

Supplemental Figure 6: Sequences and context of SDR6

Named SDR6 elements of *Nostoc punctiforme* (and instances in other cyanobacteria)

<u>Replicon</u>	<u>Site</u>	<u>SDR and flanking region</u>
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
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30	30	30
31	31	31
32	32	32
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34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50
51	51	51
52	52	52
53	53	53
54	54	54
55	55	55
56	56	56
57	57	57
58	58	58
59	59	59
60	60	60
61	61	61
62	62	62
63	63	63
64	64	64
65	65	65
66	66	66
67	67	67
68	68	68
69	69	69
70	70	70
71	71	71
72	72	72
73	73	73
74	74	74
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76	76	76
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86	86	86
87	87	87
88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

SDR6.1

Np.chrom 4170008B GCATAAAGAAAGGCGCAGGCAGATTTATTCTCT-ACGAGAGGCTGCGCCGTAAAGCGTAGCTATGCCCGAGGCTTACGCGTCCCCATTCTCAATFCCCAGTCGTTAACCCGTGTGTGTCACTTTA

Np.chrom 3117953B TTTCAGATAATAAAGTCTTGTCCTCCCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACGGTAGCTCAGGGAAGAGCTCTGTTTTATTAATTTGTC

Np.chrom 7206996B CAAAGTTCTTGATTGATGAAGGAAGCTCTCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACGACTAGAGCAGCTATGCGAAGCGCTCAGACTCTCTGTTTTATTAATTTGTC

Np.chrom 1247019B GGAATGGGAGTGGGAATGGGAGCATACCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACGACTACGGTCAGTAACCGGGGAGGAGGCAAGGAGGAATAAG

Np.chrom 4586590B TAGGAGGAAGAGAGCAGGGGGGAGCATCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACGACTACGGTCAGTAACCGGGGTAGGCAAGGAGAACAAG

Np.chrom 20540F ATCTGGTCAAAGAGTAGGGGGGAGCATCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACGACTGCGTCAGTAACCGGGGGGAGAAAGCTAGACGGGGCTC

Np.chrom 4591477B AGTTTCAGAGGCGTAGGCGTAGCCCGCATCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACGCTGCGCTCAGTGACCGTCGAGGCAATCGATCGATCATCTTAC

Np.chrom 7281943F GGTGAAAATCGGTAGGCGTAGCCCTGACCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACAGATGGTTCAGCTCGCTCACAGCGCTCAGTGA

Np.chrom 5929834F TAAAAATAAACCTAGGCGTAGGGAGCATCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACAGAACGCTCAGTGACCTAGACATCGCTTCTGTTTCAATTCGCT

Np.chrom 6650760F ACATCTGGTGGCCGAGCTACGCCCGCATCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACAGAACGCTCAGTGACCTAGACATCGCAACCACTACCTAATCCA

Np.chrom 733374B TTATTGACTAATACGCAATFCCGAGCATCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACGCTGCGCGGTAGTTGAGCGCAGTCGAACTCAGTACAAGTFCGCAATF

Np.chrom 2294296F TTACTTCCCAATTCGCAATFCCGAGCATCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACGACTGCGCGGTAGTTGAGCGCAGTCGAACTCAGTACAAGTFCGCAATF

Np.chrom 1996726F ATTGTGATCTTAGTCCCAATFCCGAGCATCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACGACTGCGCGGTAGTTGAGCGCAGTCGAACTCAGTACAAGTFCGCAATF

Np.chrom 6123831B CATTAGTATTATTTCGCAATFCCGAGCATCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACGCTTCTCTACAAGCGCTACGCGCAATGCTCAGTACAATFGCGCATGT

Np.chrom 111642F CTAATAACTAATGACCAATGACCCATCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACGCTTACGCGGTAGTTGAGCGCAGTCGAACTCAGTACAATGACTAATG

Np.chrom 7161430B GAGTTTTTTAATACTTAATGGCCAACTGCTCTCT-AAAAGAGGCTGACCCCTAAGCGTAGCTATGCCCGAGGCTTACGCTTCTCTACAAGACTAGGTGAACACTCAGTACAATFGCCCAATFCC

Np.chrom 5958003F ACTAATTACTCATGTCTATGCGCCAACTCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACGCTTCTCTACAAGCGCTACGCGCAATGCTCAGTACAATFGCGCATGT

Np.chrom 3424300F CTAATGCCCAATFCCCAATFCCGCAATCAACTCT-TGGAGAGGCTACGCCCTAAGCGTAGCTATGCCCGAGGCTTACGCTTCTCTACGAGACTACGCGCTAGCGGAGCTTTCGCTTAGAGCAT

