

Supplemental Figure 7: Sequences and context of SDR7

Named SDR7 elements of *Nostoc punctiforme*

Replicon Site Ctx SDR and flanking regions

SDR7.1

Npun.chrom	345780F	PP	TAAGGCTGGGCTTTATTGATGTAGGGGCAATTCATGAATTGCCCTACATCGTATAGTTTTGCTTAAGT
Npun.chrom	6719494F	PA	AAGGCTCTTTAGATACATTTGTAGGGGCAATTCATGAATTGCCCTACCATGTGTAGTTTTGCGTAAGT
Npun.chrom	6369006F	C	CAGGTAAATGAAGTACACAGGTAGGGGCAATTCATGAATTGCCCTACGATTGTCTGTACCTCACCCAA
Npun.chrom	4689139F	C	TATATATTTTATCCATGTCGTAGGGGCAATTCATGAATTGCCCTACGACATAATTTCTCAGATAGGT
Npun.chrom	5934971F	D	GGCAAAGATATACACGAAAGGTAGGGGCAATTCATGAATTGCCCTACCTGAAATCTTTCTTTTCGGGC
Npun.chrom	6105804B	C	GCTGAAACCTTATTCTCAGGTAGGGGCAATTCATGAATTGCCCTACGTAATACAATTATACCAATTT
Npun.chrom	7595082F	C	CGGGCTTTGTAGTTAAATGTAGGGGCAATTCATGAATTGCCCTACCTGAACATAGGGCTTCCCATT
Npun.chrom	4054593F	C	TTGGAAACACCATCTGTCGTAGGGGCAATTCATGAATTGCCCTACAGTGAGGCTCTATTATCATCA
Npun.chrom	7577333B	PP	AACCACATCTGTTATCTGTTGTAGGGGCAATTCATGAATTGCCCTACTTGCATGGTCTATTACCTGA

