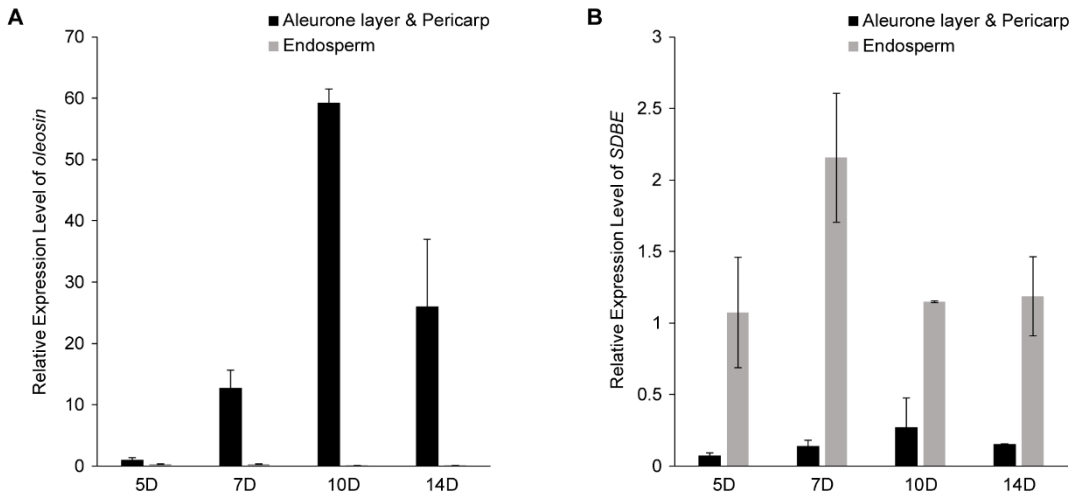
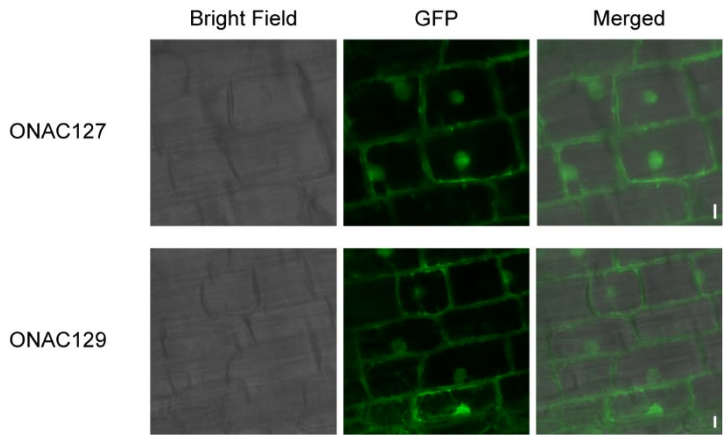
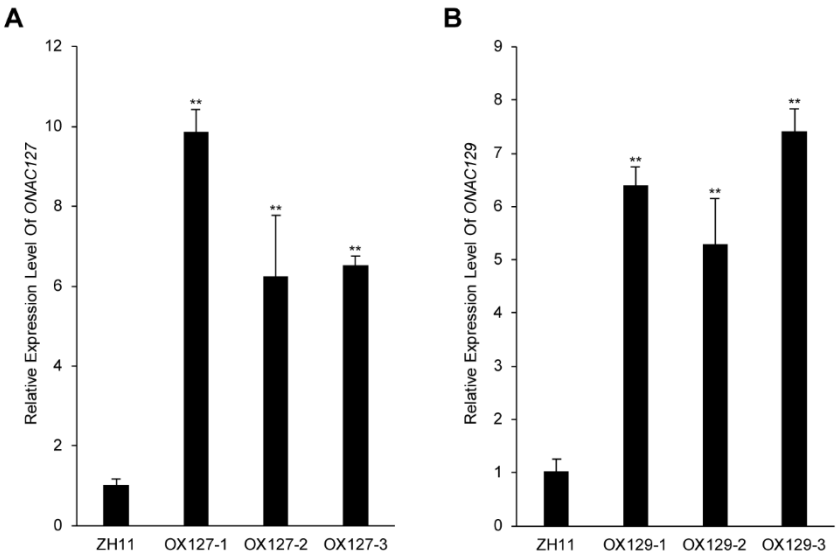


