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Identification of Two Genes Required for Heptadecane Production in a N_2-fixing Cyanobacterium *Anabaena* sp. Strain PCC 7120

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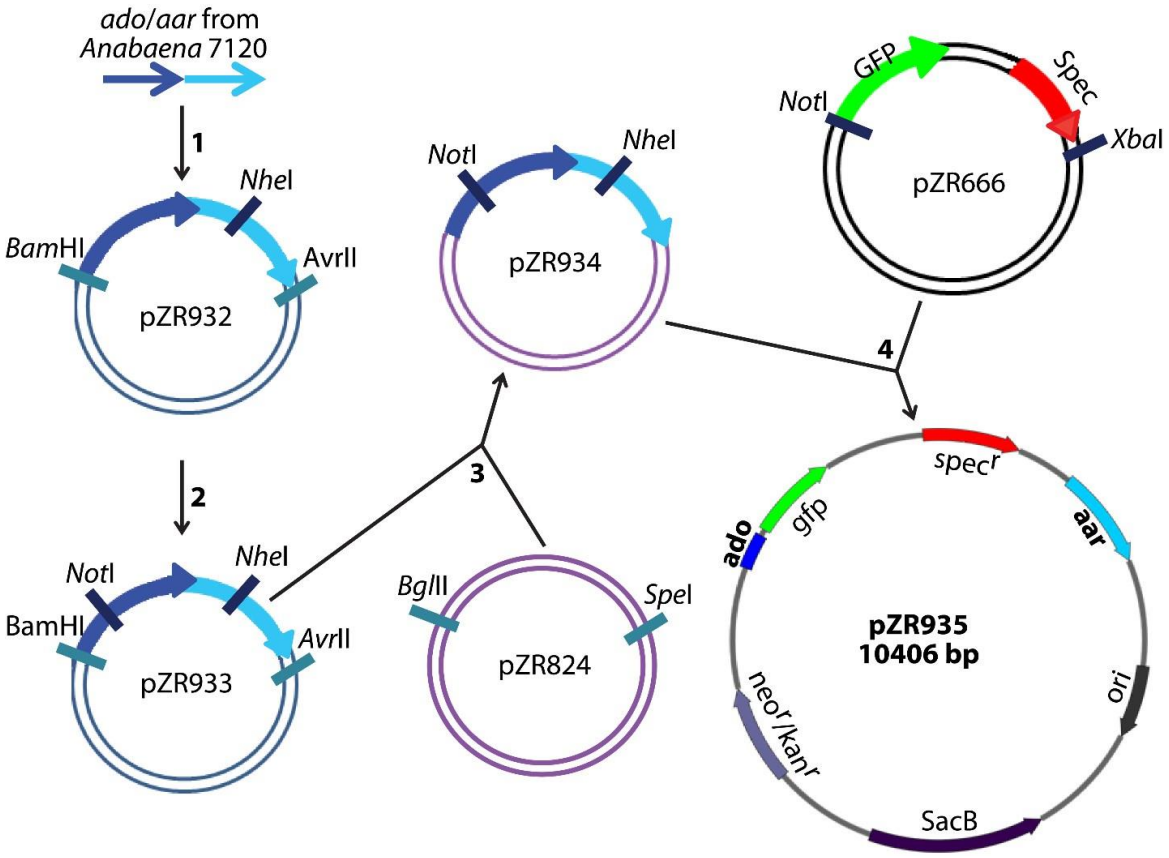

Fig. S1. Schematic illustration of pZR935 construction for knocking out *alr*5283 and *alr*5284 in *Anabaena* sp. strain PCC 7120.

Step 1: Amplified 2.7 kb fragment from *Anabaena* 7120 containing *alr*5283-84 using primers ZR241, 242. Cloned PCR product ligated to pCR2.1-TOPO vector to produce pZR932.

Step 2: Site directed mutagenesis using primers ZR243, 244 to introduce *Not*I site within *alr*5283 in pZR932, creating pZR933.

Step 3: Digestion of pZR933 with *Bam*HI and *Avr*II to obtain 2.7 kb *alr*5283-84 mutated sequence. Ligated this sequence to *Bgl*II and *Spe*I cut pZR824 vector, creating pZR934.

Step 4: *Not*I and *Xba*I cut out promoter-less GFP-Spec cassette from pZR666 ligated into *Not*I and *Nhe*I digested pZR934 to produce pZR935.