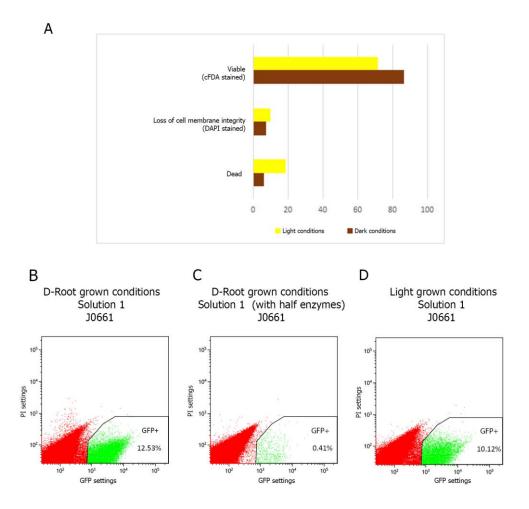
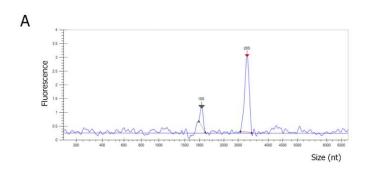
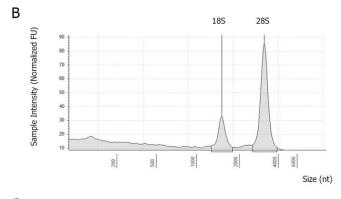
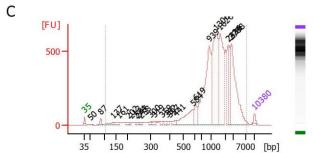
## **Supplementary Marerials**



**Figure S1.** Viability assessment and FACS experiments in dark and light conditions, as well as different enzyme concentrations (**A**) Graphic representation of the percentage of protoplast viability cFDA (live protoplasts), DAPI (show the loss of membrane integrity) staining and dead cells corresponding to no-stained root cells from seedlings grown with the D-Root device (dark) or without the D-Root (light). Propidium iodine settings/GFP settings plots of *J0661* under different conditions: (**B**) Dark conditions, (**C**) Dark conditions with half enzymes and (**D**) Light conditions.







**Figure S2.** Analysis of RNA and cDNA from mCherry sorted positive protoplasts. **(A)** Electropherogram of RNA profile from 380 mCherry positive protoplasts using LabChip (RNA Quality Score 9) and **(B)** TapeStation technology (RIN: 9). **(C)** Bio-analyzer profile of cDNA showing an average size of 1700 bp. Inset: digital electrophoresis.