 | 1.707 | 1.707 | 2.034 | WT | 2.034 | 0.934 | |
| | Off site deviation | 145(14.403) | (153) 16.492 | (153) 16.492 | (153) 19.279 | WT | (153) 19.279 | 145(14.403) | |
| 164 | UUA | UUG | UCG | CCG | CUG | UCA | CCA | CUA | |
| | L | L | S | P | L | S | P | L | 2 |
| | Deviation at mutant site | WT | 2.838 | 0.934 | WT | 2.838 | 0.934 | WT | |
| | Off site deviation | WT | (156) 16.44 | (145) 14.403 | WT | (156) 16.44 | (145) 14.403 | WT | |
| 165 | CAA | CGA | CAG | CGG | UGA | UAG | UGG | UAA | |
| | Q | R | Q | R | Stop | Stop | W | Stop | 3 |
| | Deviation at mutant site | 2.314 | WT | 2.314 | - | - | 1.124 | - | |
| | Off site deviation | 154 (19.507) | WT | 154 (19.507) | 153 (16.009) | 153 (16.009) | 56 (16.837) | 153 (16.009) | |
| 166 | UCA | UCG | CCA | CUA | UUA | CCG | CUG | UUG | |
| | S | S | P | L | L | P | L | L | 2 |
| | Deviation at mutant site | WT | 1.496 | 1.953 | 1.953 | 1.496 | 1.953 | 1.953 | |
| | Off site deviation | WT | (154) 17.275 | (153) 17.052 | (153) 17.052 | (154) 17.275 | (153) 17.052 | (153) 17.052 | |
| 167 | UAU | UGU | CAU | UAC | CAC | CGU | UGC | CGC | |

| Codon no. | WT | Mutant 1 | Mutant 2 | Mutant 3 | Mutant 4 | Mutant 5 | Mutant 6 | Mutant 7 | No.of models |
|---|---|---|---|---|---|---|---|---|---|
| | Y | C | H | Y | H | R | C | R | 3 |
| | Deviation at mutant site | 1.604 | 1.419 | WT | 1.419 | 0.053 | 1.604 | 0.053 | |
| | Off site deviation | (155) 15.746 | (153) 18.403 | WT | (153) 18.403 | 128(0.156) | (155) 15.746 | 128(0.156) | |
| 168 | GGU | GGC | GAC | AGC | AAC | GAU | AGU | AAU | |
| | G | G | D | S | N | D | S | N | 3 |
| | Deviation at mutant site | WT | 0.197 | 0.238 | 0.177 | 0.197 | 0.238 | 0.177 | |
| | Off site deviation | WT | <0.197 | <0.238 | <0.177 | <0.197 | <0.238 | <0.177 | |
| 169 | UUC | CCU | UCU | CUU | UUU | CCC | CUC | UCC | |
| | F | P | S | L | F | P | L | S | 3 |
| | Deviation at mutant site | 0.285 | 0.304 | 0.308 | WT | 0.285 | 0.308 | 0.304 | |
| | Off site deviation | <0.285 | 118 (4.594) | 118 (4.555) | WT | <0.285 | 118 (4.555) | 118 (4.594) | |
| 170 | CAA | CGA | CAG | CGG | UGA | UAG | UGG | UAA | |
| | Q | R | Q | R | Stop | Stop | W | Stop | 3 |
| | Deviation at mutant site | 0.022 | WT | 0.022 | - | - | 0.009 | - | |
| | Off site deviation | 173 (0.057) | WT | 173 (0.057) | 117 (3.286) | 117 (3.286) | 174 (0.213) | 117 (3.286) | |
| 171 | CCC | UUU | UCC | UUC | CCU | CUU | CUC | UCU | |
| | P | F | S | F | P | L | L | S | 3 |
| | Deviation at mutant site | 0.101 | 0.065 | 0.101 | WT | 0.187 | 0.187 | 0.065 | |
| | Off site deviation | 173(0.676) | 170(0.178) | 173(0.676) | WT | 173(0.651) | 173(0.651) | 170(0.178) | |
| 172 | ACU | GCU | GCC | GUU | GUC | ACC | AUU | AUC | |
| | T | A | A | V | V | T | I | I | 3 |
