

**Supplementary Table S2. Detailed information of the key proteins related to heat stress response mentioned in the review**

| Protein name | Full name                                        | Source species                                |
|--------------|--------------------------------------------------|-----------------------------------------------|
| ATX1         | Arabidopsis homolog of trithorax 1               | <i>Arabidopsis thaliana</i>                   |
| CSN5A        | Constitutive photomorphogenesis 9 signalosome 5A | <i>Arabidopsis thaliana</i>                   |
| FtsH6        | Filamentation temperature-sensitive H6           | <i>Arabidopsis thaliana</i>                   |
| HSA32        | Heat-induced 32-kD protein                       | <i>Arabidopsis thaliana</i>                   |
| HsfA1        | Heat shock transcription factor A1               | <i>Lycopersicon esculentum</i> cv. Moneymaker |
| HsfA2        | Heat shock transcription factor A2               | <i>Arabidopsis thaliana</i>                   |
| HsfA3        | Heat shock transcription factor A3               | <i>Arabidopsis thaliana</i>                   |
| HSP101       | Heat shock protein101                            | <i>Arabidopsis thaliana</i>                   |
| HSP21        | Heat shock protein 21                            | <i>Arabidopsis thaliana</i>                   |
| HSP22        | Heat shock protein 21                            | <i>Arabidopsis thaliana</i>                   |
| sHSP22       | Small heat shock protein 22                      | <i>Arabidopsis thaliana</i>                   |
| JMJ          | Jumonji domain-containing protein                | <i>Arabidopsis thaliana</i>                   |
| SDG25        | Set domain group 25                              | <i>Arabidopsis thaliana</i>                   |