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CONSTRUCTION OF AN ONE-STEP CLONING COMPLEMENTATION VECTOR FOR THE CYANOBACTERIUM *SYNECHOCYSTIS* SP. PCC 6803

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We have developed an one-step cloning complementation vector for the cyanobacterium *Synechocystis* sp. PCC 6803 (Syn6803). The plasmid vector contains a 3' T-overhang for easy cloning of PCR DNA product without using restriction enzymes, the ParE selection system for positive selection of cloned DNA in *E. coli*, and a neutral DNA site of Syn6803 for stable integration in chromosomal DNA through homologous recombination. Because this vector uses a post- segregational killing system, ParE, all *E. coli* transformants grown up on the plates can be considered as recombinants containing foreign DNA. ParE selection T-vector not require X-Gal, IPTG, or other substrates for selection. The plasmid vector, named pHS1, should be useful tool for the molecular genetic study of Syn6803.