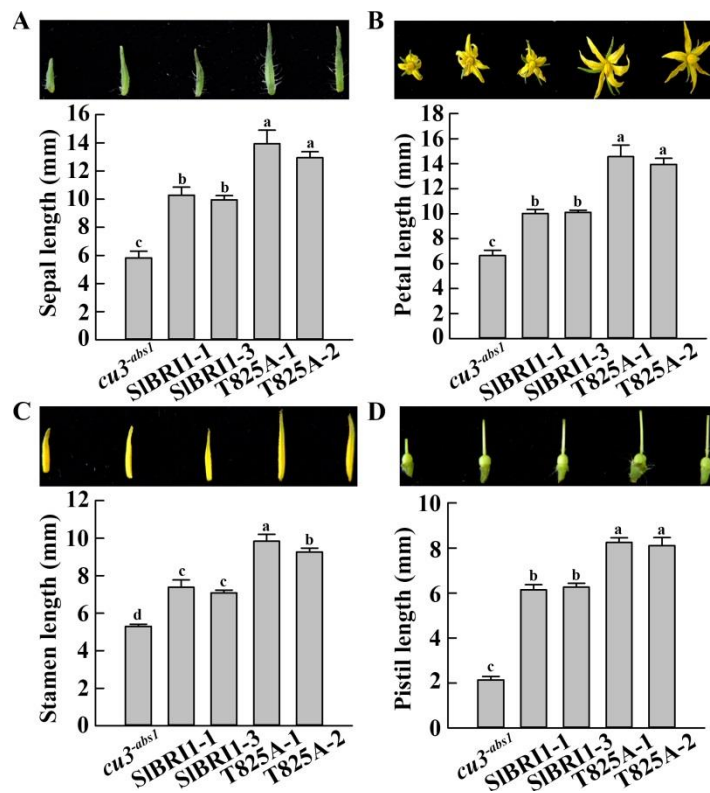
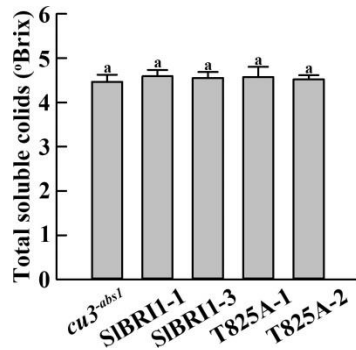


**Figure S1.** SIBRI1 T825A affected the cell size of the stems. (A) Cross section (top) and longitudinal section (bottom) of stems from both the transgenic and *cu3<sup>-abs1</sup>* plants. Scale bars represent 200 μm. (B) The cross-section area of the stem per plant. (C) The cell length of the stem per plant. The data for (B, C) are presented as the mean ± SD (n=5). The different letters indicate significant differences (one-way ANOVA, Tukey's test,  $p < 0.05$ ).

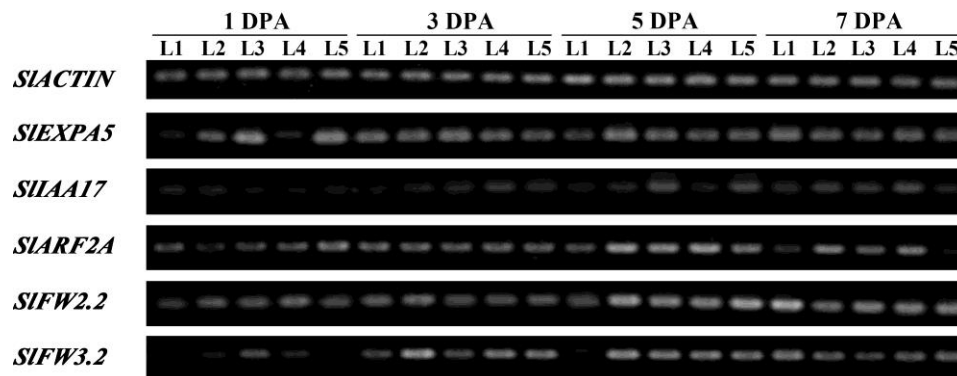


**Figure S2.** SIBRI1 T825A affected the development of the floral organs. (A) Top, phenotypes of a single

sepal per plant. Bottom, sepal length per plant. (B) Top, phenotypes of a single petal per plant. Bottom, petal length per plant. (C) Top, phenotypes of a single stamen per plant. Bottom, stamen length per plant. (D) Top, phenotypes of a single pistil per plant. Bottom, pistil length per plant. The floral organs of (A-D) shown on the top from left to right are as follows: *cu3-abs1*, SIBRI1-1, SIBRI1-3, T825A-1, and T825A-2. The data for (A-D) are presented as the mean  $\pm$  SD (n=6). The different letters indicate significant differences (one-way ANOVA, Tukey's test,  $p < 0.05$ ).



**Figure S3.** SIBRI1 T825A had no influence on fruit quality during the red ripe period. The data are presented as the mean  $\pm$  SD (n=15). The different letters indicate significant differences (one-way ANOVA, Tukey's test,  $p < 0.05$ ).