Np.chrom 4998118B TGAGTAACCAATAGCCCAATFCCGAGCATCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACGACTGCGCTCAGTACAAGTFCGCAATFCCGATFCCGACATTTATGCTC

Np.chrom 6135422F -AATFCCCAATFCCGCAATFCCGAGCATCTCTCTAACGAGAAGGCTACGCCCTAAGCGTAGCTATGCCCGAGGCTTACGACTGCGCTCAGTACAAGTFCGCAATFCCGACTACCGACTTTATGCAA

Np.chrom 5615524B ATTATFCCCAATFCCGCAATFCCGAGCATCTCTCT-ACGAGAAGGCTACGCCCTAAGCGTAGCTATGCCCGAGGCTTACGACTACGCTCAGTACAAGTFCGCAATFCCGATFCCGATFCCGCAATA

Np.chrom 5891968B ATCTCTTCGTGCTACCCATFCCCAATCTCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACGACTGCGCTCAGTACAAGTFCGCAATFCCGATFCCGATFCCGCAATA

Np.chrom 6104303B -CAATFCCCAATFCCGCAATFCCGAGCATCTCTCTAACGAGAAGGCTACGCCCTAAGCGTAGCTATGCCCGAGGCTTACGCTTCTCTACAAGCGCTACGCGCAATGCTCAGTACAATFGCGCATGT

Np.chrom 6265417F GGATTCGCGGATACGCGATACGCGCATCTCTCTGACGAGAAGGCTACGCCCTAAGCGTAGCTATGCCCGAGGCTTACGCTGGGCTTAGTACAAGTFCGCAATFCCGATFCCGATFCCGCAATA

Np.chrom 3180203F GAACAATTTCTCTTTTCCAATGGCCCACTCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACGACTGCGCTCAGTACAAGTFCGCAATFCCGATFCCGATFCCGCAATA

Np.chrom 6158872F TTTGGAGAGTTAAACAAATFAGCAACTCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACGACTACGCTCAGTACAAGTFCGCAATFCCGATFCCGATFCCGCAATA

Np.chrom 2145694B CAAATTTAAAAATTAATAAATTCGCACTCTCTCT-ACGAGAAGGCTGCGCCCTAAGCGTAGCTATGCCCGAGGCTTACGCTAGTCACTAACCAATAAATAATTTAGGGGCTGTATCTCTTTCT

Avar .pAvC	133252F	CGCCTACGCGAAAGTTAAGCTTTCCTTC--TAC--GAGAAGC-TGCGCCATAGCGTAGCTATGCCCGAGGGCTTAAGCAACGCTAGCSGTAGCTTGCTCCCCGTAGGAAGTACGCTAACCGGGTT
nod-006	78217B	GAGGGCTAGCGCCAACCTTCCTCTCCCAGAGGGAGAGGCTAGCGCCATAAGCGAAGCTATGCCCTAGGCTTTACGTGGTTCAITCTTCGTAAGTGTGCGTAAGTCTTAATTAACTTTAAT
nod-054	19356F	GAGACGCTACGCGAACCTTCCTCTCCCAGAGGGAGAGGCTAGCGCCATAAGCGAAGCTATGCCGTAGGCTTTACGTGGTTCAITCTTCGTAAGTGTGCGTAAGTCTAGACTACTCAAAC
nod-109	9900B	GAGACGCTACGCGAACCTTCCTCTCCCAGAGGGATAGGCTAGCGCCATAAGCGAAGCTATGCCGTAGGCTTTACGTGGTTCAITCTTCCTTAAGCTGTGCGTAAGTCTAGTACTGACTACAAC

SDR6.2

Np.chrom 676336F **TATTCCCCATTCCCC** **A**CTTCGGCTTCTCTTAACGGAGACGCTGCGCGTTAAGCGAAAGCTATGCCGTAGGCTTTACGCTCAGTACAAGTTCCCAATTCCCAATGACTTTATACGTAAATTACGGAA

Np.chrom 3134517F **AAGGGAAATTGGGA**TAT**CCCT**TCGGCTTCTCTTAACGGAGACGCTGCGCGTTAAGCGAAAGCTATGCCGTAGGCTTTACGCTCAGGGCAAG**TGGG**CATTGGGAATT**TGGG**TTGGGAAGAGGCGGAGTTA

Np.chrom 2144776B **TCTCGAGACGCTACGCGAACGCTCTCTCTAAGCAGGACGCTGCGCGTTAAGCGAAAGCTATGCCGTAGGCTTTACGCTCAGGGCAAGTGGGA**TGATTATTTTTTTCATCTCCCCCCCCCGCTTC

