

**Additional file 5. List of operons/genes containing RpoN-dependent promoters identified by the PromScan analysis and also identified using transcriptome analysis.**

1. Promoter # are based on the PromScan scores and are the same as those reported in additional files 3 & 4.
2. The search is based on fold change cutoff at 1.25 and  $P < 0.0005$ .
3. N.D.: Not detected. The fold changes of the gene did not match the differential expression criteria.

Promoter #	GSU	Gene	Annotation	Fold changes
1	GSU3050		flagella basal body P-ring formation protein flgA, putative	N.D.
	GSU3051	<i>flgG-1</i>	flagellar basal-body rod protein FlgG	N.D.
	GSU3052	<i>flgG-2</i>	flagellar basal-body rod protein FlgG	N.D.
	GSU3053	<i>fliA</i>	RNA polymerase sigma factor for flagellar Operon/gene/gene	N.D.
	GSU3054		ParA family protein	N.D.
	GSU3055		flagellar biosynthetic protein FlhF, putative	-1.34
	GSU3056	<i>flhA</i>	flagellar biosynthetic protein FlhA	N.D.
2	GSU0937	<i>nifV</i>	homocitrate synthase	-1.47
3	GSU0407	<i>flgB</i>	flagellar basal-body rod protein FlgB	N.D.
	GSU0408	<i>flgC</i>	flagellar basal-body rod protein FlgC	-1.31
5	GSU2005		branched-chain amino acid ABC transporter, periplasmic amino acid-binding	1.38
	GSU2006		branched-chain amino acid ABC transporter, permease protein	1.29
	GSU2007		branched-chain amino acid ABC transporter, permease protein	N.D.
	GSU2008		branched-chain amino acid ABC transporter, ATP-binding protein	N.D.
	GSU2009		branched-chain amino acid ABC transporter, ATP-binding protein	1.23
	GSU2010		CBS domain protein	N.D.
10	GSU0938		hypothetical protein	N.D.
	GSU0939		nitrogen regulatory protein P-II, putative	-1.40
	GSU0940		ammonium transporter	N.D.
11	GSU0777	<i>fdnG</i>	formate dehydrogenase, major subunit, selenocysteine-containing	-1.20
	GSU0777	<i>fdnG</i>	formate dehydrogenase, major subunit, selenocysteine-containing	-1.20
	GSU0778	<i>fdnH</i>	formate dehydrogenase, iron-sulfur subunit	N.D.

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	GSU0779	formate dehydrogenase, b-type cytochrome subunit, putative	N.D.
	GSU0780	formate dehydrogenase accessory protein FdhD	N.D.
	GSU0781	twin-arginine translocation protein, TatA/E family	-1.41
<b>12</b>	GSU3409	hypothetical protein	N.D.
	GSU3410	hypothetical protein	3.31
<b>13</b>	GSU2938	hypothetical protein	-1.49
	GSU2939	outer membrane porin FmdC, putative	N.D.
	GSU2940	lipoprotein, putative	N.D.
<b>18</b>	GSU2634	hypothetical protein	N.D.
	GSU2635	hypothetical protein	N.D.
	GSU2636	alpha-amylase family protein	1.16
	GSU2637	alcohol dehydrogenase, zinc-containing	1.31
<b>19</b>	GSU2202	transcriptional regulator, LysR family	-1.30
<b>20</b>	GSU1235	hypothetical protein	N.D.
	GSU1236	hypothetical protein	N.D.
	GSU1237	pyridine nucleotide-disulphide oxidoreductase family protein	-1.44
	GSU1238	iron-sulfur cluster-binding protein	N.D.
	GSU1239	glutamate synthase-related protein	N.D.
<b>25</b>	GSU0420	flagellar protein FliL	-1.47
	GSU0421 <i>fliM</i>	flagellar motor switch protein FliM	N.D.
	GSU0422 <i>fliN</i>	flagellar motor switch protein FliN	-1.93
	GSU0422.1 <i>fliN</i>	flagellar motor switch protein FliN	N.D.
	GSU0423 <i>fliP</i>	flagellar biosynthetic protein FliP	N.D.
	GSU0424 <i>fliQ</i>	flagellar biosynthetic protein FliQ	N.D.
	GSU0425 <i>fliR</i>	flagellar biosynthesis protein FliR	-1.72
	GSU0426 <i>flhB</i>	flagellar biosynthetic protein FlhB	N.D.

