**Table S6.**

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| **Name of Genes** | **Primer Sequences** | **Use** |
| Glyma.09G179600 S  Glyma.09G179600 AS | GCTGCTTGCAAGGCTACTTT  GTGCAACCCATGGATCCTCA | qRT-PCR assay |
| Glyma.08G060300 S  Glyma.08G060300 AS | CGGTTCCTATGCAAACCCCT  ACGCCCGCTCCATATACTTG | qRT-PCR assay |
| Glyma.16G138900 S  Glyma.16G138900 AS | AGGAGCAACAGTCAGTGGTC  TAGAAATGGCGAGCCATCCG | qRT-PCR assay |
| Glyma.16G208400 S  Glyma.16G208400 AS | GGCTCCAAGCACCCTTTTTG  GCCGGTCTCGGTCATTTTTG | qRT-PCR assay |
| Glyma.09G153400 S  Glyma.09G153400 AS | GGAAGCTGGTTGAGACCCTC  CTCATCAATTGCACGGGCTG | qRT-PCR assay |
| Glyma.13G303800 S  Glyma.13G303800 AS | CTTGGCTACCAGCACCAGAA  GTTTGAGTCACAACGGCACC | qRT-PCR assay |
| Glyma.08G060600 S  Glyma.08G060600 AS | CGGTTTCGTCTCGTGGCTAT  ACGAGGATCCCGAGAGTGAA | qRT-PCR assay |
| Glyma.16G173300 S  Glyma.16G173300 AS | TGTTAGTTGTCCCTGGTTACTCA  CAGCAAAACTGGCAAGGAGAA | qRT-PCR assay |
| Glyma.02G113900 S  Glyma.02G113900 AS | TCAAAGCTGCAGAAGAGGGC  GACGTGGAGAAGGGAACGAG | qRT-PCR assay |
| Glyma.06G148800 S  Glyma.06G148800 AS | TGATGATTGGGATGGTGGGC  TAGTACCCAACTGGCTGCAC | qRT-PCR assay |
| Glyma.18G094200 S  Glyma.18G094200 AS | AATAGGCGCATTGCACAACC  CTCCATTTGAACCCGACCCA | qRT-PCR assay |
| ActinII1S  ActinII1AS | GCTGTTCTTTCACTTTATGCAAG  CGCTCGGCTGAGGTGGTGAAGGA | Reference gene |

List of primers used for the qRT-PCR assay of the key structural genes involved in root related traits.