Np.chrom 4961977B **TCTCGGAGACGCTACGCGAACGCTCTCTCTAAGCAGGACGCTGCGCGTTAAGCGAAAGCTATGCCGTAGGCTTTACGCTCAGGGCAAGTGGGAATTTGGGAATTTGGGAATTTGGGA**AGATTCAATT

Np.chrom 1791914B **CTCTCGCGGACGCTACGCGAACGCTCTCTCTAAGCAGGACGCTGCGCGTTAAGCGAAAGCTATGCCGTAGGCTTTACGCTCAGGGCAAGTGGGAATTTGGG**CATTGAAGAAGAGACAAGGAAGAGGGG

Np.chrom 6220444B **TCCCTGCGGGACGCTACGCGAACGCTCTCTCTAAGCAGGACGCTACGCGTTAAGCGAAAGCTATGCCGTAGGCTTTACGCTCAGGGCAAGTGGGAATTTGGGAATTTGGG**CATTGAAGAAGAGACAAGGA

Np.chrom 8021933B **TCCCTGCGGGACGCTACGCGAACGCTCTCTCTAAGCAGGACGCTACGCGTTAAGCGAAAGCTATGCCGTAGGCTTTACGCTCAGGGCAAGTGGGAATTTG**ACTGTAGGCAAGCGCTTGGCGTAGGCT

Np.chrom 2645359B CTTGTGTGATAGCAAGCGTAAAG**GC**CTTCTCTAAGCAGGACGCTGCGCGTTAAGCGAAAGCTATGCCGTAGGCTTTACGCTT**AGAGCGAG**TCCGCAACGCTGTAACACCTTTATCAGTTCAATTG

Avar.chrom 6322662B GGTGATACCTTCGGTAAGCTATCTCTA**TTCC-T-TC-GGAACGCTACGCGGTAAGCGAAGCTATGCCGTAGGCTTTACG**CTAACGCACTTATTTTGGCATAGACTACACCAAGGCTCCTAAAGCTTT

Np.chrom 6510469B AAC**TAATTCGTAATTCGTAAT**GACGCTCGCGGGCTCGCTACCG**GCTACGCTCTAAGCAAAGCTATGCCGAGGCTTTACGTAATTCGTAATTTGTAAG**GGGTCTAAATCCCAACTTACTTTTATTACG
Np.chrom 5044606F GAATTAGGAT**TAATTCGTAAT**-----GGGCTTTGCCCG**GCTACGCTCTAAGCAAAGCTATGCCGAGGCTTTACGTAATTCGTAAT**TAAATTTTCCCTATTATCTAGCTCTTCCCTGTC
Np.chrom 1978097F AGGAACATAACC**AATTTGTAAT**GACATTTGGAGACTCGTTACG**GCTACGCTCTAAGCAAAGCTATGCCGAGGCTTTACGTAATTCGTAAT**TCTAAGAGGCATCAGATTCAAGTTGAGTTCCATTTCT
Np.chrom 1332408B TGCGC**AACGTAATTCGTAATGAA**CAAGTTGGGAGACTGGTAC**GCTACGCTCTAAGCAAAGCTATGCCGAGGCTTTACGTAAT**TACGATTATTGATTTAG**GGTCTTTAATTCGTAATTCG**TCGTGAACCAATTCAA

Np.chrom 5385189B **GTAA**TT**CGTAAT**GACGCTCTCTACGT**CGCTCTAAGCGTT**CGCGCAGCGTCTCTGTAGAGAAGCCATGCCGCAGGCTTT**ACG**CTACGCTAACG**TAATT****CGTAAT**TACAAATTACCCGTGAGTTGGTTCAA
Np.chrom 5011587F ACGACTGGCT**GTAG**GACGCTCTCTGCGC**CGCTCTAAGCCT**TGGCAGAGCTCTCTGTAGAGAAGCCATGCCGCAGGCTTT**ACG**CTACGCTATCGGTGTGCGCAATTATTGAATACGTGTAATACTTGGT
Np.chrom 4598865F CACTCT**TAGCGCTAAGCGCTAAGCGCTAAGCTAGTAACT**TCGCTT**GGCGCAGGCTCTCTGTAGAGAAGCCATGCCGCAGGCTTTACG**CTACGCTATCGGTGTGCCATTTCTTAACCGCAAACATAATAGAAAT
Np.chrom 4949877B **GCGCCGCGCT**TAAGCG**TACTCT**ACGGAGAGAGGAGCTATCGCTAGCGCTCTGTAGAGAAGCCATGCCGCAGGCTTT**ACG**CTACGCTATCGGTGTCCATTTTGAAGATGCGGATACCTAATAGGATT