<b>27</b>	GSU3175	hypothetical protein	N.D.
	GSU3176	lysM domain protein	-1.25
	GSU3177	Rhs family protein	N.D.
	GSU3178	hypothetical protein	-1.31
	GSU3179	hypothetical protein	N.D.
<b>28</b>	GSU3040	hypothetical protein	N.D.
	GSU3041	<i>csrA</i> carbon storage regulator	N.D.
	GSU3042	<i>flgL</i> flagellar hook-associated protein FlgL	N.D.
	GSU3043	<i>flgK</i> flagellar hook-associated protein FlgK	N.D.
	GSU3044	hypothetical protein	N.D.
	GSU3045	<i>flgM</i> negative regulator of flagellin synthesis FlgM	N.D.
	GSU3046	<i>flgJ</i> flagellar protein FlgJ-like protein	-1.41
<b>29</b>	GSU3017	hypothetical protein	N.D.
	GSU3018	hypothetical protein	1.44
	GSU3019	dehydrogenase, E1 component, alpha and beta subunits	N.D.
	GSU3020	hexapeptide transferase family protein	N.D.
	GSU3021	DegT/DnrJ/EryC1/StrS family protein	N.D.
	GSU3022	hypothetical protein	N.D.
	GSU3023	glycosyl transferase, group 38354 family protein	N.D.
	GSU3024	hypothetical protein	1.15
	GSU3025	heptosyltransferase family protein	N.D.
	GSU3026	flagellar protein FlbD, putative	N.D.
	GSU3027	chemotaxis MotA protein	N.D.
	GSU3028	<i>motB</i> chemotaxis MotB protein	N.D.
<b>31</b>	GSU2802	<i>dRAT</i> NAD(+)-dinitrogen-reductase ADP-D-ribosyltransferase	N.D.
	GSU2803	dinitrogenase iron-molybdenum cofactor family protein	N.D.
	GSU2804	ferredoxin family protein	-1.24
	GSU2805	<i>nifX</i> nitrogenase molybdenum-iron cofactor biosynthesis protein NifX	N.D.
	GSU2806	<i>nifEN</i> nitrogenase molybdenum-iron cofactor biosynthesis protein NifEN	-1.27

<b>32</b>	GSU2622	HAMP domain/GAF domain/HD domain protein	-1.35
<b>34</b>	GSU2476	TPR domain protein	N.D.
	GSU2477	TPR domain/radical SAM/B12 binding domain protein	-1.26
<b>35</b>	GSU0098	MglB protein	N.D.
	GSU0099	MglA protein	1.43
<b>40</b>	GSU2908	hypothetical protein	-1.34
	GSU2909	lipoprotein, putative	N.D.
	GSU2910	hypothetical protein	N.D.
	GSU2911	hypothetical protein	-1.33
<b>42</b>	GSU2490	oxalate/formate antiporter, putative	1.36
<b>44</b>	GSU2034	hypothetical protein	-1.32
	GSU2035	hypothetical protein	-1.33
	GSU2036	hypothetical protein	-1.66
	GSU2037	hypothetical protein	N.D.
	GSU2038	hypothetical protein	N.D.
	GSU2039	hypothetical protein	N.D.
<b>47</b>	GSU0618 <i>omcE</i>	cytochrome c family protein	1.26
<b>48</b>	GSU0357	cytochrome c family protein	1.24
	GSU0358	iron-sulfur cluster-binding protein	N.D.
<b>50</b>	GSU2884	cytochrome c family protein	-1.34
	GSU2885	NHL repeat domain protein	N.D.
<b>51</b>	GSU2378 <i>trpF</i>	N-(5'phosphoribosyl)anthranilate isomerase	-1.48
	GSU2379	pyridoxal-phosphate dependent enzyme	N.D.
	GSU2380 <i>trpC</i>	Indole-3-glycerol phosphate synthase	N.D.

