**Supplementary Table 1. Characteristics of all the full length EiMyb proteins of *Entamoeba invadens* classified according to their repeat number**

|  | **No** | **Gene ID** | **Annotation** | **Size (aa)** | **MW (kDa)** | **pI** | **TH** | **Subcellular localization** | **NLS1 sequence** | **NLS1 Description** | **NLS2 sequence** | **NLS2 Description** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |
| 1R-Myb | 1 | EIN\_020090 | Hypothetical protein | 140 | 16.37 | 9.45 | N | N | KKRK | Monopartite of 4 residues |  |  |  |
| 2 | EIN\_020720 | Hypothetical protein | 145 | 17.01 | 9.42 | N | C,N | KKKK | Monopartite of 4 residues |  |  |  |
| 3 | EIN\_023650 | Hypothetical protein | 429 | 49.25 | 7.52 | Y | C, N | KKKKRR | Monopartite of 6 residues |  |  |  |
| 4 | EIN\_031250 | Hypothetical protein | 177 | 20.26 | 9.88 | N | N | KKVRKQYTLTXRRR | Monopartite of 14 residues |  |  |  |
| 5 | EIN\_079420 | Hypothetical protein | 467 | 53.12 | 8.4 | Y | N | PKKAKTT | Monopartite of 7 residues | KKKKRR | Monopartite of 6 residues |  |
| 6 | EIN\_081930 | Hypothetical protein | 135 | 15.75 | 9.51 | N | C, N | - |  |  |  |  |
| 7 | EIN\_086260 | Hypothetical protein | 179 | 20.87 | 10.13 | N | N | RKQRKQYTITXXKKREV | Bipartite of 17 residues |  |  |  |
| 8 | EIN\_087120 | Hypothetical protein | 178 | 20.64 | 9.69 | N | N | RKQRKQYTITXXKKREV | Bipartite of 17 residues |  |  |  |
| 9 | EIN\_095950 | Hypothetical protein | 172 | 20.19 | 9.19 | N | C, N | - |  |  |  |  |
| 10 | EIN\_182440 | Hypothetical protein | 531 | 62.75 | 8.63 | N | C, N | RRWMNKENEKKTTKLRK | Bipartite of 17 residues | KRIWRLAELAXHKKDPR | Bipartite of 17 residues |  |
| 11 | EIN\_224050 | Hypothetical protein | 171 | 20.08 | 9.71 | N | C, N | - |  |  |  |  |
| 12 | EIN\_314460 | Hypothetical protein | 173 | 20.08 | 8.94 | N | C, N | KRVVAKPRKSXXKKWDK | Bipartite of 17 residues |  |  |  |
| 13 | EIN\_359680 | transcriptional adapter, putative | 330 | 38.84 | 6.45 | N | C, N | KRLEQYYKMYIERIRVR | Bipartite of 17 residues | RREGCLTMEEXTKERRR | Bipartite of 17 residues |  |
| 14 | EIN\_390470 | transcriptional adapter, putative | 343 | 40.46 | 7.55 | N | C, N | RKLERYTKMCLERKRIR | Bipartite of 17 residues | RKGAKGAKAAXHKGGKK | Bipartite of 17 residues |  |
| 15 | EIN\_407300 | Hypothetical protein | 181 | 20.76 | 6.35 | N | C, N | - |  |  |  |  |
| 16 | EIN\_469690 | Hypothetical protein | 132 | 15.58 | 9.61 | N | C, N | PEIRRKV | Monopartite of 7 residues |  |  |  |
| 2R-Myb | 17 | EIN\_022390 | transcription factor MYB90, putative | 164 | 18.72 | 9.53 | N | N | KRSQNNKENAXXLKKKL | Bipartite of 17 residues |  |  |  |
| 18 | EIN\_046410 | MYB, putative | 167 | 19.62 | 9.67 | N | N | - |  |  |  |  |
| 19 | EIN\_047330 | transcription factor WEREWOLF, putative | 157 | 18.22 | 9.8 | N | N | KHKK | Monopartite of 4 residues | PGRTRKQ | Monopartite of 7 residues |  |
| 20 | EIN\_080130 | trichome differentiation protein GL1, putative | 167 | 19.42 | 8.77 | N | N | PNRTKKQ | Monopartite of 7 residues |  |  |  |
| 21 | EIN\_095310 | transcription factor MYB75, putative | 157 | 17.97 | 9.8 | N | N | PGRTRKQ | Monopartite of 7 residues |  |  |  |
