**Table S1.** Primer sequences of the genes for ddPCR, genotyping and sequencing used in this study.

|  |  |
| --- | --- |
| **Primer name** | **Primer sequence (5'-3')** |
| **ddPCR primers** |
| *ZmLOX5gsp-L* | CTCCATATGAGCCTGGGCAGATTG |
| *ZmLOX5gsp-R* | CAAGCGTGGACTCCTCTCTC |
| *α-Tubulin-F* | GCTATCCTGTGATCTGCCCTG |
| *α-Tubulin-R* | CGCCAAACTTAATAACCCAGTA |
| **Genotyping primers** |
| *9242* | AGAGAAGCCAACGCCAWCGCCTCYA |
| *lox5-3F* | TGCCGGACCAGTCAAGCCCATAT |
| *lox5-3R* | GGCCCCTTCCGGTTCTTCAAGTC |
| **Sequencing primers** |
| *ZmLOX5gDL-L* | GCGGTGATCGAGCCGTTCGTAATC |
| *ZmLOX5gDL-R* | CAAGCGTGGACTCCTCTCTC |

**Table S2.** Primer sequences for qRT-PCR tests in this study.

|  |  |  |  |
| --- | --- | --- | --- |
| **Primer name** | **Primer (5'-3')** | **Tm (oC)** | **Product size (bp)** |
| ***ZmLOX5-F*** | GGGCAGATTGTGTCTCGTAGTA | 62 | 140 |
| ***ZmLOX5-R*** | ATATTCAAGCGTGGACTCCTCT | 60 | 140 |
| ***ZmLOX8-F*** | CAGTACCGACAGACAGCCAT | 60 | 163 |
| ***ZmLOX8-R*** | GTTTCGGACCACCAAATCAA | 57 | 163 |
| ***ZmLOX10-F*** | ATCCTCAGCATGCATTAGTCC | 59 | 139 |
| ***ZmLOX10-R*** | AGTCTCAAACGTGCCTCTTGT | 59 | 139 |
| ***ZmJAR1a-F*** | TCTATCCGCCAAGCTGTTTC | 58 | 150 |
| ***ZmJAR1a-R*** | CCCCGTCATAATGCCATAGATG | 61 | 150 |
| ***Zmα-Tubulin-F*** | GCTATCCTGTGATCTGCCCTG | 62 | 139 |
| ***Zmα-Tubulin-R*** | CGCCAAACTTAATAACCCAGTA | 59 | 139 |

**Table S3.** Sequencing results of *LOX5-CNV1* and *LOX5-CNV2* showing several SNPs found in Exons 9 and 10 relative to the reference sequence of *ZmLOX5* (Zm00001eb216870) of B73-REFERENCE-NAM-5.0 genome).



The Table presents the SNPs found in the coding sequence of Yu796 -2×LOX5 compared to the B73-LOX5 locus and the respective changes on the amino acid (AA) sequences. % represents the frequency of specific SNP occurrence in the sequenced PCR amplification products (n=13).