**Figure S4.** SIBRI1 T825A had no influence on the relative transcript levels of *SIIAA17*, *SIARF2A*, *SIEXPA5*, *FW2.2* and *FW3.2*. *SIIACTIN* was used as a reference gene in tomato. Total RNA from 1 DPA, 3 DPA, 5 DPA, and 7 DPA ovaries from both the transgenic and *cu3-abs1* plants was extracted and transcribed to cDNA. The relative transcript levels were tested by RT-PCR. L1 (Line 1), *cu3-abs1*; L2 (Line 2), SIBRI1-1; L3 (Line 3), SIBRI1-3; L4 (Line 4), T825A-1; L5 (Line 5), T825A-2. Each product had 3 biological replications.

**Table S1.** Primers sequence used in this research

Primer name	Primer sequence (5'→3')
Promoter of <i>SIBRI1</i> -F	GACCATGATTACGCCAAGCTTCT CCATTTC AATTATTGCTCAAAGG
Promoter of <i>SIBRI1</i> -R	ACCACCCGGGGATCCTCTAGACT TCAAAGATTGAAACTTTATAGCTTAAA
<i>SIBRI1</i> -F for tomato transformation	TCTTTGAAGTCTAGAGCTCGAGAT GAAAGCTCACAAAACGTGTGTTAAC
<i>SIBRI1</i> -R for tomato transformation	GCCCTTGCTCACCATGGTACCCTTA TCGTCGTCATCCTTGTAATC
T825A-F for site mutation	GTTGCCATAGAGGCGAAGAAGAGGA
T825A-R for site mutation	TCCTCTTCTTCGCCTCTATGGCAAC
T825D-F for site mutation	GTTGCCATAGAGGACAAGAAGAGGA
T825D-R for site mutation	TCCTCTTCTTGTCTCTATGGCAAC
K916E-F for site mutation	GAGTGTGTAGCTATTGAGAAATTGATAC ACG
K916E-R for site mutation	CGTGTATCAATTTCTCAATAGCTACAACA CTC
<i>SIBRI1</i> -CD-F for phosphorylation analysis in vitro	GACGATGACAAAGTCAAGCTTGAGA CGAAGAAGAGGAGGAGG
<i>SIBRI1</i> -CD-R for phosphorylation analysis in vitro	TCTGCAGGTACCCGGGAATTCAAGG TGTTTGCTCAGCTCATTG
<i>SI</i> ACTIN-F for qRT-PCR and RT-PCR	GTGTGGGCTCACCTACGTTT
<i>SI</i> ACTIN-R for qRT-PCR and RT-PCR	ACAATCCCAAGGGTTGTAC
<i>SICPD</i> -F for qRT-PCR and RT-PCR	ATCCAATTAACGTCCAACAT
<i>SICPD</i> -R for qRT-PCR and RT-PCR	ACCTTTCATACACCTCCCTC
<i>SIBRI1</i> -F for qRT-PCR	TTCAATGGCACGATCCCGAA
<i>SIBRI1</i> -R for qRT-PCR	TGGGGAGAGGATACCCACAG
<i>SIDWARF</i> -F for qRT-PCR	ATTCAATGCTTTGATTGGCA
<i>SIDWARF</i> -R for qRT-PCR	GGGAGAGAAGTTGCAGGAAG
<i>SICDKB1</i> -F for RT-PCR	ATGGAGAAATACGAGAAATTGGAG
<i>SICDKB1</i> -R for RT-PCR	ACGATGTAGAGAGAATGAGATAGC
<i>SICDKB2.1</i> -F for RT-PCR	ATGCTGGTAAGAGTGTATCGG
<i>SICDKB2.1</i> -R for RT-PCR	CGGAGAGTAGTTGGAGGAAC
<i>SIGA20ox1</i> -F for RT-PCR	CTCATTTC TAATGCTCATCGT
<i>SIGA20ox1</i> -R for RT-PCR	R: TGCAGATGATTCTTTCTTAGCG
<i>Sl</i> GID1-F for RT-PCR	GATCTTGATACACCTCTCAGTACTA
<i>Sl</i> GID1-R for RT-PCR	ACAGCCTTACATATACTAACAAGAC
<i>SIDELLA</i> -F for RT-PCR	TGATGCGACTATACTTGATATAAG
<i>SIDELLA</i> -R for RT-PCR	GGGTTAATCTGTTTAATAGAGTTC
<i>SIBZR1</i> -F for RT-PCR	AAGTATGCGTCAAATGTTC
<i>SIBZR1</i> -R for RT-PCR	TGCTCTTACCCTTGCTG
<i>Sl</i> EXPA5-F for RT-PCR	AAGGGTTCAAGAACTCAATGGCAAC

<i>SIEXPA5</i> -R for RT-PCR	ACCATCGCCTGTAGTGACCTTAAAG
<i>SIIAA17</i> -F for RT-PCR	TTAAGGCTAGGGTTGCCTGG
<i>SIIAA17</i> -R for RT-PCR	AGCTGGGGTTTTGTGTGTTG
<i>SIARF2A</i> -F for RT-PCR	GGATGGCAAAGGGCATAGTA
<i>SIARF2A</i> -R for RT-PCR	TACGCTGCACCTCCTCTTTT
<i>SIFW2.2</i> -F for RT-PCR	CTGGGATTGACAGGATTGCCT
<i>SIFW2.2</i> -R for RT-PCR	TAGCTTGCCACCCTATTCCC
<i>SIFW2.3</i> -F for RT-PCR	ATTACTCTCGTGGGCAAGGC
<i>SIFW2.3</i> -R for RT-PCR	CTGAACCGAATGGTGCAAGC

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