| | Deviation at mutant site | 2.593 | 2.593 | 0.183 | 0.183 | WT | 0.341 | 0.341 | |
| | Off site deviation | <2.593 | <2.593 | 174(0.568) | 174(0.568) | WT | 174(0.823) | 174(0.823) | |
| 173 | AAU | AGU | GAU | GGU | AGC | GAC | GGC | AAC | |
| | N | S | D | G | S | D | G | N | 3 |
| | Deviation at mutant site | 0.092 | 0.056 | 0.655 | 0.092 | 0.056 | 0.655 | WT | |
| | Off site deviation | 128(0.149) | 168(0.153) | 175(1.469) | 128(0.149) | 168(0.153) | 175(1.469) | WT | |
| 174 | GGU | GGC | GAC | AGC | AAC | GAU | AGU | AAU | |
| | G | G | D | S | N | D | S | N | 3 |
| | Deviation at mutant site | WT | 1.692 | 1.779 | 0.71 | 1.692 | 1.779 | 0.71 | |
| | Off site deviation | WT | <1.692 | <1.779 | <0.71 | <1.692 | <1.779 | <0.71 | |
| 175 | GUU | AUU | ACC | AUC | ACU | GCC | GUC | GCU | |
| | V | I | T | I | T | A | V | A | 3 |
| | Deviation at mutant site | 0.157 | 0.198 | 0.157 | 0.198 | 0.163 | WT | 0.163 | |
| | Off site deviation | 173(0.554) | 174(0.633) | 173(0.554) | 174(0.633) | 174(0.425) | WT | 174(0.425) | |
| 176 | GGU | GGC | GAC | AGC | AAC | GAU | AGU | AAU | |
| | G | G | D | S | N | D | S | N | 3 |
| | Deviation at mutant site | WT | 0.344 | 0.306 | 0.344 | 0.344 | 0.306 | 0.344 | |
| | Off site deviation | WT | 174(0.439) | 174(0.412) | 174(0.423) | 174(0.439) | 174(0.412) | 174(0.423) | |
| 177 | UAC | UGC | CGC | CGU | UGU | CAC | CAU | UAU | |
| | Y | C | R | R | C | H | H | Y | 3 |
| | Deviation at mutant site | 0.045 | 0.079 | 0.079 | 0.045 | 0.032 | 0.032 | WT | |
| | Off site deviation | 141(0.201) | 170(0.153) | 170(0.153) | 141(0.201) | 141(0.205) | 141(0.205) | WT | |
| 178 | CAA | CGA | CAG | CGG | UGA | UAG | UGG | UAA | |
| | Q | R | Q | R | Stop | Stop | W | Stop | 3 |
| | Deviation at mutant site | 0.046 | WT | 0.046 | - | - | 0.129 | - | |
| | Off site deviation | 128(0.121) | WT | 128(0.121) | 117(3.198) | 117(3.198) | 128(0.158) | 117(3.198) | |
| 179 | CCA | CCG | UUA | CUA | UCA | UUG | UCG | CUG | |
| | P | P | L | L | S | L | S | L | 2 |
| | Deviation at mutant site | WT | 0.334 | 0.334 | 0.1 | 0.334 | 0.1 | 0.334 | |
| | Off site deviation | WT | 73 (0.42) | 73 (0.42) | <0.1 | 73 (0.42) | <0.1 | 73 (0.42) | |
| 180 | UAC | UGC | CGC | CGU | UGU | CAC | CAU | UAU | |
| | Y | C | R | R | C | H | H | Y | 3 |
| | Deviation at mutant site | 0.034 | 0.054 | 0.054 | 0.034 | 0.044 | 0.044 | WT | |
| | Off site deviation | 76 (0.068) | 109 (0.227) | 109 (0.227) | 76 (0.068) | 141 (0.213) | 141 (0.213) | WT | |
| 181 | AGA | AAG | AAA | GAA | GGG | GGA | AGG | GAG | |
| | R | K | K | E | G | G | R | E | 3 |
| | Deviation at mutant site | 0.065 | 0.065 | 0.088 | 0.096 | 0.096 | WT | 0.088 | |
| | Off site deviation | 141 (0.212) | 141 (0.212) | 114 (0.202) | 114 (0.16) | 114 (0.16) | WT | 114 (0.202) | |
| 182 | GUA | AUA | GUG | AUG | GCA | ACA | GCG | ACG | |
