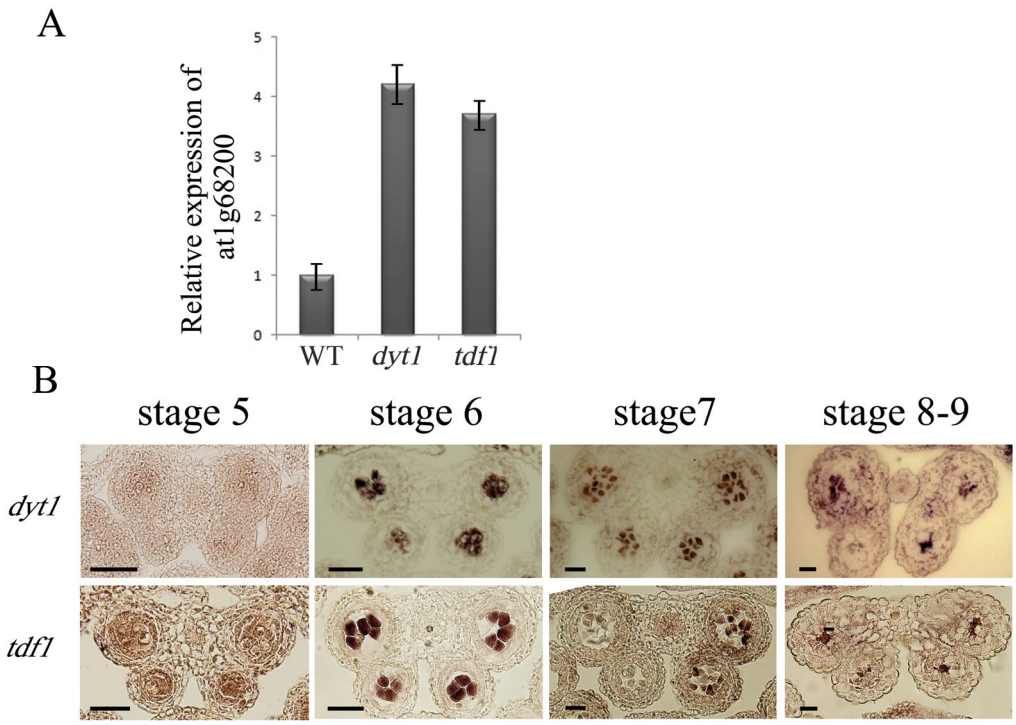
Figure A

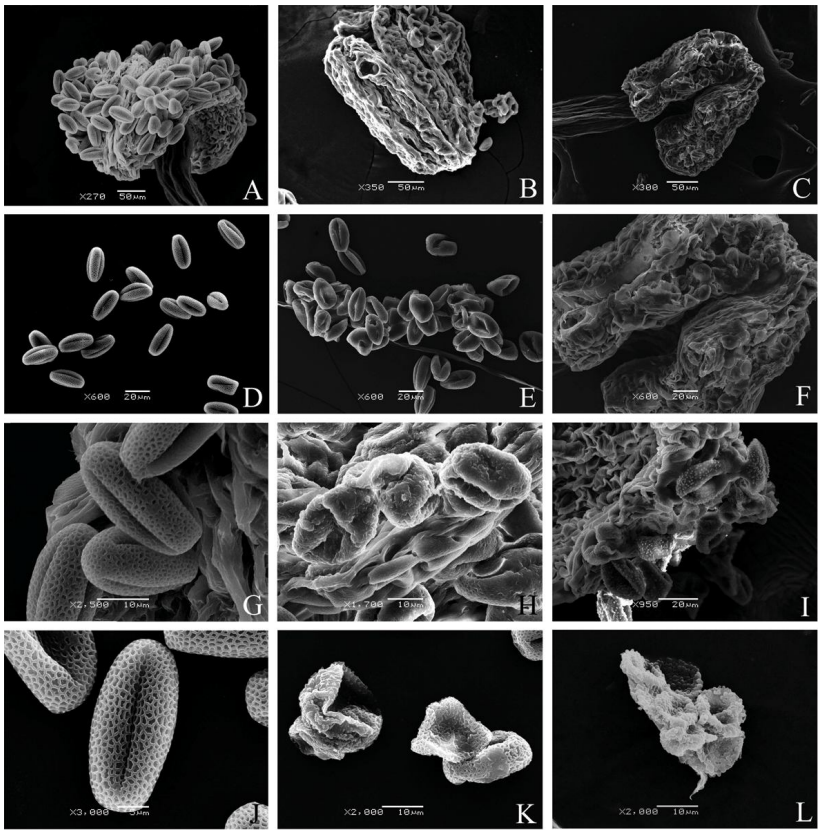


(A) Real-time PCR analysis of *AtTTP* in in *dyt1* and *tdf1* floral buds. Each expression level was normalized to that of *TUBULIN*.

