Supporting Information

Dual peptide-based gene delivery system for the efficient transfection of plant callus cells

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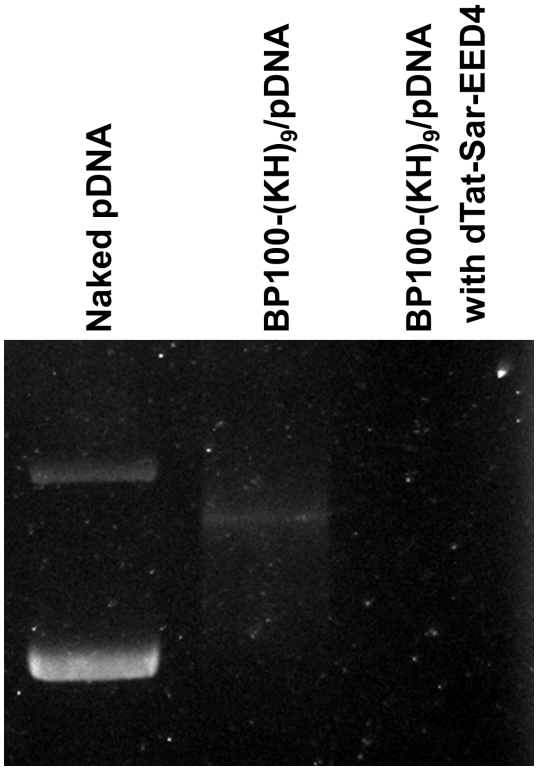

Figure S1. Electrophoretic mobility of the naked pDNA, the BP100-$(KH)_9$/pDNA complex (N/P =0.5), or the BP100-$(KH)_9$/pDNA complex (N/P =0.5) with dTat-Sar-EED4.

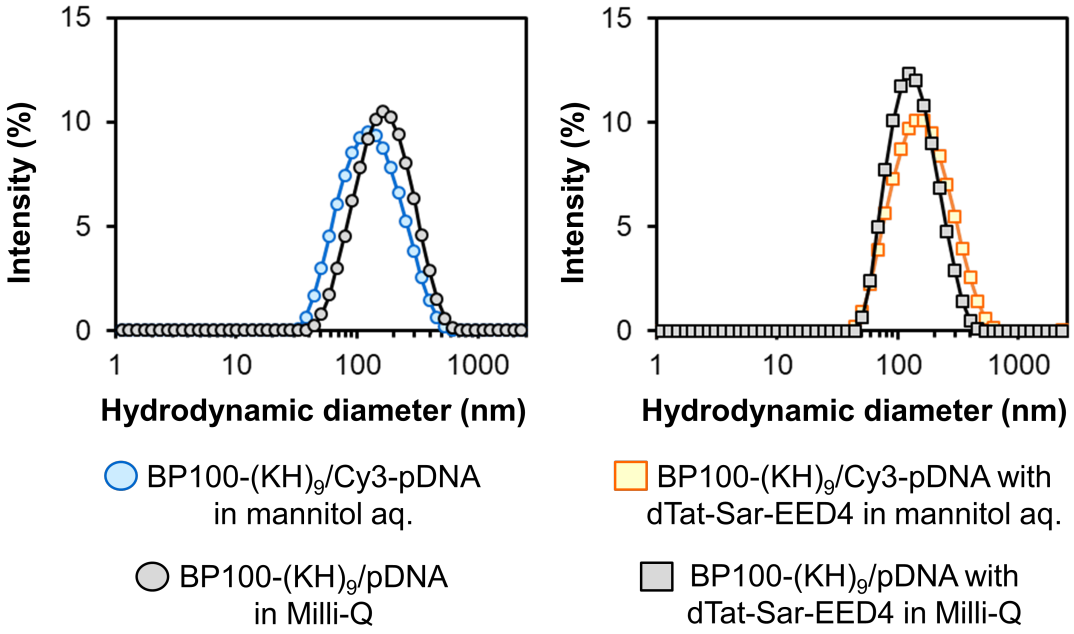

Figure S2. Effect of Cy3 (a fluorescent dye)-labeling of pDNA and presence of mannitol on the formation of the BP100-$(KH)_9$/pDNA complex. In the absence and presence of dTat-Sar-EED4 (96 μM), DLS measurements were performed three times for the labeled (BP100-$(KH)_9$/Cy3-pDNA (N/P =0.5)) complex in 0.4 M mannitol aqueous solution, or for the unlabeled (BP100-$(KH)_9$/pDNA (N/P =0.5)) complex in Milli-Q water. The mean hydrodynamic diameter and PDI of each system were as follow: the labeled complex in mannitol aq., 145 nm and 0.279; the unlabeled complex in Milli-Q, 160 nm and 0.211; the labeled complex with dTat-Sar-EED4 in mannitol aq., 119 nm and 0.257; the unlabeled complex with dTat-Sar-EED4 in Milli-Q, 130 nm and 0.240.

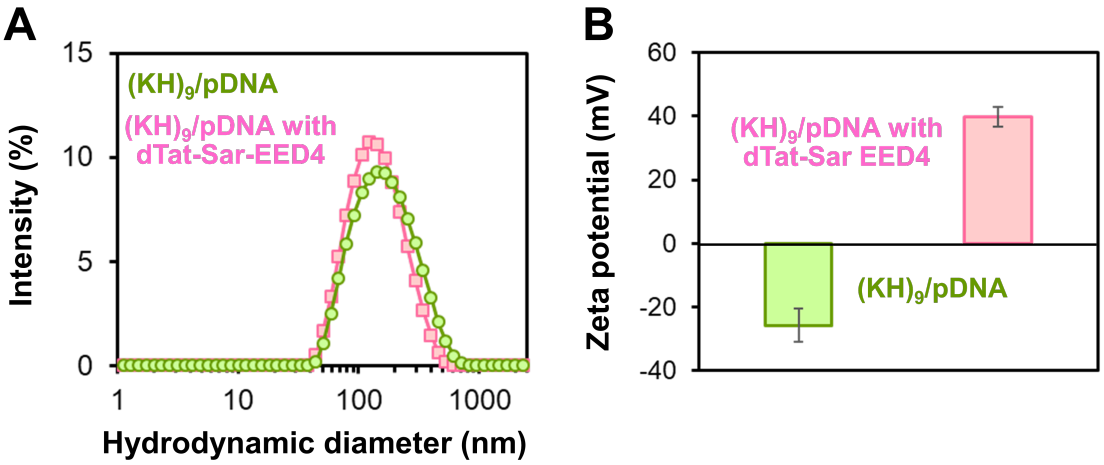

Figure S3. Physicochemical properties of the $(KH)_9$/pDNA complex (N/P = 0.5) in the absence and presence of dTat-Sar-EED4 (96 μM). (A) Representative size distributions and (B) zeta potentials of the complexes. Error bars represent standard deviations (n = 3). The mean hydrodynamic diameter, PDI, and zeta potential of each system were as follow: $(KH)_9$/pDNA, 147 nm, 0.229, and −26 mV; $(KH)_9$/pDNA with dTat-Sar-EED4, 128 nm, 0.238, and 40 mV.