Table S1 Prediction of physicochemical properties and secondary structure of *BraGST*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Protein name | Number of amino acids | pI | Instability index | Aliphatic index | Grand average of hydropathicity | Alpha helix | Beta bridge | Random coil | Extended strand |
| *BraDHAR3* | 257 | 9.35 | 30.7 | 70.1 | -0.4 | 15 | 4 | 47 | 15 |
| *BraDHAR1* | 210 | 6.83 | 36.8 | 96.1 | 0 | 30 | 11 | 86 | 30 |
| *BraDHAR4* | 213 | 5.79 | 42.1 | 103 | -0.1 | 33 | 15 | 65 | 33 |
| *BraGSTF1* | 213 | 5.66 | 38.1 | 90.2 | -0.3 | 33 | 14 | 72 | 33 |
| *BraGSTF10* | 215 | 6.76 | 28.1 | 90.7 | -0.2 | 33 | 13 | 71 | 33 |
| *BraGSTF11* | 210 | 6.41 | 28 | 93 | -0.3 | 35 | 12 | 70 | 35 |
| *BraGSTF12* | 213 | 5.13 | 39 | 87.8 | -0.2 | 19 | 7 | 61 | 19 |
| *BraGSTF13* | 215 | 5.76 | 43.5 | 90.6 | -0.2 | 33 | 9 | 85 | 33 |
| *BraGSTF14* | 254 | 6.67 | 34.3 | 93 | -0.3 | 34 | 12 | 71 | 34 |
| *BraGSTF15* | 248 | 6.25 | 35.5 | 89.3 | -0.4 | 25 | 13 | 62 | 25 |
| *BraGSTF16* | 210 | 7.71 | 33 | 91.5 | -0.2 | 33 | 14 | 81 | 33 |
| *BraGSTF17* | 231 | 5.98 | 38.6 | 90.2 | -0.2 | 31 | 11 | 75 | 31 |
| *BraGSTF18* | 264 | 5.79 | 35.9 | 96.6 | -0.1 | 15 | 10 | 47 | 15 |
| *BraGSTF19* | 215 | 6.17 | 38.7 | 90.2 | -0.2 | 34 | 16 | 70 | 34 |
| *BraGSTF2* | 213 | 5.14 | 36.7 | 97.8 | -0.1 | 30 | 18 | 62 | 30 |
| *BraGSTF20* | 215 | 5.91 | 35.3 | 84.4 | -0.3 | 32 | 9 | 65 | 32 |
| *BraGSTF3* | 213 | 5.05 | 40.6 | 89.4 | -0.3 | 20 | 10 | 77 | 20 |
| *BraGSTF4* | 213 | 5.98 | 39.2 | 88.6 | -0.3 | 23 | 11 | 77 | 23 |
| *BraGSTF5* | 213 | 5.44 | 39.2 | 83.6 | -0.3 | 31 | 8 | 67 | 31 |
| *BraGSTF6* | 251 | 5.1 | 28.5 | 79.7 | -0.3 | 34 | 12 | 64 | 34 |
| *BraGSTF7* | 215 | 5.43 | 38 | 82.8 | -0.4 | 31 | 12 | 61 | 31 |
| BraGSTF8 | 181 | 5.11 | 38.3 | 87.7 | -0.3 | 29 | 17 | 55 | 29 |
| BraGSTF9 | 482 | 5.45 | 44.5 | 80.1 | -0.3 | 31 | 12 | 58 | 31 |
| *BraGSTL1* | 297 | 5.32 | 36.9 | 83.7 | -0.3 | 25 | 10 | 63 | 25 |
| *BraGSTL2* | 459 | 6.36 | 37.7 | 77.4 | -0.5 | 29 | 14 | 67 | 29 |
| *BraGSTT1* | 241 | 5.29 | 32.1 | 81.1 | -0.4 | 36 | 9 | 64 | 36 |
| *BraGSTT2* | 246 | 5.75 | 32 | 93.5 | -0.2 | 29 | 7 | 55 | 29 |
| *BraGSTT3* | 181 | 5.42 | 37.7 | 87.7 | -0.3 | 26 | 14 | 5 | 26 |
| *BraTCHQD* | 266 | 5.33 | 33.8 | 79.2 | -0.4 | 36 | 10 | 67 | 36 |
| *BraGSTU1* | 232 | 6.13 | 37.6 | 100 | -0.3 | 26 | 12 | 63 | 26 |
| *BraGSTU10* | 227 | 6.04 | 47.7 | 95.3 | -0.3 | 30 | 12 | 58 | 30 |
| *BraGSTU11* | 224 | 6.17 | 57.4 | 95.3 | -0.2 | 28 | 11 | 57 | 28 |
| *BraGSTU12* | 249 | 6.04 | 44.2 | 98.4 | -0.3 | 29 | 11 | 62 | 29 |