| | V | I | V | M | A | T | A | T | 4 |
| | Deviation at mutant site | 0.096 | WT | 0.164 | 0.037 | 0.07 | 0.037 | 0.07 | |
| | Off site deviation | 82 (0.098) | WT | <0.164 | 141 (0.181) | 199(0.144) | 141 (0.181) | 199(0.144) | |
| 183 | GUA | AUA | GUG | AUG | GCA | ACA | GCG | ACG | |
| | V | I | V | M | A | T | A | T | 4 |
| | Deviation at mutant site | 0.095 | WT | 0.214 | 0.014 | 0.077 | 0.014 | 0.077 | |
| | Off site deviation | 71, 128 (0.14) | WT | 13 (0.225) | 141 (0.206) | <0.077 | 141 (0.206) | <0.077 | |
| 184 | GUA | AUA | GUG | AUG | GCA | ACA | GCG | ACG | |
| | V | I | V | M | A | T | A | T | 4 |
| | Deviation at mutant site | 0.084 | WT | 0.187 | 0.039 | 0.045 | 0.039 | 0.045 | |
| | Off site deviation | 141 (0.203) | WT | 184(0.187) | 141 (0.185) | 184 (0.045) | 141 (0.185) | 184 (0.045) | |
| 185 | CUU | CUC | CCU | CCC | UCC | UUU | UCU | UUC | |
| | L | L | P | P | S | F | S | F | 3 |
| | Deviation at mutant site | WT | 0.183 | 0.183 | 0.045 | 0.193 | 0.045 | 0.193 | |
| | Off site deviation | WT | 104 (0.195) | 104 (0.195) | 141 (0.173) | 69 (0.21) | 141 (0.173) | 69 (0.21) | |
| 186 | UCU | CCU | CUU | CCC | UCC | UUC | UUU | CUC | |
| | S | P | L | P | S | F | F | L | 3 |
| | Deviation at mutant site | 0.209 | 0.083 | 0.209 | WT | 0.052 | 0.052 | 0.083 | |
| | Off site deviation | <0.209 | <0.083 | <0.209 | WT | <0.052 | <0.052 | <0.083 | |
| 187 | UUU | CUU | UCU | UUC | CCU | UCC | CUC | CCC | |
| | F | L | S | F | P | S | L | P | 3 |
| | Deviation at mutant site | 0.13 | 0.114 | WT | 0.374 | 0.114 | 0.13 | 0.374 | |
| | Off site deviation | 103 (0.173) | 114 (0.218) | WT | <0.374 | 114 (0.218) | 103 (0.173) | <0.374 | |
| 188 | GAA | GAG | AAA | GGA | GGG | AAG | AGA | AGG | |
| | E | E | K | G | G | K | R | R | 3 |
| | Deviation at mutant site | WT | 0.067 | 0.276 | 0.276 | 0.067 | 0.099 | 0.099 | |
| | Off site deviation | WT | 186 (0.075) | <0.276 | <0.276 | 186 (0.075) | 128 (0.126) | 128 (0.126) | |
| 189 | CUU | CUC | CCU | CCC | UCC | UUU | UCU | UUC | |
| | L | L | P | P | S | F | S | F | 3 |
| | Deviation at mutant site | WT | 0.149 | 0.149 | 0.107 | 0.106 | 0.107 | 0.106 | |
| | Off site deviation | WT | <0.149 | <0.149 | <0.107 | <0.106 | <0.107 | <0.106 | |
| 190 | CUA | CUG | UUA | UCG | UCA | CCG | CCA | UUG | |
| | L | L | L | S | S | P | P | L | 2 |
| | Deviation at mutant site | WT | WT | 0.067 | 0.067 | 0.301 | 0.301 | WT | |
| | Off site deviation | WT | WT | <0.067 | <0.067 | <0.301 | <0.301 | WT | |

| Codon no. | WT | Mutant 1 | Mutant 2 | Mutant 3 | Mutant 4 | Mutant 5 | Mutant 6 | Mutant 7 | No.of models |
|---|---|---|---|---|---|---|---|---|---|
| 191 | CAU | CGU | UAC | UAU | CAC | UGC | CGC | UGU | |
| | H | R | Y | Y | H | C | R | C | 3 |