Supplemental Fig. S1 Expression level of mechanical isolation marker in isolated tissue. A. Aleurone layer marker *oleosin*. B. Endosperm marker *SDBE*. 5-14D, total RNA was extracted from caryopses collected during 5-14 DAP. The values in each column are the mean of three technical replicates and the error bars indicate the ±SD. Ubiquitin is used as the reference gene.

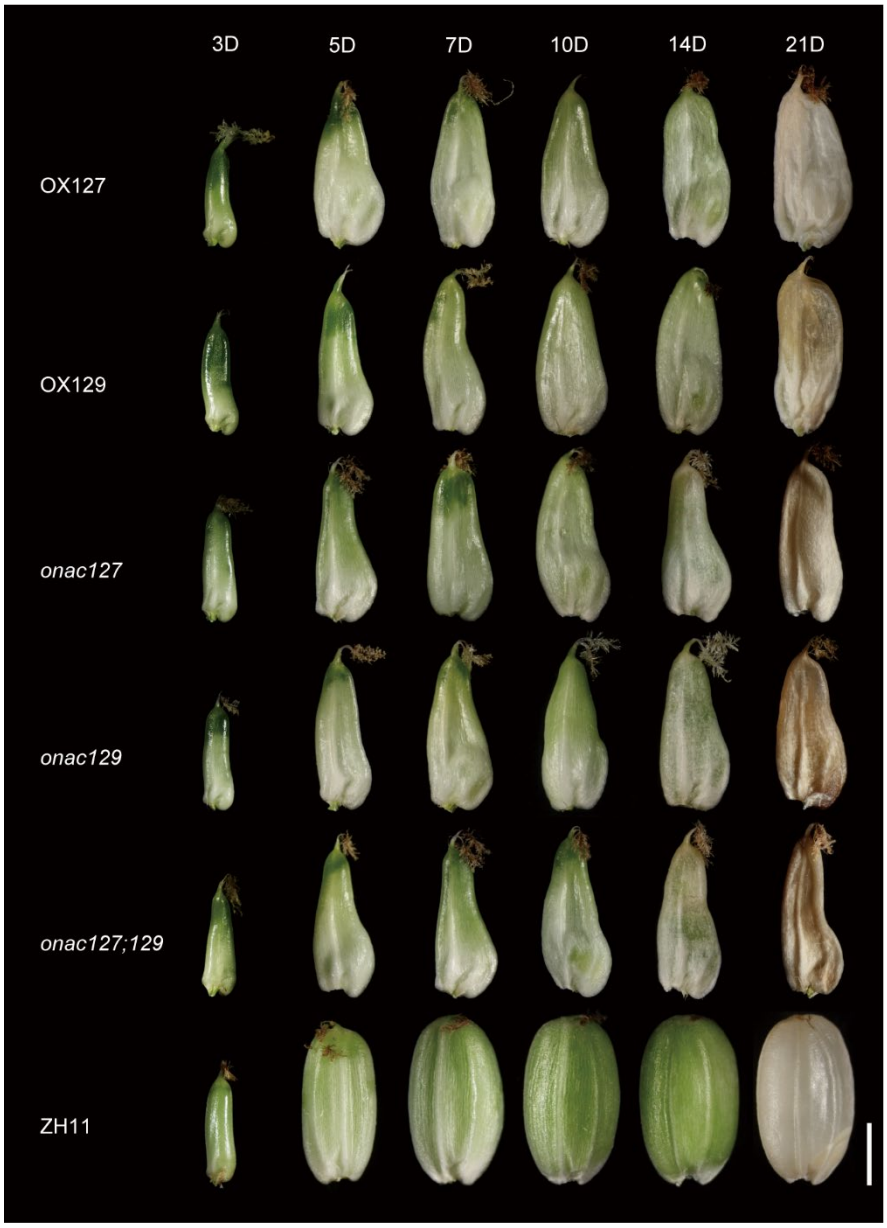


Supplemental Fig. S2 Subcellular localization of the ONAC127 and ONAC129 in the roots of two-week-old rice seedlings of pUbi::ONAC127-GFP and pUbi::ONAC129-GFP transgenic plants. Scale bars are 5 μm.