A7120.chrom 16349348 -- -GCTAACGCCAA**CGCAATTGCGAAC**GATGCTCCCGCTCT**GCTCTGCT**GAGT**CGAGCTATGCCGACGGCTTTACGCAATTGCAATA**AACTTTCTTAACATCTAT-CTCAGGCATGACATTAATTT
A7120.chrom 4757303F GATATAACGGAGATGAAGATTATTGGCT**CCCTGCGGGACGCTCCGCTG**TAAAGCGAGCTATCGCCGAAGGCTT**ACG**CGTGCAGTTGTCAGGATG-TCAGTTGTTATTGTGACAGTGGTTGAAAG
A7120.chrom 6174485B -- -TTGTTCGGGAGCTTTTTATTGGT**CCCTGCGGGACGCTCCGCT**TAAAGCGAGCTATCGCCGAAGGCTT**ACG**CGTGCAGTTGTTGAAAGGATCTGCTGGT-TTAATACCCCATCCCAAGAA

Avar.chrom	553251F	AAATCATGATGAAGAAAGGTCAGTCGCTCTCTGCGAGACGCTACGCGTTAAGCGAAGCTATGCCGACGGCTTTACGCTCCAAATTCAAAATTCAAAATTCAAAATACCCCTACGGTCAATAGTCAATA
Avar.chrom	1181693B	GCTGGGGATTGGTAATTGGTCAAGTCGCTCTCTACGAGACGCTACGCGTTAAGCGAAGCTATGCCGACGGCTTTACGCTCCAAATTCAAAATTCAAAATTCGCTTTGAAAAGTTTCTACGGCGGGAA
Avar.chrom	3994705B	CATCGCCAAAGGCGCATATGTCAGATCGCTCTCTACGAGACGCTACGCGTTAAGCGAAGCTATGCCGACGGCTTTACGCTCCAAATTCAAAATTCGCTTTGAAAAGTTTCTACGGCGGGAAACCCCTC
Avar.chrom	4381291B	CACAAAATCTTTTATGCTGTCAGATCGCTCTCTACGAGACGCTACGCGTTAAGCGAAGCTATGCCGACGGCTTTACGCTCCAAATTCAAAATTCAAAATTCAAAATTCAAAATTCAAAATTC
Avar.chrom	6172312F	TGCGGCAAGCGCGCAAGCGTCAAGTCGCTCTCTACGAGACGCTACGCGTTAAGCGAAGCTATGCCGACGGCTTTACGCTCCAAATTCAAAATTCAAAATTCAAAATTCAAAATTCAAAATTC