(B) *In situ* hybridization of the *AtTTP* transcript in the *dyt1* and *tdf1* anther.

Bars = 10 μm

Figure B



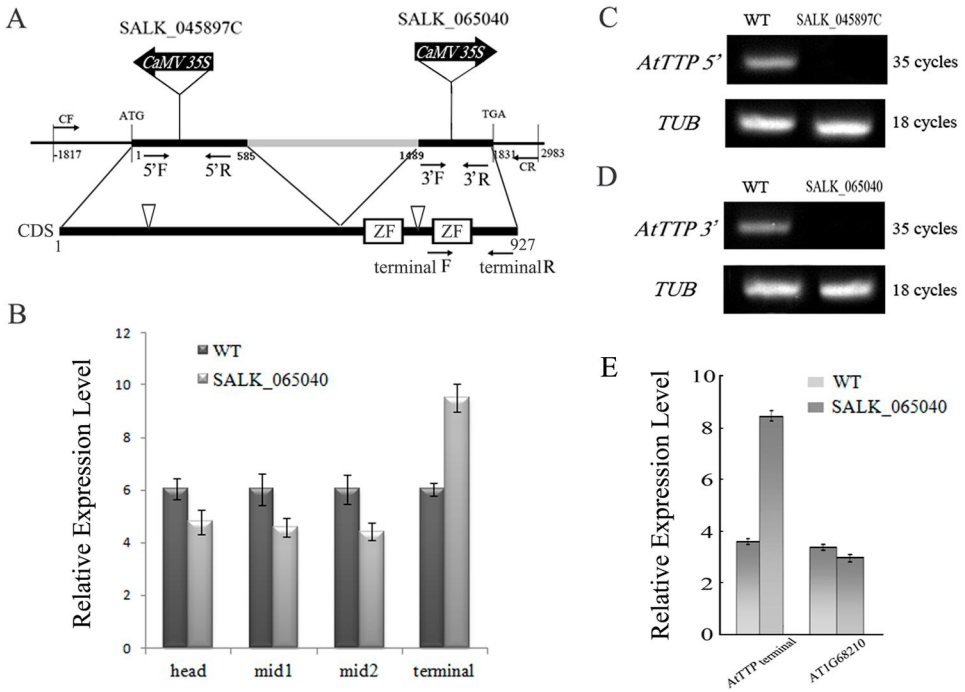
(A, B and C) Dehiscent anthers. Wild-type anther contained numerous pollen grains, whereas most of the *AtTTP*-OE pollen grains were degenerated and adhered to the anther.

(D, E and F) Pollen grains. Wild-type pollen grains were separated from each other, whereas *AtTTP*-OE pollen grains adhered to each other (E) and even were inseparable from the anther (F).

(G, H and I) Pollen grains on the dehiscent anther.

(J, K and L) Pollen exine pattern. Wild-type pollen grains have a regular reticulate exine pattern, whereas ruptured *AtTTP*-OE pollen grains exhibit a spotted exine pattern.

Figure C



A, the T-DNA insertion of SALK_045897 and the name of primers used in the expression analysis of AtTTP gene.

