Рисунок 4. Выравнивание потенциальных промоторов и сайтов связывания фактора NtcB перед генами у цианобактерий. Желтым отмечены консервативные участки с консенсусом TGCA-5N-TGCA, зеленым – замены в сайтах. Подчеркнуты максимально продолженные комплементарные участки связывания фактора. Знак «–“-» разделяет несколько сайтов в лидерной области одного вида/штамма.

***nrtA*,** транспортер нитрата/нитрита

Chroococcales:

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ACCAATGCAGTAATCGCATGAAAATTAATTATTAGTTACAAACTATACAAATATTTACAAGGAAAAAATC*CAGTCT Synechocystis sp. PCC 6803; sll1450; 10
TTTTATGCTTTTATGACATGGCTGACAATATTTTGTAACAATCTATACGAATTTTCCTGTTGAAGACTGTAAATTTA Microcystis aeruginosa; MAE_14800; 19.5
AGCTATGCAAAAACCACATAAAAGCAATGCTTTTATTGCAAAAATTGTAATATTTTGTAGCAAATAATACGAAAAAT Cyanothece sp. PCC 8801; PCC8801_4396; 14
AGCAATGCTTTTATTGCAAAAATTGTAATATTTTGTAGCAAATAATACGAAAAATTCAAAATCCCCATGTAATGCTT -"-; PCC8801_4396; 16.5
AGCTATGCAAAAACCACATAAAAGCAATGCTTTTATTGCAAAAATTGTAATATTTTGTAGCAAATAATACGAAAAAT Cyanothece sp. PCC 8802; Cyan8802_4459; 14
AGCAATGCTTTTATTGCAAAAATTGTAATATTTTGTAGCAAATAATACGAAAAATTCAAAATCCCCATGTAATGCTT -"-; Cyan8802_4459; 16.5
AAAAATGCTTAAATTGCATCAAGGCAAGCTTCTATAGCCATCTTCTCTAAACTTTTGTTACAAATTATACAAAAAAG Cyanothece sp. PCC 7424; PCC7424_3527; 12.5
TATTATGCAAAAAACGCATCAAATAGTTTTTTTTGTTACAAAAACTACAAATTTCTGAATTAAAGACTGTAAATTTT -"-; PCC7424_3527; 12
GAACATGCAAAAATTGCGCTCCTTAGTGTGACGGAAGGAGAAGATAAACCCCTCAAATATCCCGTTATGTTCCAAGA Synechococcus sp. PCC 7002; SYNPCC7002_A1748; 17.5
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Oscillatoriales:

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TCAGATGCAAGTTACGCATGACCGAAATGCGTAAAATAAAAAACAATCTAAAAATTGTAGTTGCCGATACATAAACC Arthrospira maxima; AmaxDRAFT_3857; 16.5
TCAGATGCAAGTTACGCATGACCGAAATGCGTAAAATAAAAAACAATCTAAAAATTGTAGTTGCCGATACATAAACC Arthrospira platensis; AplaP_010100019381; 16.5
TCAGATGCAAGTTACGCATGACCGAAATGCGTAAAATAAAAAACAATCTAAAAATTGTAGTTGCCGATACATAAACC Arthrospira sp. PCC 8005; APCC8_010100008251; 16.5
CAAGTTGCAGACATTGGTTTACTCGGTACAAAAGTCCGCAAAAACGGCAAAACATTAGAAGGTGTTGACCTTTATAT Oscillatoria sp. PCC 6506; OSCI_2880002; 18.5
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***nirA*,** ферредоксин-зависимая нитритредуктаза

Chroococcales:

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CTTCTTGCAGAACATGCATGATTTACAAAAAGTTGTAGTTTCTGTTACCAATTGCGAATCGAGAACTGCC*TAATCT Synechococcus elongatus; syc0310_d; 11
CTAAATGCGTAAACTGCATATGCCTTGGCTGAGTGTAATTTACGTTACAAATTTTAACGAAACGGGAACCCTATATT Synechocystis sp. PCC 6803; slr0898; 11
TGTAATACAAAAACTGTATCGAGACAAGAAAAAAGTAGCAAAATTTACAAATGTTCATGATTCATCTGGCTAAATTG Thermosynechococcus elongatus; tlr1349; 16
CTCAATGCACTTACTGCATGATATAAATCCTTAAACACGATGGTTAACGGATTTCTGTTACAGACAATACAAAATTA Microcystis aeruginosa; MAE_18410; 13.5
ATTTATGCAAAATACGCATTATATAAATGCTTATTTATCAAGCCGACCCAAATTTGGTAACAAAGTACACAAAGTAC Cyanothece sp. PCC 7822; Cyan7822DRAFT_1390; 13.5
TATCATGCAATAATCGCATAATTAAAATGCTTTTTTTTCAAGAATAGAAAAGTTTGGTAACAAAAGACACAAAGTAG Cyanothece sp. PCC 7424; PCC7424_1683; 12
GATTATGCAGGTTTGGCATCGATCCCATGACAAAAAGTCACAATAGGTAAATTTTTGTAACTTAATATACCAATTAC Cyanothece sp. PCC 7425; Cyan7425_4573; 18
TAAAATGCAAAAAATCCATAATTAAAATGCAAAAAACGGATTTTTAATACAATTTTGTTACATTAGCTACAAAATAT Cyanothece sp. ATCC 51142; cce_1223; 12
TATTATGCAAAATAATCATCTTTTAAATCCGTTTTTTTCATAAAATCCTTATTTTTGTTACAACTGATACAAAAATT Cyanothece sp.PCC 8802; Cyan8802_3641;16.5
TGTTATGCAAAATAATCATCTTTAAAATCCGCTTTTTACATAAAATCCTTATTTTTGTTACAATTAATACAAAAATT Cyanothece sp. PCC 8801; cce_1223; 16.5
AAAAATGCAAAAAATACATGAAAAAAATGCAAAAGACGAATTTTGCCCAACTTTTTGTTACATTAGCTACAAAATTT Cyanothece sp. CCY0110; CY0110_23451; 12
AGATATGCAAGAAAAACATAATAAAAATGCAAAAAACGAATGTAATTTAACATTTTGTTACATTAGCTACATAAATT Crocosphaera watsonii; CwatDRAFT_3683; 16
TTGAATGCGGCGATCGCATCATCAATATTCTGATTTCGCAAAAGCAAGCCAGGCCCGTAGTTAACACTACAAAATCT Synechococcus sp. PCC 7002; SYNPCC7002_A1827; 15
GGCAATGAAGCAAGTTGAAGGCGAAAGTCAAACGGTCTAATTCGCTACCGACTGAAAGGGATACGCACGGTTAATTG Synechococcus sp. CC9902; Syncc9902_2284; 20
GGCGATGGATGCTCTGCAGTCAGCACTTCCAATTCAACTGGGGCCGTTCGGCGCTCAGCCACAGCATCCACAATCTG Synechococcus sp. CC9311; sync_2898; 22.5
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Nostocales:

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TGTAATGCAGAAAACGCATATTCTCTATTAAACTTACGCATTAATACGAGAATTTTGTAGCTACTTATACTATTTTA Nostoc sp. PCC 7120 (Anabaena sp.PCC7120); alr0607; 8
CTTGATGCAAAAAATGCATATTATGCATCCATTTTCAGCAATTTTACTAAAAAATCGTAACAATTTATACGATTTTA Nostoc punctiforme; Npun_R1528; 11
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AAAAATGCATATTATGCATCCATTTTCAGCAATTTTACTAAAAAATCGTAACAATTTATACGATTTTAACAGAAATC -"-; Npun_R1528; 15
TCTCATGCAGAAATTGCATTCATTTGATGCGCTTTGAACAAAAAATTCAAAAAAAGGTAGCAATGTATACTATTTTA Nodularia spumigena; N9414_05289; 11.5
ATCAATGCAAAATTTGCACAACGGCCGAGAATTTCTGAGAATTCTGTAACTGAGTATACGAATCCTTCCCGAAATTT Cylindrospermopsis raciborskii; CRC_00047; 14
ATAAATGCAAAATCTGCATAGCATCCGAGAATTTCTGAGAATTCCGTAACTGAGTATACGAATCCCTCCCGAAATTT Raphidiopsis brookii; CRD_02595; 13

Oscillatoriales:

GTTTATGTAAAAAACGCATTTTTTATATTCTAAAACTTCATATAACTTAAAATTTTGTAACTTTTGCTACGATTAAA Lyngbya sp. PCC 8106; L8106_10091; 14
TTTTATGTAATAAATGCATTTTAACAATGCATAAATGTCATAAAAGACTCTATTTTGTTATATAAGCTACGAATTCT Trichodesmium erythraeum; Tery_1068; 15
AACAATGCATAAATGTCATAAAAGACTCTATTTTGTTATATAAGCTACGAATTCTTTATTTCCTTTCCTTTAAATTG -"-; Tery_1068; 13
ATATATGCAATAATTGCAAAATCAGAGGTTTTATGTATCTTCAACTACAAATTATCACTGATTCTGAATTTAATCTA Arthrospira platensis; AplaP_010100015448; 15
ATATATGCAATAACTGCAAACTCTTGGATTTTATGTATCTTAAACTACAAATTATCACTGATTCTGAATTTAATCTA Arthrospira sp. PCC 8005; APCC8_010100020361; 16
CGCGATGTAGAAACTGCATCGTGCTTATCCGAAAACTTCATAAAACTCCATATTCTGTAACATTAGCTACGAACAAC Oscillatoria sp. PCC 6506; OSCI_2880001; 14.5

Неклассифицированный род Acaryochloris:

AGCAATGCAGCTAATGCATCTACAGACTGGGGCCCTATTTGGGCTAACATTTGGGCCGCAATTTCAGCAACATCATC Acaryochloris marina; AM1_2984; 13
TTCTATGCAGCTTTAGCATGAATCAATTGCAAGAACTACATTTAGCCTATCACTTTGTAACGACTGATACGAACGAT -"-; AM1_2984; 16.5
TCAATTGCAAGAACTACATTTAGCCTATCACTTTGTAACGACTGATACGAACGATCCCAATGGGAGTCGCTAAGTTA -"-; AM1_2984; 16

Gloeobacterales:

CGTTAGTCACTCCGTGCATCAGACCATATCCGGCCCGCACGGCCACGAATGTATCTGGGGTTACGTAAAGTTAAGTT Gloeobacter violaceus; gvip212; 21