| | Deviation at mutant site | 0.057 | 0.052 | 0.052 | WT | 0.039 | 0.057 | 0.039 | |
| | Off site deviation | <0.057 | <0.052 | <0.052 | WT | 141 (0.179) | <0.057 | 141 (0.179) | |
| 192 | GCA | ACG | ACA | GCG | AUG | GUA | AUA | GUG | |
| | A | T | T | A | M | V | I | V | 4 |
| | Deviation at mutant site | 0.224 | 0.224 | WT | 0.057 | 0.213 | 0.273 | 0.213 | |
| | Off site deviation | <0.224 | <0.224 | WT | 141(0.217) | <0.213 | <0.273 | <0.213 | |
| 193 | CCA | CCG | UUA | CUA | UCA | UUG | UCG | CUG | |
| | P | P | L | L | S | L | S | L | 2 |
| | Deviation at mutant site | WT | 0.052 | 0.052 | 0.056 | 0.052 | 0.056 | 0.052 | |
| | Off site deviation | WT | 141 (0.215) | 141 (0.215) | 192 (0.073) | 141 (0.215) | 192 (0.073) | 141 (0.215) | |
| 194 | GCA | ACG | ACA | GCG | AUG | GUA | AUA | GUG | |
| | A | T | T | A | M | V | I | V | 4 |
| | Deviation at mutant site | 0.066 | 0.066 | WT | 0.016 | 0.044 | 0.197 | 0.044 | |
| | Off site deviation | 128 (0.147) | 128 (0.147) | WT | 128 (0.2) | 128 (0.133) | 114 (0.316) | 128 (0.133) | |
| 195 | ACU | GCU | GCC | GUU | GUC | ACC | AUU | AUC | |
| | T | A | A | V | V | T | I | I | 3 |
| | Deviation at mutant site | 0.045 | 0.045 | 0.109 | 0.109 | WT | 0.249 | 0.249 | |
| | Off site deviation | 128(0.131) | 128(0.131) | 128 (0.14) | 128 (0.14) | WT | 31 (0.266) | 31 (0.266) | |
| 196 | GUU | AUU | ACC | AUC | ACU | GCC | GUC | GCU | |
| | V | I | T | I | T | A | V | A | 3 |
| | Deviation at mutant site | 0.098 | 0.064 | 0.098 | 0.064 | 0.08 | WT | 0.08 | |
| | Off site deviation | 66 (0.252) | 141 (0.211) | 66 (0.252) | 141 (0.211) | 141 (0.185) | WT | 141 (0.185) | |
| 197 | UGU | UAU | CGU | CGC | UGC | CAU | CAC | UAC | |
| | C | Y | R | R | C | H | H | Y | 3 |
| | Deviation at mutant site | 0.156 | 0.201 | 0.201 | WT | 0.101 | 0.101 | 0.156 | |
| | Off site deviation | 141 (0.254) | 141 (0.208) | 141 (0.208) | WT | 141 (0.237) | 141 (0.237) | 141 (0.254) | |
| 198 | GGA | GAA | GGG | AAA | AGA | AAG | AGG | GAG | |
| | G | E | G | K | R | K | R | E | 3 |
| | Deviation at mutant site | 0.205 | WT | 0.222 | 0.471 | 0.222 | 0.471 | 0.205 | |
| | Off site deviation | 60 (0.587) | WT | 60 (0.773) | 60 (0.927) | 60 (0.773) | 60 (0.927) | 60 (0.587) | |
| 199 | CCU | UCU | UUU | UUC | CUU | CCC | CUC | UCC | |
| | P | S | F | F | L | P | L | S | 3 |
| | Deviation at mutant site | 0.163 | 0.148 | 0.148 | 0.158 | WT | 0.158 | 0.163 | |
| | Off site deviation | <0.163 | <0.148 | <0.148 | <0.158 | WT | <0.158 | <0.163 | |
| 200 | AAA | GAA | AGA | AAG | GGA | AGG | GAG | GGG | |
| | K | E | R | K | G | R | E | G | 3 |
| | Deviation at mutant site | 0.131 | 0.103 | WT | - | 0.103 | 0.131 | - | |
| | Off site deviation | <0.131 | 141 (0.22) | WT | 141 (0.207) | 141 (0.22) | <0.131 | 141 (0.207) | |
| | | | | | | | | | 598 |