nod-001	254184F	I	CGCCAACGTGTCTTTCGTGTCCTTCTCCCAA-GGGGAGACGCTT-CGCGGTAAAGCGAAGCTATGCCGAAGGCTTTACGTGGTTCGTTTTTCCATAA-TTITGCGTAAGTCTCTGATCCCTTCAAATTC
nod-006	7081F	PP	CCCTTGGCGCTAGCCTCTCCCTTTGGGAGAAGGGGAGACGCTT-CGCGGTAAAGCGAAGCTATGCCGAAGGCTTTACGTGGTTCGTTTTTCCATAA-TTTTGCATAAATCCTGCTAATAACTAATAAA
nod-016	4663F	PA	GAAACCTTCTTAACCTTCTCCCTTTGGGAGAAGGGGAGACGCTT-CGCGGTAAAGCGAAGCTATGCCGAAGGCTTTACGTGGTTCGTTTTTCCATAA-TTTTGCCTAAGTCTGCATAACTACGATGTGA
nod-027	31993F	D	GACGCTTAACGCGAACCTGTCTCTTCTCCCAA-GGGAGACGCTAGCGCCATAAGCGAAGCTATGCCGAAGGCTTTACGTGGTTCATCTCTCGTGACTTCGCGTAAGTCTAAATCAAAATAGTAGT
nod-034	2582B	PP	TTCCCTTCTTCTTTTGTTGTCCTTCTCCCAA-GGGGAGACGCTAAGCGCCATAAGCGAAGCTATGCCGAAGGCTTTACGTGGTTCGTTTGTCTATATAAAACGCGATTTATCGCGTCTCCAAAAATAA
nod-039	3785F	PA	TATCTCTAAAACTCTCTCTCTTCTCCCAA-GGGGAGACGCTAAGCGCGGTAAAGCGAAGCTATGCCGAAGGCTTTACGTGACCTTCGTCTCTTCCCAAGGGGAGACGCTAAGCGGTAAAGCGAA
nod-039	3854F	PA	CTTTACGTAGCACTTTCGTGTCCTTCTCCCAA-GGGGAGACGCTAAGCGCGGTAAAGCGAAGCTATGCCGAAGGCTTTACGTGGTTCATCTCTCATGACTTCGCGTAAGTCTAAATTTAGATCAAAAGC
nod-051	32055F	D	AGACGCTAGCGCGAACCTGTCTCTTCTCCCAA-GGGGAGACGCTT-CGCGGTAAAGCGAAGCTATGCCGAAGGCTTTACGTGGTTCGTTTTTTCCTAA-TTTTGCATAAGTCTGTTTAAATTTAAAAAA
nod-113	9220B	PA	TATCTCTTAACCTCTCTTCTCTTCTCCCAA-GGGGAGACGCTAAGCGCGGTAAAGCGAAGCTATGCCGAAGGCTTTACGTGTTCTTCTCCCAAGGGGAGAGGCTAGCGCCAACGTTCTTCTCCCAA
nod-003	47107F	PP	AGCCCATACAATAGACCTTTTGGACCTTCTCTCGGAGACACTACGTGGTAAAGCGCAGCTATGCCGTAGGCTTTACGACTAAGCTCAGGGTAAACCTTTTGACTTTTGACTTTTGACTTTTAACTTC
nod-050	34808F	PP	TTTATGATATATGTCGCAAAAAAACCTTCCCTACGGGACGCTACGCGGTAAAGCGCAGCTATGCCGTAGGCTTTACGCGATAGCTCTGGGTAAAAAGATTTGGGTCTTGGGAATCAGGACTCTCGCC
nod-059	18073B	C	TTCTTAAGTATAAGGTTGGGCACTACTTGGTAACGCGACGCTACGACGCGTAAAGCGCAGCTATGCCGTAGGCTTTACGCGAAGCTCAGTACAAGCTTTGGCTGCCCTTTATAGCTGGTTCGTTGGGGA

Np.chrom	1770956B	P	TTGTGCTGGTAAGATGATCGTTTGC GTTCTTCTT	CTTGAGTTTGGATATTAGCGGT	TAGCGAAGCC	ATGCCGCAAGGCTTAT	CGCTGTTCAATTGCTGTTG	CTGGAATAGCCATCTCGATTGCTTTGAGCA
Np.chrom	2034242F	I	TTGTGCTGGTAAGATGATCGTTTGC GTTCTTCTT	CTTGAGTTTGGATATTAGCGGT	TAGCGAAGCC	ATGCCGCAAGGCTTAT	CGCTGTTCAATTGCTGTTG	CTGGAATAGCCATCTCGATTGCTTTGAGCA
Np.chrom	1888171B	C	AAGTCGCTGAGTAATAATTCGTAATA	CTTCTCTACGAGAGGGCTGCGCCCT	AGCGTAGCTATGCT	GCAAGGCTTTACG	ACTACGCACAGTACAAG	TTCGTAATTTCGTAATTAATTACACTGGTATA
Np.chrom	7840472F	D	AGAATAACTGATAACTAATGAC	CAATCTCTCTAT	AAAAGACTGCACCT	AGCGTAGCTATGCT	GCAAGGCTTTACG	ACTACGCAGGTAGTTGAATCTCGACTTCGCTCGATTTCCGCGCAGTCAA
Np.chrom	5750632F	P	TTGTCATTCCAATA	CCCGATGACCAATACAA	CTCTTGGAGAGGCTACGCCCT	AGCGTAACATGCAAGGCTTTACG	ACTACGC	GCTAGTTGAATCTCGACTTCGCTCGATTTCCGCGCAGTTCGA
Np.chrom	5106373F	P	CTAAGTG	CCCCATGTCGCAATTCCCAATCA	TA	CTCTACGAGAGGCTGCGCCCT	AGCGTAGCTATACCGCAAGGCTTTAC	CGACTCGCCTTAGTACAAGTTCCCAATTCGCAATAACTAACAGAGGTTTAA
Np.chrom	6775082F	D	CGAATGACCAAGTTAACCACTCCGACTCTCT	CTCTCTACGAGAGGCTGCGCCCT	AGCGTAGCTATGCAAGGCTTTTAC	ACGCGCT	TACCTCGAGTCTTCCTCCCTCTCTCTACGAGAGGCTGCGCTCGAG	

