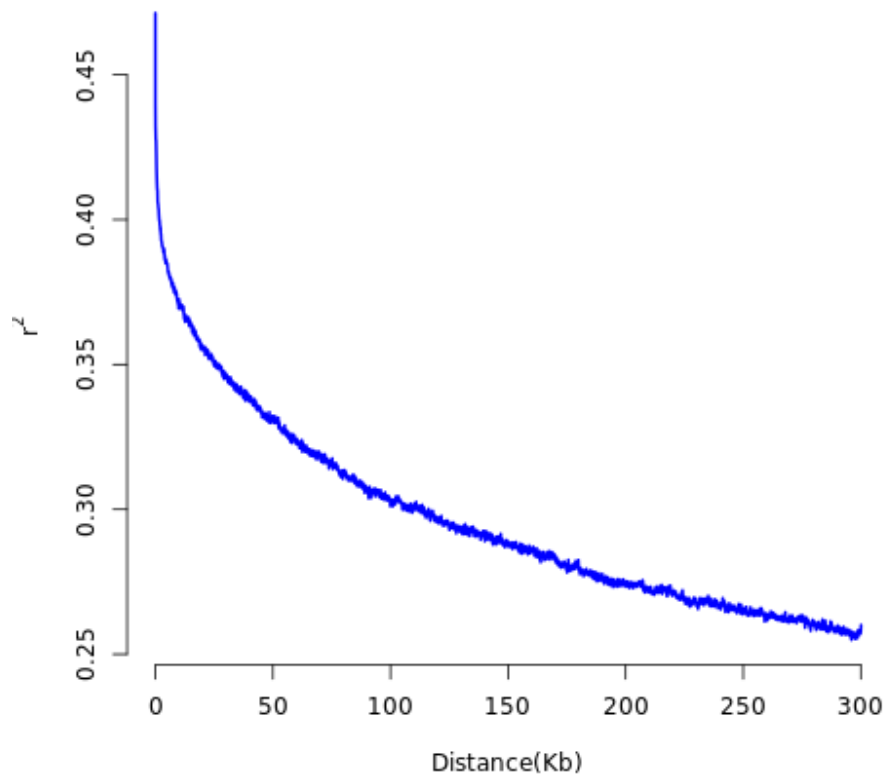


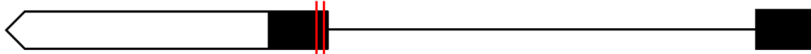
Supplementary Fig. S1. Daily temperature screening in the greenhouse during experiment

LD decay



Supplementary Fig. S2. Diagram of LD decay

(a) Os10g0178101

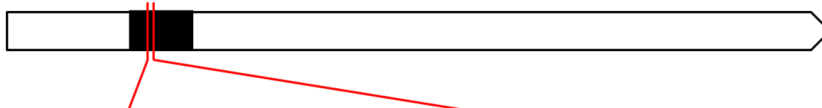


(b)

Chromosome	10	10	10	10	Means of Score (%)	Number of accession	F-value	Pr > F
Exon	2	2	2	2				
SNP Position	5374207	5374216	5374217	5374219				
Allele	C/G	C/G	C/A	T/C				
Amino acid Substitution	E -> Q	A -> P	R -> S	R -> G				
Codon Variant	GAA -> CAA	GCA -> CCA	AGG -> AGT	AGG -> GGG				
Hap 1	C	C	C	T	18.491023	88	3.46	0.0354*
Hap 2	G	C	A	C	5.39	6		
Hap 3	C	G	C	T	45.94	4		

Supplementary Fig. S3. Haplotype analysis of Os10g0178101. (a) Gene structure of Os10g0178101. White box means non-coding region, black box means coding region and red line means relative positions of SNP substitution. (b) Haplotype analysis and phenotypic variation analysis among haplotypes. * p -value < 0.05

(a) Os10g0181900



(b)

Chromosome	10	10	10	Means of Score (%)	Number of accession	F-value	Pr > F
Exon	1	1	1				
SNP Position	5625326	5625348	5625399				
Allele	C/A	C/A	C/T				
Amino acid Substitution	L -> M	T -> N	T -> M				
Codon Variant	CTG -> ATG	ACT -> AAT	ACG -> ATG				
Hap 1	C	C	C	18.491023	88	3.46	0.0354*
Hap 2	A	A	T	5.39	6		
Hap 3	C	A	C	45.94	4		

Supplementary Fig. S4. Haplotype analysis of Os10g0181900. (a) Gene structure of Os10g0181900. White box means non-coding region, black box means coding region and red line means relative positions of SNP substitution. (b) Haplotype analysis and phenotypic variation analysis among haplotypes. * p -value < 0.05

(a) **Os11g0231800**

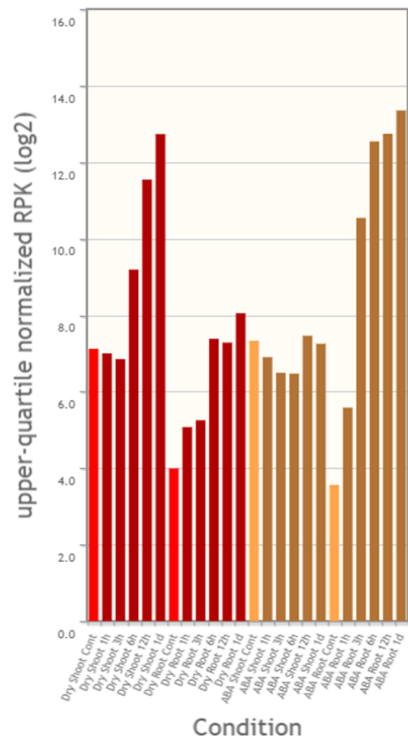


(b)

Chromosome	11	Means of Score (%)	Number of accession	F-value	Pr > F
Exon	1				
SNP Position	6981191				
Allele	T/G				
Amino acid Substitution	L -> R				
Codon Variant	CTC -> CGC				
Hap 1	T	14.31	62	5.85	0.017 *
Hap 2	G	26.56	36		

Supplementary Fig. S5. Haplotype analysis of Os11g0231800. (a) Gene structure of Os11g0231800. White box means non-coding region, black box means coding region and red line means relative positions of SNP substitution. (b) Haplotype analysis and phenotypic variation analysis among haplotypes. * p -value < 0.05

Os10t0177200-02 EF-HAND 2 domain containing protein.



Supplementary Fig. S6. Expression patterns of Os10g0177200 under the various environmental conditions.