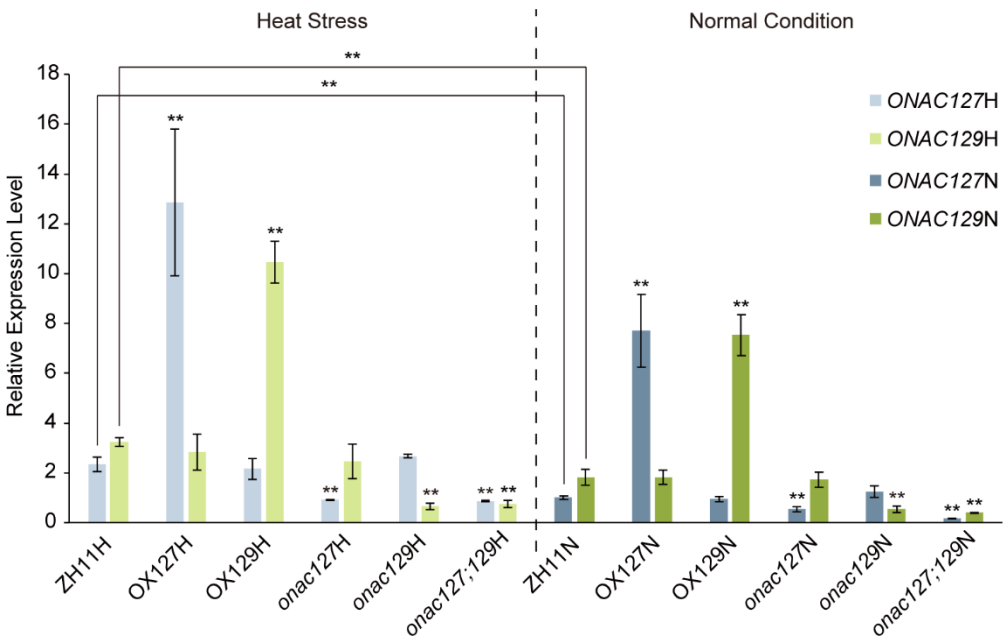
Supplemental Fig. S3 Mutation sites in *onac127*, *onac129* and *onac127;129* lines, as compared with wild-type (ZH11) sequences. The protospacer-adjacent motif sequences are shown in orange and the inserted or deleted nucleotides are indicated in red.



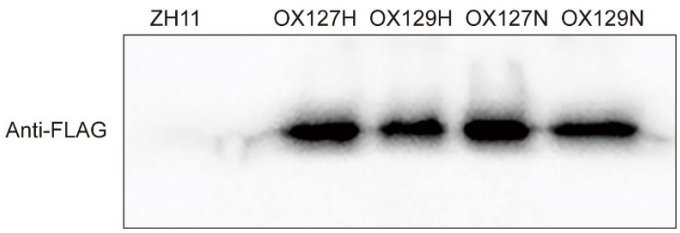
Supplemental Fig. S4 The relative expression level of the overexpression lines of *ONAC127* and *ONAC129*. The values in each column are the mean (±SD) of three biological replicates. Ubiquitin is used as the reference gene. Significant differences between the ZH11 and the overexpression lines are determined using Student's t-test (** P<0.01).