Np. chrom	2460631B	P	TCTACAAGACGCTGCACGAACGATA	TA	CTCTCTACGAGA	AGCTGCGCC	TA	AGCGTAGT	TATGCCGT	AGGCTTTAC	AGCTGCGCTCAGTACAAG	AAGCTCAGTGACCATCGTAGATATCGCATCT
Np. chrom	6397679B	P	AGCAATGCCAATACTTCGGCTTCG	CC	CTCTCTACGAGA	AGCTGCGCACT	TA	AGCGTAGCTATGCCA	CAGGCTTTAC	CGCTACGCTCAGGACA	GG	CTCAGTACAAGTGCCCAACGACCCATACCCA
Np. chrom	6371453F	P	TCATTTGTAAAAACAATGCCCCATA	CT	TTCTCTACGAGA	AGGCTCGCC	CT	AGCGTAGCTATGCCGCA	C6GCTTTAC	GG	TTCTCTACGAGACGCTACGCGT	TAGCGAAGCTTTTCGCTTTAGCGAT
Np. chrom	5596477B	C	TGGGATTTAAGCGATTATGCCCAATACA	CT	CTTGGAGAGGCTGTGCC	TA	AGCGTAGCTATGCCGCA	AGGCTTTAC	CGCTTTTAC	AGACGCT	CGCGT	TAGCGAAGCTTTTCGCTTTAGGGATA
Np. chrom	5023507F	C	ACTAAGACCAATGACCAATGACTAATACAA	CT	TTAGAGAGGCTGCGCC	TA	AGCGTAGCTATGCCGCA	AGGCTTTAC	CGACTACGG	GGTAGTTGGGCGCAGTCGAACTCACTACAAGTGACCAATT		
Np. pNpB	129907F	D	GGCTCTGGTTAATA	CAAA	TTCAAA	TACAAC	CT	TTGGAGAGGCTATGCT	TA	AGGCGTAGCTATGCCGCA	AGGCTTTAC	GGCTGCGCCTTCTCTCTGTGCGACAGCGCTATGCGTAGCTTGCCTCCACA
Np. chrom	585609B	P	CTTTCTCCTTTGCCTTTTTAACCAATACA	ACT	CTTGGAAAGGCTGCGT	CT	TA	AGCGTAGCTATGCCGCA	AGCTTTAC	AGCTACGG	GGTAGTTGAATCTCGACTTCGCTCGATTTCCGCGCAGTCGA	
Np. chrom	4958775B	P	TAGCGTAGCGTAAAGCCTGCGGCATGG	CT	TTCTCTACGAGA	AGGCTGCGCC	TA	AGCGAATCTATCCCGT	AGGCTTTAC	CGCTTAGAGTGACGCGAGAAGCGTCA	TAGCCCGCTGAGACATCGCTATAA	
Np. chrom	6161089B	P	ACAGCGTACCCGATAGCGTTTGCCTAGCGT	CT	CTATGAGAGGCTGCGCC	CT	TA	AGCGAAGCTATGCCGT	AGGCTTTAC	CGTTAGAGCGAGTCA	TGAGCGCTCATAGCCATTGCGAACATCGCATTG	
Np. chrom	3363434B	C	CCGTGCGGGACGCTACGCGAACGACTT	CT	CTAATGAGAGGCTGCGCGT	TA	AGCGAATCTATGCCGT	AGGCTTTAC	CGCTCAGGGCAAG	TGGGCAATTGGG	TATTAATTTCTTGCTCACACTGTAAT	
Np. chrom	1874518F	P	TTCCAAAGAGACAGGCTAGCGCTTTTC	CT	TTCTCTACGAGA	AGGCTGCGCC	CT	TAAGCGGAGCTATGCCG	AAAGGCTTTAC	CGA-ACGCTC	TGCGAACGCAAGCGCTCTTTGTAAGAAAGGGAGTTTCCCCCA	
Np. chrom	8203325F	D	ACAATTCATAGTCTCTAAGCGTAG	CC	TTCTCTACGAGA	AGGCTGCGCC	CT	TAAGCGTAGCTATGCCGCA	AGGCTTTAC	GGCTGCGCTCAGGA	ACCA	CTCGTCGTAGACATCGCTTTCTTTGTTGGTT
Np. pNpA	252626F	P	TACAGATAGCGATGTCTACTTTTTGGGGCTG	TG	AGCTCTCTGCGTCTCTAAGTGA	AGCTATGCCGCA	AGGCTTTAC	CGCTACGCT	ATCCGTGTCGCTGACACTACTAAGAAAGTGCCTTAGCGTAG			
Np. chrom	5679732B	P	CGTTGCTC	TAAG	CGTACTCTACGGAAGCGAGCT	ACGCGTAGTGTCTCTGAGAGA	AGCCATGCCGCA	AGGCTTTAC	CGCTACACTATCG	TAATCTAAAATTCTGAGTCAAGAGTCCAAAGTCCGA		
