

# Supplementary Information

**Figure S1.** Flowers of *E. sagittatum* (A) and *E. leptorrhizum* (B). Asterisks indicate the petal with nectariferous tissue.



**Table S1.** Primers for cloning and analyzing EsCRC and ElCRC.

| Primers         | Sequences (5' to 3')                          | Usage             |
|-----------------|-----------------------------------------------|-------------------|
| qCRCF (Forward) | CCTGTCCAGCCTCAATGTTT                          | qRT-PCR           |
| qCRCR (Reverse) | CTCGATGGGGTATCTCAGGA                          | qRT-PCR           |
| ABCRC06         | CYGARCATCTYTGCTAYGTCC                         | 3' RACE           |
| 5' CRCGSP1      | ACGATGAAGAATGCGCCTTGAAATCAT                   | 5' RACE one round |
| 5' CRCGSP2      | GCAGCGGACATAGCAAAGTTGTTTCAGA                  | 5' RACE two round |
| CRCF (Forward)  | ATCATCATGGATTTTCATCCCACC                      | Full-length       |
| CRCR (Reverse)  | ACACCACTCAAGGACTAAGTCC                        | Full-length       |
| 3' CDS          | AAGCAGTGGTATCAACGCAGAGTAC(T)30N-1N            | RACE              |
| SMARTII         | AAGCAGTGGTATCAACGCAGAGTACGCGGG                | RACE              |
| UPML            | CTAATACGACTCACTATAGGGCAAGCAGTGGTATCAACGCAGAGT | RACE              |
| UPMS            | CTAATACGACTCACTATAGGGC                        | RACE              |
| NUP             | AAGCAGTGGTATCAACGCAGAGT                       | RACE              |

Es and El indicated *E. sagittatum* and *E. leptorrhizum*, respectively.

**Table S2.** Genes used for phylogenetic analysis and protein alignment.

| <b>Family</b>  | <b>Species</b>                  | <b>Accession No</b>     | <b>Name</b> | <b>Type</b> |
|----------------|---------------------------------|-------------------------|-------------|-------------|
| Solanaceae     | <i>Nicotiana tobacum</i>        | AY854799                | NtCRC1      | CRC         |
| Solanaceae     | <i>Nicotiana tabacum</i>        | AY854800                | NtCRC2      | CRC         |
| Solanaceae     | <i>Petunia x hybrid</i>         | AY854801                | PhCRC       | CRC         |
| Brassicaceae   | <i>Arabidopsis thaliana</i>     | NM_105585               | AtCRC       | CRC         |
| Brassicaceae   | <i>Brassica juncea</i>          | XM_002263575            | BjCRC       | CRC         |
| Malvaceae      | <i>Gossypium hirsutum</i>       | AY854804                | GhCRC1      | CRC         |
| Malvaceae      | <i>Gossypium hirsutum</i>       | AY854805                | GhCRC2      | CRC         |
| Berberidaceae  | <i>Epimedium sagittatum</i>     | JX560412                | EsCRC       | CRC         |
| Berberidaceae  | <i>Epimedium leptorrhizum</i>   | JX625141                | EICRC       | CRC         |
| Ranunculaceae  | <i>Aquilegia formosa</i>        | EU481798                | AfCRC       | CRC         |
| Proteaceae     | <i>Grevillea robusta</i>        | Provided by John Bowman | GrCRC       | CRC         |
| Plantaginaceae | <i>Antirrhinum majus</i>        | AJ877257                | AmCRC       | CRC         |
| Liliaceae      | <i>Lilium longiflorum</i>       | EF363135                | LICRC       | CRC         |
| Poaceae        | <i>Oryza sativa</i>             | AY494713                | OsDL        | CRC         |
| Orchidaceae    | <i>Cymbidium goeringii</i>      | HM106986                | CgDL        | CRC         |
| Papaveraceae   | <i>Eschscholzia californica</i> | AM946412                | EcCRC       | CRC         |
| Amborellaceae  | <i>Amborella trichopoda</i>     | AJ877257                | AtCRC       | CRC         |
| Poaceae        | <i>Triticum aestivum</i>        | AF545436                | TaCRC       | CRC         |
| Euphorbiaceae  | <i>Ricinus communis</i>         | XM_002512009            | RcCRC       | CRC         |
| Cabombaceae    | <i>Cabomba caroliniana</i>      | AB553318                | CcCRC       | CRC         |
| Salicaceae     | <i>Populus trichocarpa</i>      | XM_002316041            | PtCRC       | CRC         |
| Vitaceae       | <i>Vitis vinifera</i>           | XM_002263575            | VvCRC       | CRC         |
| Fabaceae       | <i>Medicago truncatula</i>      | XM_003614153            | MtCRC       | CRC         |
| Poaceae        | <i>Oryza sativa</i>             | NM_001055910            | OsFIL2      | FIL         |
| Brassicaceae   | <i>Arabidopsis thaliana</i>     | AF074948                | AtFIL       | FIL         |