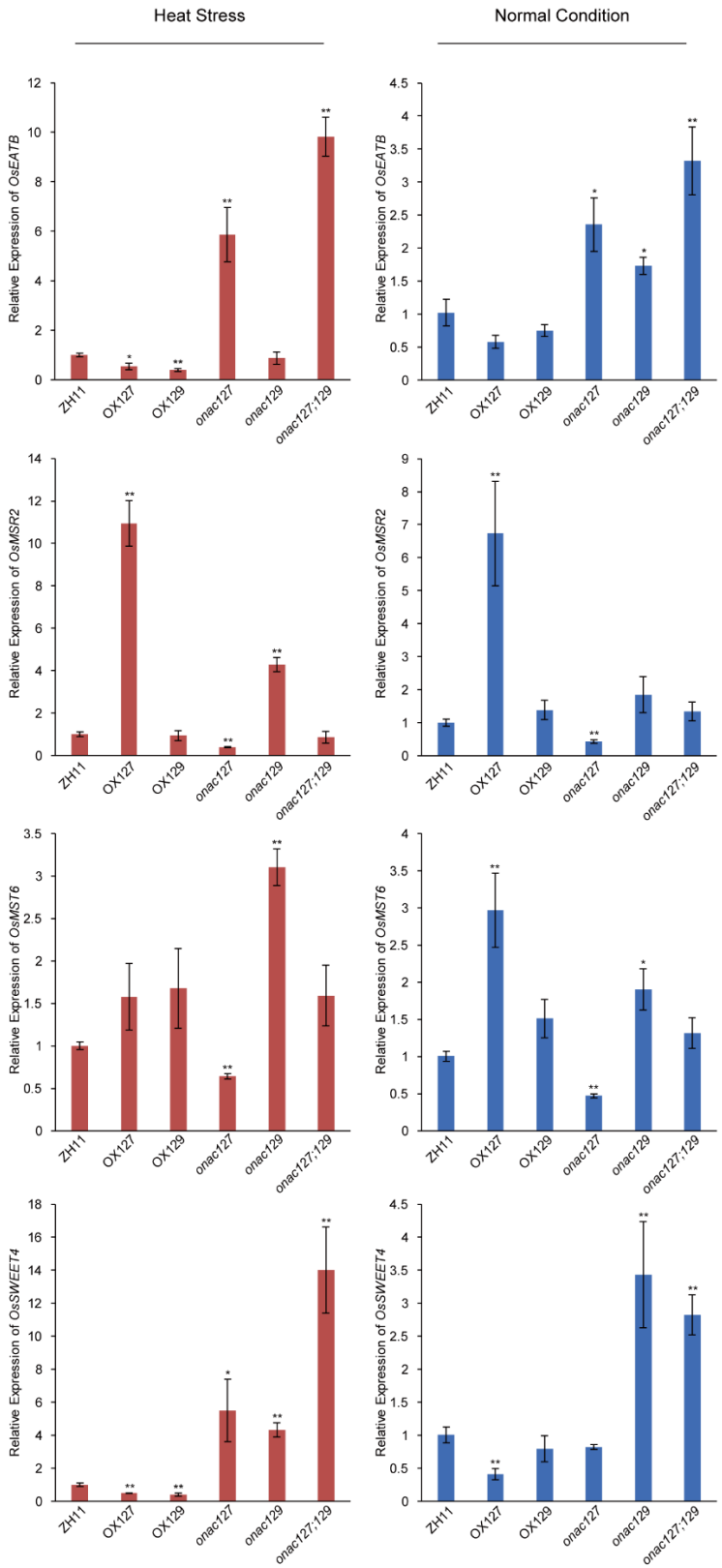
Supplemental Fig. S5 Different stages of caryopses development. Scale bar is 2 mm.