Np. chrom	1332438B	P	TGTTAAATAATTCGTAATTCGTAATTCGTAAT	GA	CGCTCCTCGCTGCTCTAAGCGA	AGCCATGCCGCA	AGGCTTTAC	CGCTGCGCT	TAACGTAATTCATTAAGAGCTTGC	GGAGCTTGTCTACCGCTAC		
Np. chrom	6651654B	D	GTCAAGCTGGAGACGTTTCAGTTAGCTCAGGT	CAGAATTAAGACACTCTTTAAGAA	TTGCTATGACGCA	AGGCTTTAC	ACTGCGCT	ATCAGCTAGCATGCACTGAGTTTGT	CGAAGTCGAAGTGTCT			
Np. chrom	5103389F	P	GGAGCGGAGCCGGAGACTCCGAAAGCTCCGGT	CAGAATCAAGATACTCT	CTAAGAGTTGCTATGCCA	AGGCTTTAC	ACTCCGAAGCATCCCTTTTTCAGT	CACAATACCCAACTAAATCCTGTTA				
Np. chrom	5202958B	P	TCGACCTAAGAGTACGAAACTTGCTCTAACAA	AGGTAGGCGTAGCATCTTTAAGAT	TTGCTATGCCGCA	AGGCTTTAC	CTATTAGTGGCGGGTTAAATCCCCCACT	AAATAGCGTCGTTCCCTCTCT				
Np. chrom	4173864F	P	GTCTTAAAGACGCTCTCTGCGAGACGCTAAA	AGCGAACGCGGACT	CGCTCTAAGCGGAGCTATGCCG	TAAGGCTTTAC	CTGCGCT	ATCAGTGGAGATTACAGCCGCCCACTGAATTTGT	GCACCA			
Np. chrom	4009724B	P	TAGCTATCCGCTAACAGGAGTCAAGATACAA	GACGCTCAGGACT	CGCTCTAAGCGTAGCTATGCCG	TAAGGCTTTAC	CTGCGCT	CATCCGCTTTTTCGTTCAAAATTCATGCT	CTGTTCTTGGCGA			
Np. pNpA	145370F	P	CATAGACTCATTGCAATTACAGACTTACCAC	TAATTGCGTGGT	TAGCGGG	AAGCGAAGCTATGCCGCA	AGGCTTTAC	CTGCGCTC	CTCTTCAGTTTGGGTATTAGTGATCGCTTCTTCGATTGC			
A7120. chrom	1299350B		GTTTAAAT	CAATTCCCAATTGCAAT	GG--	TAACGTCCCA	CTACGCTCTAAGCGC	AGCTATGCCGCA	AGGCTTTAC	CAATTGCAATT	AAATACAGCCACTAGGGGCGTTAGCGTAGCGGGACACA	
A7120. chrom	5698093B		--TGAGAATATAAAT	CCAATTGCAAT	GG	CTAACGTCCCA	CTACGCTCTAAGCGC	AGCTATGCCGCA	AGGCTTTAC	CAATTGCTAAT	AAATAGTAGGGTGGGCAATGCCACCAAAACGCAATTTT	
Avar. chrom	6322662B		AAGGTGATACCTTCGGTAAGCTATCTCTA	TTCTT	CGGAACGCTACGCGGT	AAGCGAAGCTATGCCG	TAAGGCTTTAC	CTAACGC	CACTTATTTTGGCATAGACTACACCAAGGCTCCTAAAGCTTT			
Avar. chrom	79471B		GACAACCTGAGTACGTCA	GTCAAGTCGCTTCTCTACGAGACGCTAC	CGGTAAAGAGA	AACTATGCCGCA	AGGCTTTAC	CTTCAAT	GAAAAATTAAGTGTGGGCTTGTGATTTACG			
Avar. pAvB	25853F		GGGTGTCGAAGAC	AGACGCTACGTGTTAAG	CGTCGCGCAGGCTCTCCGACAGGAG	AACTATGCCGCA	AGGCTTTAC	CTCCAATT	CAAAATTAATTTTATCTTCTTCAACAGAATTTTGCAATTT			
Avar. pAvC	173251B		CTTCGGGTGACGCTCCT	CGCTCGCTCTAAGCGTTCGCGTAGGCTCTC	G-TA-GAGA	AACTATGCCG	TAAGGCTTTAC	CTACGAAGATCGGAAGTTTCAACT	CGACGGGAACCGGAGCCACTCCGG			
