**Table S6:** The position of motifs 1-4 and HSF motif in each PtHSF protein.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Position | Motif 1 | | Motif 2 | Motif 3 | Motif 4 | HSF Motif |
| PtHSF1 | 120-139 | 144-164 | | 170-190 | 200-220 | 123-221 |
| PtHSF2 | 90-109 | 111-131 | | 137-157 | 167-187 | 97-187 |
| PtHSF3 | - | 43-63 | | 70-90 | 100-120 | 26-121 |
| PtHSF4 | 116135 | 147-167 | | 173-197 | - | 119-231 |
| PtHSF5 | 97-116 | 118-138 | | - | 178-198 | 103-199 |
| PtHSF6 | - | 157-177 | | 183-203 | - | 136-237 |
| PtHSF7 | 39-58 | 63-83 | | 89-109 | 119-139 | 46-139 |
| PtHSF8 | 355-374 | 376-396 | | 402-422 | 432-452 | 362-452 |
| PtHSF9 | 212-231 | 236-256 | | 262-282 | 292-312 | 219-312 |
| PtHSF10 | 102-121 | 126-146 | | 152-172 | 182-202 | 108-203 |
| PtHSF11 | 71-90 | 95-105 | | 122-142 | 152-172 | 74-172 |
| PtHSF12 | 101-120 | 125-145 | | 151-171 | 181-201 | 108-198 |
| PtHSF13 | 257-276 | 280-300 | | 306-326 | 336-356 | 260-357 |
| PtHSF14 | 207-226 | 232-252 | | 258-278 | 288-308 | 210-309 |
| PtHSF15 | 238-257 | 259-279 | | 285-305 | 315-335 | 241-336 |
| PtHSF16 | 26-45 | - | | 79-99 | - | 29-129 |
| PtHSF17 | 25-44 | 54-74 | | 80-100 | - | 28-131 |
| PtHSF18 | 78-98 | 104-124 | | 145-165 | - | 61-166 |
| PtHSF19 | 36-55 | 60-80 | | 86-106 | 116-136 | 42-137 |
| PtHSF20 | 13-32 | 37-57 | | 63-83 | 93-113 | 16-114 |
| PtHSF21 | - | 65-85 | | 86-106 | 116-136 | 44-137 |
| PtHSF22 | 9-28 | 33-53 | | - | 96-116 | 16-116 |
| PtHSF23 | 47-66 | 71-91 | | 97-117 | 127-147 | 50-148 |
| PtHSF24 | 78-97 | 102-122 | | 127-147 | 157-177 | 81-178 |
| PtHSF25 | 159-178 | 183-203 | | 21-234 | 244-264 | 166-265 |
| PtHSF26 | 163-182 | 187-207 | | 213-233 | 243-263 | 166-264 |
| PtHSF27 | 176-195 | 200-220 | | 226-246 | 256-276 | 183-277 |
| PtHSF28 | 169-188 | 193-213 | | 219-239 | 249-269 | 176-270 |
| PtHSF29 | 265-284 | 289-309 | | 315-335 | 345-365 | 272-366 |
| PtHSF30 | 94-113 | 118-138 | | 144-164 | 174-194 | 101-194 |
| PtHSF31 | 86-105 | 110-130 | | 136-156 | 167-187 | 89-188 |
| PtHSF32 | - | 234-254 | | 261-281 | - | 217-313 |
| PtHSF33 | 5-24 | 29-49 | | 55-75 | 85-105 | 12-106 |
| PtHSF34 | 110-129 | - | | 156-176 | 189-209 | 117-212 |
| PtHSF35 | 121-140 | 142-162 | | 168-188 | 198-218 | 128-217 |
| PtHSF36 | 13-32 | 34-54 | | 61-81 | 91-111 | 16-112 |
| PtHSF37 | 241-260 | 265-285 | | 291-311 | 321-341 | 248-341 |
| PtHSF38 | 221-240 | 245-265 | | 271-291 | 301-321 | 224-322 |
| PtHSF39 | 78-97 | 99-119 | | 131-151 | 161-181 | 81-183 |
| PtHSF40 | 247-266 | 271-291 | | 297-317 | 327-347 | 250-348 |
| PtHSF41 | - | 82-102 | | 108-128 | 150-170 | 65-171 |
| PtHSF42 | - | 102-122 | | 128-148 | 169-189 | 89-189 |
| PtHSF43 | 97-116 | 118-138 | | 144-164 | 174-194 | 100-195 |
| PtHSF44 | - | 42-62 | | 68-88 | 111-131 | 33-131 |
| PtHSF45 | - | 49-69 | | 75-95 | 117-137 | 36-136 |
| PtHSF46 | - | 119-139 | | 147-167 | - | 119-188 |
| PtHSF47 | 98-117 | 117-139 | | 145-165 | - | 104-197 |
| PtHSF48 | 382-401 | 403-423 | | 429-449 | 459-479 | 389-478 |
| PtHSF49 | 57-76 | 81-101 | | 107-127 | 167-187 | 64-187 |
| PtHSF50 | 181-200 | 202-222 | | 228-248 | 258-278 | 188-277 |
| PtHSF51 | 120-139 | - | | 165-185 | - | 123-221 |
| PtHSF52 | 81-100 | 105-125 | | 131-151 | 162-182 | 88-182 |
| PtHSF53 | 23-42 | 47-67 | | 73-93 | 104-124 | 26-125 |
| PtHSF54 | - | 49-69 | | 75-95 | 117-137 | 36-136 |
| PtHSF55 | 81-100 | 102-122 | | 128-148 | 158-178 | 84-179 |
| PtHSF56 | - | 55-75 | | 81-101 | 123-143 | 38-144 |
| PtHSF57 | - | - | | 120-140 | - | 83-172 |
| PtHSF58 | - | - | | 180-200 | - | 139-232 |
| PtHSF59 | 107-126 | 128-148 | | 161-181 | 191-211 | 114-212 |
| PtHSF60 | 93-112 | 114-134 | | 140-160 | 179-199 | 100-197 |
| PtHSF61 | 252-271 | 276-296 | | 302-322 | 332-352 | 255-353 |
| PtHSF62 | 306-325 | 330-350 | | 356-376 | 386-406 | 309-407 |
| PtHSF63 | 256-275 | 280-300 | | 306-326 | 336-356 | 259-357 |
| PtHSF64 | 308-327 | 332-352 | | 358-378 | 388-408 | 311-409 |
| PtHSF65 | 371-390 | 395-415 | | 421-441 | 452-472 | 378-473 |
| PtHSF65 | 532-551 | 556-576 | | 582-602 | 612-632 | 539-632 |
| PtHSF66 | 135-154 | 156-176 | | 183-203 | 213-233 | 142-231 |
| PtHSF67 | 244-263 | 264-284 | | 290-310 | 320-340 | 251-340 |
| PtHSF68 | 311-330 | 335-355 | | 361-381 | 391-401 | 314-412 |

Note: The blank meant the member had no corresponding motif.