

Supplementary Data for A BioBrick Compatible Strategy for Genetic Modification of Plants.

Patrick M. Boyle^{1*}, Devin R. Burrill^{1*}, Mara C. Inniss^{1*}, Christina M. Agapakis^{1‡*}, Aaron Deardon^{2†}, Jonathan G. DeWerd^{2†}, Michael A. Gedeon^{2†}, Jacqueline Y. Quinn^{2†}, Morgan L. Paull^{2†}, Anugraha M. Raman^{2†}, Mark R. Theilmann^{2†}, Lu Wang^{2†}, Julia C. Winn^{2†}, Oliver Medvedik³, Kurt Schellenberg⁴, Karmella A. Haynes^{1¶}, Alain Viel³, Tamara J. Brenner³, George M. Church^{5,6}, Jagesh V. Shah^{1§}, and Pamela A. Silver^{1,5§}

¹ Department of Systems Biology, Harvard Medical School, Boston, MA 02115

² Harvard College, Harvard University, Cambridge, MA 02138

³ Department of Molecular and Cellular Biology, Harvard University, Cambridge, MA 02138

⁴ The Arnold Arboretum of Harvard University, Jamaica Plain, MA 02131

⁵ Wyss Institute for Biologically Inspired Engineering, Harvard University, Boston, MA 02115

⁶ Department of Genetics, Harvard Medical School, Boston, MA 02115

* These authors contributed equally to this work

† These authors contributed equally to this work

§ Corresponding authors

‡ Current Address: Department of Chemical and Biomolecular Engineering, University of California, Los Angeles, CA 90095

¶ Current Address: School of Biological and Health Systems Engineering, Arizona State University, Tempe, AZ 85287

Supplementary Tables

Supplementary Table 1 - Primers used to engineer Arabidopsis pORE series transformation vectors (TAIR*).

Primer Name	Sequence	Purpose
O_5'	GGGAATTcgcgccgcttctagaactagtagcgccgctgcaga	Add MCS** to pORE Open Series vectors O1 and O2 to create V1 and V2
O_3'	CTAGTctgcagcgccgctactagtctagaagcgccgcaATTCCcgc	Add MCS** to pORE Open Series vectors O1 and O2 to create V1 and V2
E_5'	cgatAAGCTTgggatcttctgcaagcatctc	Add MCS** to pORE Expression Series vectors E3 and E4 to create V3 and V4
E_3'	caagaGCTAGCctgcagcgccgctactagtcctctattctagaagcgccgcaattctccggtgggtttgaggtgag	Add MCS** to pORE Expression Series vectors E3 and E4 to create V3 and V4
R1_5'	actacgaagcttgaattcgcgccgcttctagaattagaggactagtagcgccgctgcagAgagctcatgttacgtcctgtagaacc	Add MCS** to pORE Reporter Series vector R1 to create V5
R1_3'	caagaGCTAGCAaaaggtaacctattgtttgc	Add MCS** to pORE Reporter Series vector R1 to create V5
R3_5'	actacgaagcttgaattcgcgccgcttctagaattagaggactagtagcgccgctgcagAgagctcatggcgagtaaaggagaagaac	Add MCS** to pORE Reporter Series vector R3 to create V6
R3_3'	atctGCTAGCttttgttacctattgtatag	Add MCS** to pORE Reporter Series vector R3 to create V6

*Original vectors were provided by The Arabidopsis Information Resource (TAIR)

**MCS: BioBrick multiple cloning site

Supplementary Table 2 - Primers for testing DNA and RNA expression of miraculin and brazzein in Arabidopsis.

Primer Name	Sequence
BRAZ_5'	AATTGGCAAACCAAGTGCAA
BRAZ_3'	TCACAGATACACTGGAGGTTCC
MIR1_5'	CGTGACTATCGGAGGAGTGAAGGGT
MIR1_3'	CCACACACAGTTGGGCAAAACACA
ACTIN_5'	TGTGCCAATCTACGAGGGTTT
ACTIN_3'	TTTCCCGCTCTGCTGTTGT