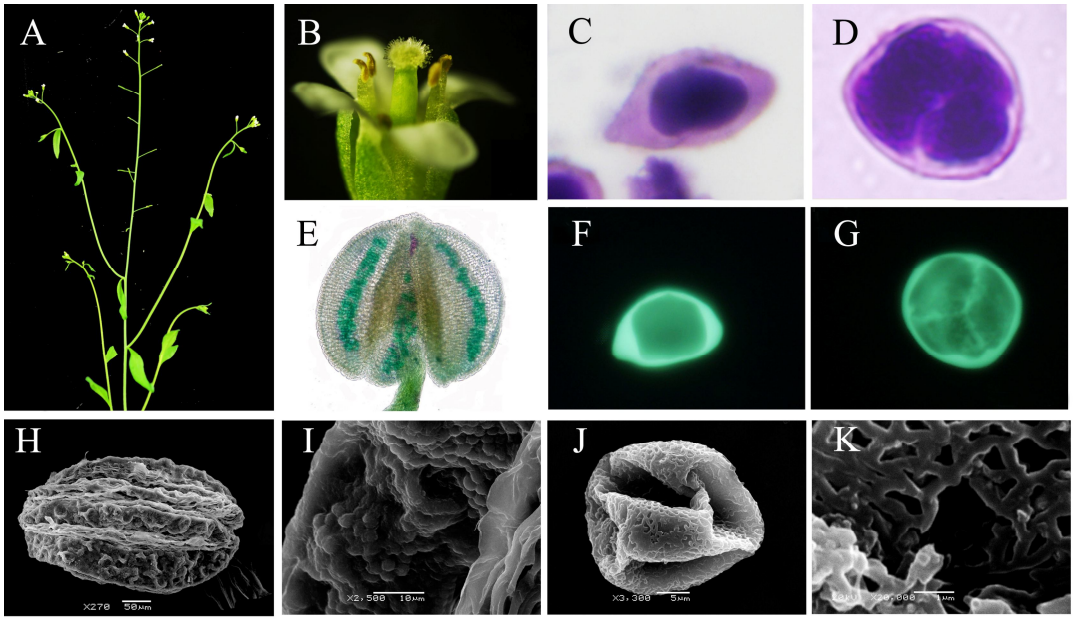
B, the expression analysis of different part of *AtTTP* gene in SALK_065040. Head, the 109th to 356th bp of *AtTTP* CDS sequence. Mid1, the 551st to 740th bp of *AtTTP* CDS sequence. Mid2, the 436th to 615th bp of *AtTTP* CDS sequence.

C, the expression analysis of *AtTTP* gene in both wild type and SALK_045897.

D, the expression analysis of C-terminal of *AtTTP* gene in both wild type and Salk_065040.

E, the C-terminal over-expression of *AtTTP* and At1g68210 in wild type and Salk_065040.

Figure D



A, Salk_065040 showed male sterility.

B, the flower of Salk_065040

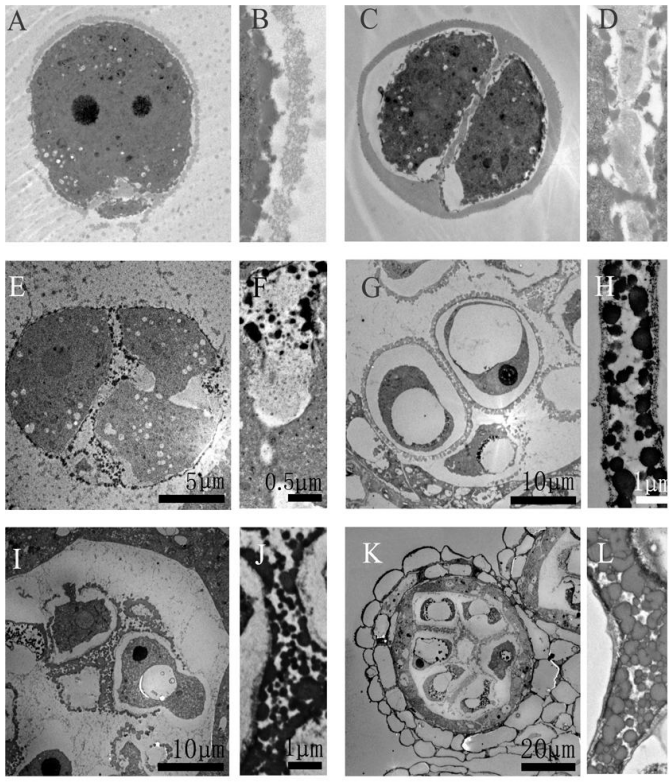
C and D, the pollen mother cells and tetrads of Salk_065040

E, pollen staining of Salk_065040

F and G, callose staining of pollen mother cells and tetrads of Salk_065040

H to K, the SEM observation of Salk_065040 pollen grains

Figure E



A and B, pollen mother cell

C to F, tetrads

G to I, adhered microspores

J to L, adhered microspores and abnormal sporopollenin deposition