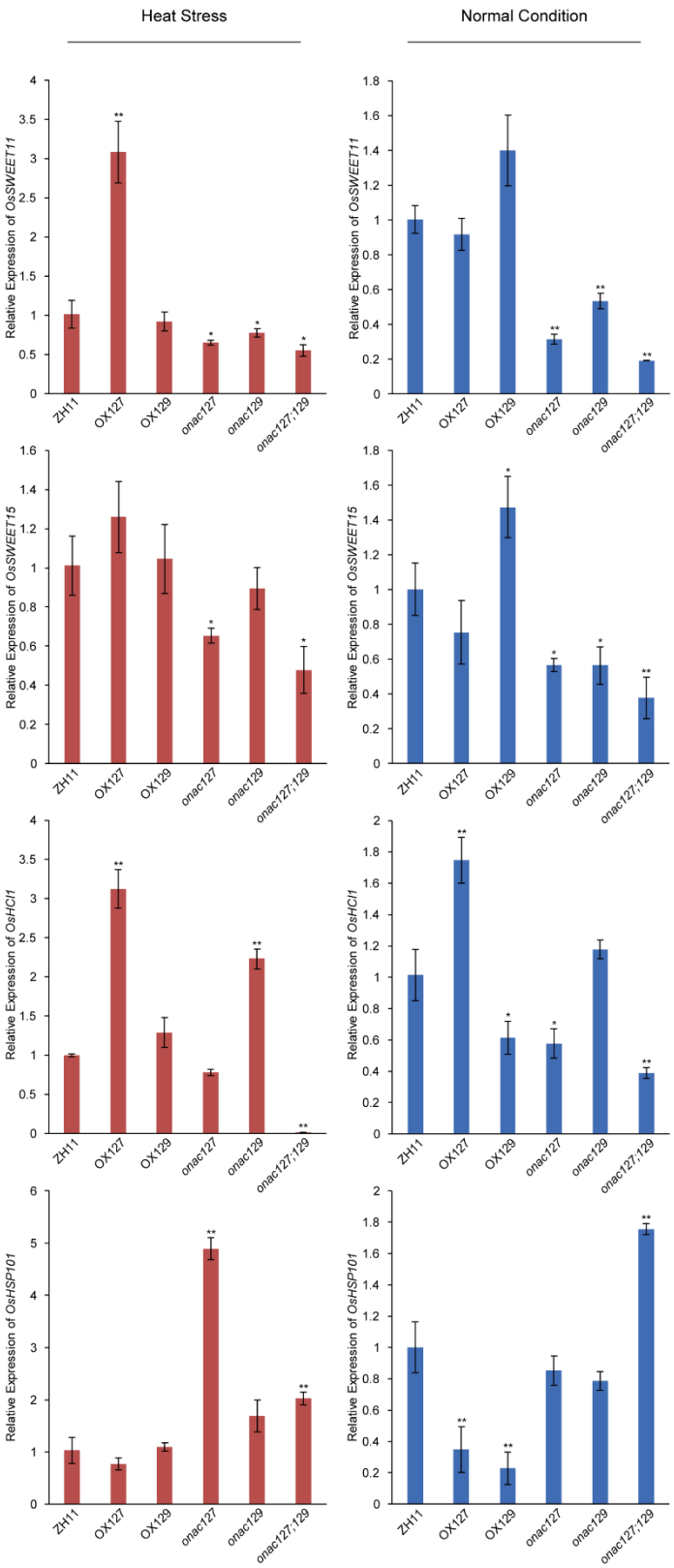
Supplemental Fig. S6 Expression level of *ONAC127* and *ONAC129* in 7 DAP caryopses of transgenic lines compared with that of ZH11. Ubiquitin was used as the reference gene. The values in each column are the mean (±SD) of three replicates. Significant differences between the ZH11 and the transgenic lines were determined using Student's t-test (** P<0.01).



Supplemental Fig. S7 Detection of FLAG fusion proteins in the ZH11 and overexpression lines. Total proteins extracted from developing caryopses at 7 DAP were used for western blot analyses with an anti-FLAG antibody.



Supplemental Fig. S8 Expression level of the target genes of ONAC127 and ONAC129 in 7 DAP caryopses of transgenic lines compared with that of ZH11. Ubiquitin was used as the reference gene. The values in each column are the mean (±SD) of three replicates. Significant differences between the ZH11 and the overexpression lines were determined using Student's t-test (* $P<0.05$; ** $P<0.01$).



Supplemental Fig. S9 Expression level of the indirect target genes of ONAC127 and ONAC129 in 7 DAP caryopses of transgenic lines compared with that of ZH11. Ubiquitin is used as the reference gene. The values in each column are the mean (±SD) of three replicates. Significant differences between the ZH11 and the overexpression lines are determined using Student's t-test (* P<0.05; ** P<0.01).