| *BraGSTU13* | 227 | 7.71 | 34.7 | 95.7 | -0.2 | 26 | 11 | 60 | 26 |
| *BraGSTU14* | 227 | 5.17 | 41.9 | 106 | -0.1 | 28 | 10 | 60 | 28 |
| *BraGSTU15* | 219 | 5.28 | 43.4 | 86.7 | -0.3 | 28 | 7 | 53 | 28 |
| *BraGSTU17* | 224 | 6.14 | 34.7 | 87.3 | -0.1 | 26 | 9 | 67 | 26 |
| *BraGSTU18* | 116 | 5.84 | 43 | 90.5 | -0.4 | 34 | 7 | 72 | 34 |
| *BraGSTU19* | 221 | 5.61 | 34.8 | 94.1 | -0.2 | 25 | 9 | 64 | 25 |
| *BraGSTU2* | 232 | 6.13 | 36.9 | 91.2 | 0 | 26 | 13 | 59 | 26 |
| *BraGSTU20* | 164 | 5.59 | 47.7 | 100 | -0.1 | 25 | 9 | 63 | 25 |
| *BraGSTU21* | 218 | 9.17 | 53.6 | 78.3 | -0.3 | 30 | 11 | 62 | 30 |
| *BraGSTU22* | 220 | 5.49 | 36.1 | 91.1 | 0 | 27 | 12 | 64 | 27 |
| *BraGSTU23* | 215 | 4.84 | 31.2 | 85.1 | -0.1 | 28 | 13 | 59 | 28 |
| *BraGSTU24* | 219 | 5.32 | 44.2 | 92.8 | -0.1 | 30 | 11 | 64 | 30 |
| *BraGSTU25* | 219 | 7.71 | 30.6 | 99.7 | -0.1 | 30 | 16 | 7 | 30 |
| *BraGSTU27* | 219 | 5.47 | 43.6 | 99.1 | -0.3 | 29 | 17 | 56 | 29 |
| *BraGSTU28* | 219 | 5.86 | 33.4 | 101.6 | -0.3 | 28 | 12 | 58 | 28 |
| *BraGSTU29* | 219 | 5.57 | 56.7 | 101.5 | -0.3 | 27 | 16 | 60 | 27 |
| *BraGSTU3* | 234 | 5.23 | 44.9 | 91.6 | -0.1 | 35 | 12 | 68 | 35 |
| *BraGSTU30* | 220 | 9.5 | 44.9 | 93.5 | -0.2 | 21 | 15 | 88 | 21 |
| *BraGSTU31* | 227 | 9.36 | 42.1 | 92.8 | -0.2 | 29 | 14 | 82 | 29 |
| *BraGSTU32* | 224 | 9.11 | 52 | 81.1 | -0.3 | 32 | 14 | 75 | 32 |
| *BraGSTU33* | 228 | 5.31 | 36.4 | 97.1 | -0.2 | 25 | 11 | 67 | 25 |
| *BraGSTU34* | 398 | 9.12 | 27.1 | 88.9 | -0.4 | 30 | 16 | 77 | 30 |
| *BraGSTU35* | 224 | 5.16 | 40 | 85.6 | -0.3 | 27 | 20 | 81 | 27 |
| *BraGSTU36* | 224 | 6.98 | 32.4 | 83.1 | -0.2 | 30 | 14 | 73 | 30 |
| *BraGSTU37* | 224 | 8.32 | 35.7 | 80.8 | -0.3 | 38 | 6 | 92 | 38 |
| *BraGSTU38* | 225 | 8.51 | 48.4 | 89.1 | -0.1 | 42 | 22 | 94 | 42 |
| *BraGSTU39* | 226 | 9.28 | 47.6 | 92.2 | -0.4 | 30 | 12 | 61 | 30 |
| *BraGSTU4* | 182 | 6.84 | 51.7 | 82.8 | -0.4 | 37 | 7 | 152 | 37 |
| *BraGSTU26* | 234 | 6.7 | 39 | 71 | -0.5 | 49 | 8 | 162 | 49 |
| *BraGSTU5* | 230 | 5.06 | 43 | 86 | -0.2 | 64 | 46 | 133 | 64 |
| *BraGSTU6* | 255 | 5.58 | 31.9 | 79.4 | -0.3 | 60 | 11 | 175 | 60 |
| *BraGSTU7* | 228 | 5.54 | 33.7 | 77.2 | -0.3 | 62 | 12 | 164 | 62 |
| *BraGSTU8* | 228 | 4.99 | 35.4 | 87.9 | -0.3 | 50 | 19 | 146 | 50 |
| *BraGSTU9* | 228 | 9.04 | 50.4 | 88.6 | -0.1 | 84 | 32 | 205 | 84 |
| *BraGSTZ1* | 216 | 5.39 | 39.8 | 100.8 | 0.2 | 147 | 44 | 208 | 147 |
| *BraGSTZ2* | 600 | 9.54 | 43.8 | 78.8 | -0.4 | 109 | 23 | 290 | 109 |
| *BraGSTU16* | 114 | 5.52 | 54.2 | 71.8 | -0.5 | 18 | 6 | 27 | 18 |