Other SDR7 elements in *Nostoc punctiforme* and other cyanobacteria

Npun.chrom	8020870B	C	GTATTTGAAGCACATCTGTCGTAGGGGCAATTCATGAATTGCCCTACAGCGTGGTCTATTTAAGGAGC
Npun.chrom	103460F	PP	AGCGAAACCTATATTCAGGTAGGGGCAATTCATGAATTGCCCTACAGCGTATAGTTTTGTGTAAGT
Npun.chrom	2121867B	D	ATAGAAATAGACCACGGGTAGGGGCAATTCATGAATTGCCCTACACC-ATATAAATTTGCGTAAGT
Npun.chrom	2136830F	PA	ATAGAAATAGACCACGGGTAGGGGCAATTCATGAATTGCCCTACACC-ATATAAATTTGCGTAAGT
Npun.chrom	8184551B	PP	GCCCAAACCGTTATTTCCGGTAGGGGTAAATTCATGAATTGCCCTACCG-CGTGTAGTTTTGCGTAAGT
Npun.chrom	5878296B	C	TTTAGAAACCATATATGTCGTAGGGGTAAATTCATGAATTGCCCTACAGCACAGGTGATTATCATC
Npun.chrom	1389858B	PA	TGAGACTGCACTTTATTCACGTAGGAGCAATTCATGAATTGCCCTACG- AATTTGTAGTTTTACGTCAAT
Npun.chrom	1248520F	C	GCCAAACTCTGATTTTTCAGGTAGGGGCAATTCATGAATTGCCCTTACGTGCGTGATTTTGCATAAA
Npun.chrom	607140F	D	GCCAAACCTGATTCTAAAGTAGCGGCAATTCATTAAATACCTTAC-AGCGTGTAGTTTTGCGTAAGT
Npun.chrom	5282390B	PP	CCCGAAACCTTTATTTTCAGGTAGGGGCAATTCATGAATTGCCCTTAC- -CGGTGTAGGTTTGCCTGAAC
Npun.chrom	6747317F	PP	ACTCAAACCTTAATTTTCCGATAGTGGCAATTCATGAATTGCCCTACG- GCCTGTAGTTTTGCATTATT
Npun.chrom	6276680B	C	AGCCCAAACCTGATTTTCTGGTAGGGGCAATTCATGAATTGCCCTACG- GCATAAATTTTGCCTAAGT
Npun.chrom	6552944F	PP	CCGAAAGAAATTTTTCAGGTAGGCAATTCATGAATTGCCCTACG- AACGTCCAATTTTGCCTAAGT
Npun.chrom	5067514B	D	CCGAAAGAAAGGATTTTCAAGTAG- GGCAATTCATGAATTGCCCTACG- AGCAACAGTTTTGCGTAAGT
Npun.pNpC	72409B	PA	ACTGAAAGGTTGATTATTCGGTAGCGGTAAATTCATGAATTACTGCTACGTTTCGTTATGTTGTGCGTAAG
Npun.chrom	7452281F	PA	CAAAATAGCTAAACCTTATAGGGGCAATTCATGAATTGCCCTACG- ATCTTATGTTTGGCCTAAGA
Npun.chrom	2080397F	C	GGGTAACATTTAAATCCCTATTGGGGCAATTCATGAATTGCCCTACG- GCAGTTATTTTGCCTAAGT
Npun.chrom	5149061B	C	TGTAAATACGTATACGCAGTAGGAGCAATTCATGAATTGCCCTTCTG- GCCTATAGTTTTGAGCAAGT
Npun.chrom	1785200F	PP	ACTAATGGTCTATCCATTAGTAGGGGCAATTCATGAATTGCCCTTATATTTCATAGCTTGATGCATAA
Npun.chrom	2741240F	PP	CATTGATGTGAGGCACACCCGTAGGGGCAATTCATGAATTGCCCTTATACCTTGCAATTTAACATTGTA
Npun.chrom	7373542B	C	ATTAATTATTTACTAGACAAGTAGAGGCAATTCATGAATTGCCCTACGTTTAGCACTTATTAGGGATA
Npun.chrom	870242F	C	ATAGTAAATAAATCTACACTGTAGGGGCAATTCATGAATTGCCCTACGATATGTATTGTATGTAGTTT
Npun.chrom	4831554F	PP	AAATAGCAAAACTACATATAGGGGTAAATTCATGAATTGCCCTACGATGTAAATTTGTGTAAAGTTTT
Npun.chrom	631595B	D	ATGTCAATTAACATAGACATAGTAGGGGCAATTCATGAATTGCCCTACGTTGTCAATTTCTGTATTTTA
Npun.chrom	5714432B	PP	TAATTCATGTGAGATTCAGGTAGGCAATTCATGAATTGCCCTACGAGTTAATAAATAAATATTTA
Npun.chrom	1196261F	PP	GGGATTTAAGCAAGTTTGTGTAAGGCAATTCATGAATTGCCCTACGATACGTTAAATTTTCTACG
Npun.chrom	348028F	C	CGCTAAGTGTAGCATTCTGTAGGATCAATTCATGCGATTGCCCTACGATCCCATAGCACAGCTTCA
Npun.chrom	5169861B	C	AGCCTAATTAATCTTTGGGGTAGGGCAATTCATGAATTGCCCTACGCTCAAGTTTATAAACCTT
Npun.chrom	53133F	PA	GTATTTGAACATACATCTGTCGTAGGAGCAATTCATGAATTGCCCTACGACGAAAGTCTAAATTTAAT
Npun.chrom	3592272B	C	CATCTTAACATAACAATAGAAGTAGGGGTAAATTCATGAATTGCCCTACCAACCTTAATAATTTAACT
Npun.chrom	3371518B	C	TCTCAAGCCCAGATTTTTCAGTAGGGGTAAATTCATGAATTGCCCTACGCCCCAATAGTAAATTAAGTA
Npun.chrom	7408743F	PP	CGCTTTATTTAGATAGGGAGTAGGGGTAAATTCATGAATTGCCCTACAGCCTGTAGTTTTGTATTGCA
Npun.chrom	1272546B	PP	TAGTAGAGCAATATGACCTGTAGAGGCAATTCATGAATTGCCCTTACGCTGAAATCTCTGTTTGTGTA
Npun.chrom	1612683B	C	GCTTTCTGCTTTAGATAAAGTAGGGGCAATTCATGAATTGCCCTACGTTGAAAGTAGGGTTAGATT
Npun.chrom	4218546B	D	GGTCAAAACCATATTTGTCGTAGGGGCAATTCATGAATTGCCCTATAGCGTGGTCTATTGGCAATCAT
Npun.chrom	2916304B	PA	TTTGAGAAACGATCCGTCGTAGAGGTAAATTCATGAATTGCCCTACACACAGCATTTATTTCCCATC
Npun.chrom	2010053B	PP	GTATCTGAACCATCCGTTGTAGGGGTAAATTCATGAATTGCCCTACGACGCTGGTCTATTTATCTG

Tery.chrom	6127249F	C	AGTTGAAAACCTTAACCTTTTT	TAGGGGCAATTCAT	AAATTGCC	CTAC	TTACCAAAGCGAAATATGACT		
Tery.chrom	605681B	I	AGTTGAAAATTTAAC- TTTT	TAGGGG	AAATTCAT	AAATTGCC	CTAC	TTACTAAGGCGAAACATGACT	
lyn-027	58236B	PP	GAAGAGAGAAGAATTTACGG	G	TAGCGG	GAATT	GAT	CAATTGCCCTAC	AGTCCCAAATTCTATGTTAAA
lyn-009	88992B	C	CCGTTAATCAACTGTTTATC	G	TAGGGGCAATT	GAT	CAATT	CCCCTAC	CCCGGTCACGGGTGACGGCTT
lyn-024	40675B	PP	TTAGTGTTTACTGTTTCTAG	G	T	GGGGCAATT	TATGAATT	CCCCTAC	TTTTTTAGGGATCACTTTTG

Supplemental Figure 7: Sequences and contexts of SDR7 elements. All instances of SDR7 in any genome of a cyanobacterium listed in Figure 5 of the main text are indicated. Conventions are as described in Supplemental Figure 1. In addition, deviations from SDR7.1, highlighted in gray, use red letters if the mutation is compensatory with the corresponding location elsewhere in the element, blue letters if base pairing may be maintained through G-T hydrogen bonding, green letters if base pairing may be maintained through G-T hydrogen bonding of a polynucleotide corresponding to the inverse strand, and black letters otherwise. Runs of at least four thymidines or four adenosines are rendered in blue or green letters, respectively.