Table S-1. Construct components used in T-DNA construction.

|  |  |  |  |
| --- | --- | --- | --- |
| **Component type** | **Label** | **Description** | **References** |
|
| **Promoters** | *Sb-Alspro* | The sorghum ALS promoter | SB-ALS promoter and 5’UTR, DOE-JGI Sbi v3.1, SBChr04, bases 49239164-49240031. DOE-JGI Sbi v3.1 corresponds to Sorghum bicolor BTx623 assembly v3.0.1 and gene annotation v3.1 available from phytozome (http://phytozome.jgi.doe.gov/). Chromosome 4 of Sbi v3.1 is registered as NCBI accessions NC\_012873.2 and CM000763.3 |
| *Pltppro* | Maize phospholipid transferase promoter | See GenBank sequence (MN380778) |
| *Axig1pro* | The maize Axig1 promoter | (Garnaat et al., 2002) |
| *Sb-Ubipro* | The sorghum Ubiquitin promoter | (Shane, 2007) |
|  |  |  |
| **3' Sequences** | *In2-2* | The maize IN2-2 terminator | (Hershey and Stoner, 1991) |
| *PINII* | The potato proteinase inhibitor II (pinII) 3’sequence | (An et al., 1989) |
| *Os-Ubi 3'* | The rice Ubiquitin terminator | Terminator region of the rice Ubiquitin (Os06g46770.1), unpublished |
| *Sb-Ubi 3'* | The sorghum Ubiquitin terminator | (Shane, 2007) |
| *Os-T28 3'* | The T28 3' regulatory sequence from *Oryza sativa* | (Bhyri et al., 2014) |
| **Marker genes** | *NPTII* | Maize codon-optimized Neomycin Phosphotransferase II | Previously unpublished Corteva Agriscience sequence |
| *HRA* | The maize ALS double mutant gene conferring herbicide resistance | (Green et al., 2009) |
| *Zs-YELLOW* | The Zs-Yellow1 N1 gene encoding a yellow fluorescent protein from *Zoanthus sp* | (Matz et al., 1999) |
| **Maize morphogenic genes** | *Zm-Wus2* | The maize *Wuschel2* (*Wus2*) gene | (Lowe et al., 2007) |
| *Zm-Bbm* | The maize *Baby boom* gene (*Bbm*) | (Gordon-Kamm et al., 2005) |
| **Recombinase Expression Cassettes** | *Cre* | A maize-optimized *Cre* recombinase gene (originally from the P1 bacteriophage), with an inserted potato LS1 intron | (Odell et al., 1990) |
| **Recombinase Target Sites** | *lox*P | The recombinase target site for the Cre recombinase from *E. coli* | (Odell et al., 1990) |

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