

## Legends for Supplementary Data

Supplementary Data 1. The BAC sequence of SDGa25 *ZmGa1P*.

Supplementary Data 2. LC-MS/MS analysis of IEF fraction 6-10 of SDGa25 and J66 pollen secretome.

Supplementary Data 3. LC-MS/MS analysis of the 100 kb DSS-crosslinked proteins in SDGa25 pollen secretome.

Supplementary Data 4. Haplotypes of the 946 inbred lines at *Ga1* locus.