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	GSU2381	<i>trpD</i>	anthranilate phosphoribosyltransferase	N.D.
	GSU2382	<i>trpG</i>	anthranilate synthase component II	N.D.
	GSU2383	<i>trpE</i>	anthranilate synthase component I	N.D.
	GSU2384		sensor histidine kinase	N.D.
	GSU2385		hypothetical protein	-1.30
	GSU2386		methylcobamide:CoM methyltransferase-related protein	N.D.
	GSU2387		B12-binding domain	N.D.
	GSU2388		sensory box histidine kinase	-1.27
	GSU2389		ABC transporter, periplasmic substrate-binding protein, putative	N.D.
<b>58</b>	GSU0930		sulfur transferase, putative, selenocysteine-containing	-1.34
<b>60</b>	GSU3364		hypothetical protein	1.45
<b>61</b>	GSU3206		dnaK suppressor protein, putative	1.56
<b>63</b>	GSU2815		sensory box histidine kinase	1.22
<b>64</b>	GSU2750		hypothetical protein	1.30
	GSU2751	<i>dcuB</i>	C4-dicarboxylate transporter, anaerobic	1.63
<b>66</b>	GSU1944		hypothetical protein	-1.38
<b>73</b>	GSU2531		sensory box histidine kinase	N.D.
	GSU2532		hypothetical protein	N.D.
	GSU2533		hypothetical protein	N.D.
	GSU2534		sensory box/response regulator	-1.26
	GSU2535		response regulator	-1.28
<b>77</b>	GSU0702		cytochrome c family protein	N.D.
	GSU0703		hypothetical protein	N.D.
	GSU0704		hypothetical protein	N.D.
	GSU0705		cytochrome c biogenesis protein, CcmF/CcyK/CcsA family	-1.28

<b>79</b>	GSU0516	hypothetical protein	N.D.
	GSU0517	hypothetical protein	N.D.
	GSU0518	sodium/solute symporter family protein	-1.44
	GSU0519	hypothetical protein	N.D.
	GSU0520	hypothetical protein	N.D.
	GSU0521	methyltransferase, putative	N.D.
<b>81</b>	GSU3229	DNA-binding response regulator, LuxR family	-1.36
	GSU3230	sensory box histidine kinase	N.D.
<b>82</b>	GSU3195	chemotaxis protein methyltransferase CheR, putative	-1.27
	GSU3196	methyl-accepting chemotaxis protein	N.D.
	GSU3197	purine-binding chemotaxis protein CheW, putative	N.D.
	GSU3198	<i>cheY-7</i> chemotaxis protein CheY	N.D.
	GSU3199	<i>cheA-3</i> chemotaxis protein CheA	N.D.
	GSU3200	chemotaxis protein, CheC family	N.D.
	GSU3201	chemotaxis protein CheD, putative	N.D.
	GSU3202	hypothetical protein	N.D.
<b>87</b>	GSU2525	nitroreductase family protein	-1.53
	GSU2526	membrane protein, putative	N.D.
<b>91</b>	GSU1251	BNR repeat domain protein	N.D.
	GSU1252	hypothetical protein	N.D.
	GSU1253	hypothetical protein	-1.41
	GSU1254	hypothetical protein	N.D.
	GSU1255	hypothetical protein	N.D.
	GSU1256	hypothetical protein	N.D.
	GSU1257	ABC transporter, periplasmic-substrate binding protein, putative	N.D.
<b>101</b>	GSU1994	hypothetical protein	1.90

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<b>103</b>	GSU1835	<i>glnA</i>	glutamine synthetase, type I	N.D.
	GSU1836	<i>glnB</i>	nitrogen regulatory protein PII	1.77
<b>108</b>	GSU1401	<i>dnaE</i>	DNA polymerase III, alpha subunit	-1.37
	GSU1402	<i>accA</i>	acetyl-CoA carboxylase, carboxyl transferase, alpha subunit	1.77