| 22 | EIN\_168610 | trichome differentiation protein GL1, putative | 148 | 17.49 | 9.58 | N | N | KKIEIFVVGRXNRKQCR | Bipartite of 17 residues |  |  |  |
| 23 | EIN\_168860 | transcription factor MYB59, putative | 164 | 19.5 | 9.32 | N | N | RKKRK | Monopartite of 5 residues |  |  |  |
| 24 | EIN\_169190 | C-MYB, putative | 150 | 17.64 | 9.77 | N | N | - |  |  |  |  |
| 25 | EIN\_169560 | r2r3-MYB transcription factor, putative | 145 | 17.21 | 9.79 | N | N | KKVEKNIKGRXNRKQCR | Bipartite of 17 residues | KRPWTIEEDQTIMKTRK | Bipartite of 17 residues |  |
| 26 | EIN\_178740 | transcription factor WEREWOLF, putative | 176 | 20.68 | 9.78 | N | N | KRANSKTKEVXXKQKEK | Bipartite of 17 residues |  |  |  |
| 27 | EIN\_183110 | transcription factor MYB23, putative | 151 | 17.41 | 9.75 | N | N | HKKK | Monopartite of 4 residues |  |  |  |
| 28 | EIN\_183730 | hypothetical protein | 152 | 17.52 | 9.37 | N | N | PVSKRPR | Monopartite of 7 residues |  |  |  |
| 29 | EIN\_206260 | trichome differentiation protein GL1, putative | 149 | 17.42 | 9.47 | N | N | KKVELFVPKRXNRKQCR | Bipartite of 17 residues |  |  |  |
| 30 | EIN\_207200 | transcription factor MYB23, putative | 148 | 17.55 | 9.11 | N | N | KHKK | Monopartite of 4 residues | PERTKKQ | Monopartite of 7 residues |  |
| 31 | EIN\_248780 | transcription factor MYB23, putative | 237 | 27.3 | 9.52 | N | N | - |  |  |  |  |
| 32 | EIN\_276810 | hypothetical protein | 233 | 27.58 | 9.87 | N | N | PNRTKKQ | Monopartite of 7 residues |  |  |  |
| 33 | EIN\_284910 | transcription factor WEREWOLF, putative | 172 | 19.87 | 9.73 | N | N | KKKK | Monopartite of 4 residues | PNRSRKQ | Monopartite of 7 residues |  |
| 34 | EIN\_307180 | transcription factor MYB48, putative | 155 | 18.55 | 9.77 | N | N | KRAWTQEEDDXIIMKRR | Bipartite of 17 residues |  |  |  |
| 35 | EIN\_307410 | transcription factor MYB90, putative | 168 | 19.84 | 9.77 | N | N | KRAWTQEEDDXIIMKRR | Bipartite of 17 residues |  |  |  |
| 36 | EIN\_308550 | transcription factor MYB75, putative | 155 | 18.46 | 9.68 | N | N | KRAWTQEEDDXIIMKRR | Bipartite of 17 residues |  |  |  |
| 37 | EIN\_310240 | transcription factor MYB23, putative | 147 | 17.13 | 9.72 | N | N | PFKKKYS | Monopartite of 7 residues | PSRTRKQ | Monopartite of 7 residues |  |
| 38 | EIN\_359630 | trichome differentiation protein GL1 | 150 | 17.29 | 9.68 | N | N | - |  |  |  |  |
| 39 | EIN\_379820 | trichome differentiation protein GL1, putative | 150 | 17.32 | 10.08 | N | N | - |  |  |  |  |
| 40 | EIN\_399710 | Hypothetical protein | 305 | 36.47 | 9.88 | N | N | KKGAHLLIIFQSKKKVK | Bipartite of 17 residues | RRWHLVALKIXPSRTRK | Bipartite of 17 residues |  |
| 41 | EIN\_405040 | trichome differentiation protein GL1, putative | 204 | 23.3 | 6.18 | N | N | KRKK | Monopartite of 4 residues |  |  |  |
| 42 | EIN\_425380 | transcription factor MYB48, putative | 161 | 18.6 | 9.34 | N | N | - |  |  |  |  |
| 43 | EIN\_490880 | r2r3-MYB transcription factor, putative | 158 | 18.42 | 9.46 | N | N | KKKK | Monopartite of 4 residues | PGRSRKQ | Monopartite of 7 residues |  |
| 4R-Myb | 44 | EIN\_267690 | snap190, putative | 663 | 77.44 | 7.47 | N | C, N | - |  |  |  |  |