Avar. chrom	2058471B		CTCGTTCTCTGGGAGACGCTACGTGT	TAAGCGTTGCGCGACGCTCCCGACAGGAG	AACTATGCCGCA	AGGCTTTAC	CTGCGCT	CAATTCGAAATACGCTGATGTTGATTAACAGGATTACGTT				
nod-006	78361B	PP	CTTCTCCCAAGGGGAGACGCTA	CGCGT	AAGCGTTTCGCGGAGCGTCTCTG	TAGAGAAGCTATGCCG	AAAGGCTTTAC	TGTTCTCTCCCAAGGGGAGAGGCTAGCGCAACAGTTCCTTCTCCCAA				
nod-033	14066F	C	TTCTCCCAAGGGGAGAGGCTAACG	CCATAAGCGTTTCGCGCAGCGCTCTCTG	TAGAGAAGCTATGCCG	AAAGGCTTTAC	TGTTCTCTCCCAAGGGGAGAGGCTAGCGCAACAGTTCCTTCTCCCAA					
nod-016	24738F	PA	CCATAAGCGTATCGCTAAAGCGAAAGCTCCG	TAA	CGCGGAGCGTCTCTG	TAGAGAAGCTATGCCG	TAAGGCTTTAC	TGGTTCTCTCTTTCGTA	AACTTGTGCGTAAGTCTTGAATAAATTACGCAA			
nod-073	4731B	C	TTTGGGAGAA	GGGAGACGCTACGCGG	TAGCGTTTCGCGGAGCGTCTCTG	TAGAGAAGCTATGCCG	TAAGGCTTTAC	GTAGCGTGTGCGAGACAAGCCTCTCG	TAGAGAAGGCTTTACGTGGTTAG			
nod-108	1085F	D	GCGTTGGCGTAGCCTCTCCCTTCTCCCA	AAAGGAGAGGCTACGCGG	TAAAGCAAGCTATGCCG	AAAGGCTTTAC	TGGTTCTGTTTTCATAA	TTTTGCGTAAGTCTTGTCCATAACACGATGG				
nod-038	7434F	PA	AGTGAATAATTACTAATTCGTATGCT	CCCTTTGGGAGAGCTACGCTCTAAGCGC	AGCTATGCCG	CAGGCTTTAC	TAATTCGTAGTTAAGTTATATG	TAATCAGTGGGAGTTGGAAC	TGCGCAC			
nod-002	153956F	PA	GTAATTCATAATTGTAATTCGTAATGGT	GATCCACCCCACTGCGCTCTCAGG	TAGCTATGCCG	CAGGCTTTAC	CGTAATTTGTGATTA	AAAAAGGTAGTCTAAACCA	GATAAATACCGAATTTATA			
nod-151	2169F	D	ACTAGCTACGCATCCACAGGGGTGCTG	TGACTCAAAATACGGCTACCC	TAGCCG	GAAGCTATGCCG	TAAGGCTTTAC	ACTGCGCTCAGGGTGGTCTGGT	CAGTACGGCTTGTCTGATTACTCTTAC			
nod-040	9407F	PP	GTGTTCTCTGTGCTCTGTGGTA	TGCGCTACGCGCACGCTACGCG	TTAAGCGGAAGCTATGCCG	AAAGGCTTTAC	TTTTTCTTAAATATCCCTA	AATTCCTGAGAAAAATATGGTTCAGTTATAA				
nod-001	233054F	PP	AGGAAGCTTGATACCCATGTTCCGTCTCT	CTACAA	GACGCTGCGCGG	TAAAGCGGAAGCTATGCCG	AAAGGCTTTAC	CTCCACAGCAAGAGGGAAGGCGTTT	GCTCCCGCTGCTTTCGGTCAAA			
nod-003	132251B	D	GCCCAAAGTGAGAGGCTAGCGCCATAAG	CGTTGCGGTAAGCGT	GCCGG	AGGCTCTAGCTATGCCG	AAAGGCTTTAC	CGGTTCTGTTCTCATATA	AAAAATAAATAATGAATTTAGCAGTAATT			

Supplemental Figure 6: Sequences and contexts of SDR6 elements. All instances of SDR6 in any genome of a cyanobacterium listed in Figure 5 of the main text are indicated. Conventions are as described in Supplemental Figure 1, except that the coordinate listed under **site** is the low order coordinate of the sequence shown (including the sequence flanking the SDR element).