**Table S1:** The ID, given name, signal peptide (SP), transmembrane domains (TMD) and modification of PtHSF proteins.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Gene ID | NAME | SP | TMD | N-glycan |
| Phatr3\_draftJ1650.p1 | PtHSF1 | NO | NO | YES |
| Phatr3\_EG02327.p1 | PtHSF2 | NO | NO | YES |
| Phatr3\_J47181.p1 | PtHSF3 | NO | NO | YES |
| Phatr3\_J47360.p1 | PtHSF4 | NO | NO | YES |
| Phatr3\_J47952.p1 | PtHSF5 | NO | NO | YES |
| Phatr3\_J38294.p1 | PtHSF6 | NO | NO | YES |
| Phatr3\_EG00672.p1 | PtHSF7 | NO | NO | YES |
| Phatr3\_EG01965.p1 | PtHSF8 | NO | NO | YES |
| Phatr3\_J48361.p1 | PtHSF9 | NO | NO | YES |
| Phatr3\_J48394.p1 | PtHSF10 | NO | NO | YES |
| Phatr3\_J48667.p1 | PtHSF11 | NO | NO | NO |
| Phatr3\_J48558.p1 | PtHSF12 | NO | NO | YES |
| Phatr3\_J48702.p1 | PtHSF13 | NO | NO | YES |
| Phatr3\_J48572.p1 | PtHSF14 | NO | NO | YES |
| Phatr3\_J31764.p1 | PtHSF15 | NO | NO | YES |
| Phatr3\_J42514.p1 | PtHSF16 | NO | NO | YES |
| Phatr3\_J43051.p1 | PtHSF17 | NO | NO | NO |
| Phatr3\_J42824.p1 | PtHSF18 | NO | NO | YES |
| Phatr3\_J39786.p1 | PtHSF19 | NO | NO | YES |
| Phatr3\_J39785.p1 | PtHSF20 | NO | NO | YES |
| Phatr3\_J39794.p1 | PtHSF21 | NO | NO | NO |
| Phatr3\_J49170.p1 | PtHSF22 | NO | NO | YES |
| Phatr3\_J49620.p1 | PtHSF23 | NO | NO | NO |
| Phatr3\_J49596.p1 | PtHSF24 | NO | NO | YES |
| Phatr3\_J49567.p1 | PtHSF25 | NO | NO | YES |
| Phatr3\_J49557.p1 | PtHSF26 | NO | NO | YES |
| Phatr3\_EG01933.p1 | PtHSF27 | NO | NO | YES |
| Phatr3\_J49566.p1 | PtHSF28 | NO | NO | YES |
| Phatr3\_EG00322.p1 | PtHSF29 | NO | NO | YES |
| Phatr3\_J49594.p1 | PtHSF30 | NO | NO | NO |
| Phatr3\_J55070.p1 | PtHSF31 | NO | NO | YES |
| Phatr3\_J55108.p1 | PtHSF32 | NO | NO | YES |
| Phatr3\_EG00212.p1 | PtHSF33 | NO | NO | YES |
| Phatr3\_J40994.p1 | PtHSF34 | NO | NO | YES |
| Phatr3\_J50136.p1 | PtHSF35 | NO | NO | YES |
| Phatr3\_J43413.p1 | PtHSF36 | NO | NO | YES |
| Phatr3\_J43364.p1 | PtHSF37 | NO | NO | YES |
| Phatr3\_J43363.p1 | PtHSF38 | NO | NO | YES |
| Phatr3\_J50481.p1 | PtHSF39 | NO | NO | YES |
| Phatr3\_J50622.p1 | PtHSF40 | NO | NO | YES |
| Phatr3\_J44029.p1 | PtHSF41 | NO | NO | YES |
| Phatr3\_J33622.p1 | PtHSF42 | NO | NO | YES |
| Phatr3\_J44099.p1 | PtHSF43 | NO | NO | YES |
| Phatr3\_J44200.p1 | PtHSF44 | NO | NO | YES |
| Phatr3\_J33380.p1 | PtHSF45 | NO | NO | YES |
| Phatr3\_J44088.p1 | PtHSF46 | NO | NO | YES |
| Phatr3\_J44582.p1 | PtHSF47 | NO | NO | YES |
| Phatr3\_J44570.p1 | PtHSF48 | NO | NO | YES |
| Phatr3\_J44684.p1 | PtHSF49 | NO | NO | YES |
| Phatr3\_J44586.p1 | PtHSF50 | NO | NO | YES |
| Phatr3\_J44750.p1 | PtHSF51 | NO | NO | YES |
| Phatr3\_J44917.p1 | PtHSF52 | NO | NO | YES |
| Phatr3\_J34415.p1 | PtHSF53 | NO | NO | NO |
| Phatr3\_J34724.p1 | PtHSF54 | NO | NO | YES |
| Phatr3\_J45206.p1 | PtHSF55 | NO | NO | YES |
| Phatr3\_J45112.p1 | PtHSF56 | NO | NO | YES |
| Phatr3\_J45666.p1 | PtHSF57 | NO | NO | YES |
| Phatr3\_J35419.p1 | PtHSF58 | NO | NO | YES |
| Phatr3\_J45560.p1 | PtHSF59 | NO | NO | YES |
| Phatr3\_J45559.p1 | PtHSF60 | NO | NO | YES |
| Phatr3\_J45391.p1 | PtHSF61 | NO | NO | YES |
| Phatr3\_J45393.p1 | PtHSF62 | NO | NO | YES |
| Phatr3\_J45392.p1 | PtHSF63 | NO | NO | YES |
| Phatr3\_J45389.p1 | PtHSF64 | NO | NO | YES |
| Phatr3\_J45816.p1 | PtHSF65 | NO | NO | YES |
| Phatr3\_J45926.p1 | PtHSF66 | NO | NO | YES |
| Phatr3\_EG02471.p1 | PtHSF67 | NO | NO | YES |
| Phatr3\_EG02624.p1 | PtHSF68 | NO | NO | YES |