

Table S4. *B. ovatus* genes with altered expression *in vitro* during growth on plant glycans or in mice fed a plant

Mean fold differences in expression compared to growth on minimal medium plus glucose

"Sector" designations for each sub-list refer to the Venn diagram in

| Gene | Description | β -glucan | Oat spelt xylan | Wheat arabino- xylan | Galacto mannan | Gluco mannan | Xylo glucan | Homogal acturonan | adult plant rich |
|-----------------------------------|---|-----------------|--------------------|-------------------------|-------------------|-----------------|----------------|----------------------|---------------------|
| Upregulated: | | | | | | | | | |
| Sector 1 (<i>in vitro</i>) | | | | | | | | | |
| BACOVA_00014 | Predicted Protein | | | | 16.4 | | | | |
| BACOVA_00032 | Hypothetical Protein | | | | 10.7 | | | | |
| BACOVA_00034 | Hypothetical Protein | | | | 10.4 | | | | |
| BACOVA_00035 | Predicted Protein | | | | 11.8 | | | | |
| BACOVA_00066 | Predicted Protein | | | | 17.9 | | | | |
| BACOVA_00068 | Hypothetical Protein | | | | 10.0 | | | | |
| BACOVA_00140 | Similar to 4-deoxy-L-threo-5-hexosulose-uronate ketol-isomerase | | | | | | | 17.5 | |
| BACOVA_00242 | susC-like | | | | | | | 12.5 | |
| BACOVA_00321 | Hypothetical Protein | | | | 16.0 | | | | |
| BACOVA_00370 | Similar to IS116 family transposase | | 15.7 | | | | | | |
| BACOVA_00858 | Similar to mannonate dehydratase | | | | | | | 13.0 | |
| BACOVA_00859 | Similar to D-mannonate oxidoreductase | | | | | | | 13.7 | |
| BACOVA_00860 | Conserved Hypothetical Protein | | | | | | | 17.3 | |
| BACOVA_00934 | susC-like | 77.6 | | | | 17.4 | | | |
| BACOVA_00936 | Predicted Protein | 12.1 | | | | | | | |
| BACOVA_00938 | Predicted Protein | 10.3 | | | | | | | |
| BACOVA_00939 | Hypothetical Protein | 11.0 | | | | | | | |
| BACOVA_00940 | Glycoside hydrolase family 20 | 10.5 | | | | | | | |
| BACOVA_00942 | susC-like | 47.6 | | | | 23.2 | | | |
| BACOVA_00943 | susD-like | 29.8 | | | | 16.3 | | | |
| BACOVA_00944 | Glycoside hydrolase family 30 | 35.4 | | | | 21.3 | | | |
| BACOVA_00945 | Hypothetical Protein | 32.4 | | | | 19.4 | | | |
| BACOVA_00946 | Glycoside hydrolase family 3 | 15.4 | | | | | | | |
| BACOVA_01333 | Similar to mannonate dehydratase | | 135.0 | | | | | 11.2 | |
| BACOVA_01497 | Predicted Protein | | | | 11.6 | | | | |
| BACOVA_01564 | Conserved Hypothetical Protein | | | | 33.6 | | | | |
| BACOVA_01565 | Conserved Hypothetical Protein | | | | 25.1 | | | | |
| BACOVA_01619 | Carbohydrate esterase family 7 | | | | | | | 17.1 | |
| BACOVA_01707 | Predicted Protein | | 39.9 | | 26.6 | | | | |
| BACOVA_01709 | Conserved Hypothetical Protein | | 56.9 | | 41.2 | | | | |

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|--------------|--|------|------|-------|-------|-------|
| BACOVA_01711 | Similar to L-arabinose isomerase | 16.3 | 12.1 | | | |
| BACOVA_01712 | Similar to L-ribulose-5-phosphate 4-epimerase | 20.3 | 16.1 | | | |
| BACOVA_01713 | Conserved Hypothetical Protein | 30.9 | 24.6 | | | |
| BACOVA_01715 | Similar to aldose 1-epimerase precursor | 33.1 | 20.9 | | 16.8 | |
| BACOVA_02061 | Glycoside hydrolase family 18 | | | | 12.4 | |
| BACOVA_02064 | susC-like | | | | 13.7 | |
| BACOVA_02087 | Predicted Protein | | | 184.9 | 77.9 | |
| BACOVA_02090 | Hypothetical Protein | | | 163.2 | 116.9 | |
| BACOVA_02091 | Glycoside hydrolase family 36 | | | 169.7 | 111.8 | |
| BACOVA_02092 | Glycoside hydrolase family 26 | | | 170.5 | 101.3 | |
| BACOVA_02093 | Glycoside hydrolase family 26 | | | 246.9 | 199.8 | |
| BACOVA_02094 | Hypothetical Protein | | | 215.4 | 127.5 | |
| BACOVA_02095 | susD-like | | | 228.8 | 176.1 | |
| BACOVA_02097 | Hypothetical Protein | | | | 20.1 | |
| BACOVA_02237 | Similar to Na ⁺ -transporting NADH:ubiquinone oxidoreductase, Electron transport complex protein rnfC | | | | | 10.4 |
| BACOVA_02238 | Similar to Na ⁺ -transporting NADH:ubiquinone oxidoreductase, Electron transport complex protein rnfD | | | | | 10.6 |
| BACOVA_02239 | Hypothetical Protein | | | | | 11.6 |
| BACOVA_02240 | Similar to NADH-ubiquinone oxidoreductase | | | | | 11.8 |
| BACOVA_02356 | Similar to molybdopterin biosynthesis protein | | | | | 12.1 |
| BACOVA_02532 | Conserved Hypothetical Protein | 66.7 | 39.8 | | 23.8 | 15.7 |
| BACOVA_02533 | Similar to xylulose kinase (xylulokinase) | 52.9 | 39.3 | | 33.2 | |
| BACOVA_02558 | Similar to UXAC_BACTN Uronate isomerase (Glucuronate isomerase) (Uronic isomerase) | | | | | 22.0 |
| BACOVA_02559 | Similar to transcriptional regulator (LacI family) | | | | | 28.2 |
| BACOVA_02560 | Similar to tagaturonate reductase | | | | | 24.7 |
| BACOVA_02644 | Glycoside hydrolase family 3 | | | | 185.3 | |
| BACOVA_02645 | Glycoside hydrolase family 2 | | | | 252.4 | |
| BACOVA_02646 | Glycoside hydrolase family 31 | | | | 139.2 | |
| BACOVA_02647 | Predicted Protein | | | | 22.8 | |
| BACOVA_02648 | Hypothetical Protein | | | | 19.8 | |
| BACOVA_02649 | Glycoside hydrolase family 9 | | | | 103.8 | |
| BACOVA_02654 | Glycoside hydrolase family 43 | | | | 137.4 | |
| BACOVA_02655 | Predicted Protein | | | | 118.6 | |
| BACOVA_02656 | Glycoside hydrolase family 43 | | | | 157.2 | |
| BACOVA_02659 | Glycoside hydrolase family 3 | | | | 17.5 | 100.8 |

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|--------------|--|------|------|------|------|
| BACOVA_03088 | Polysaccharide lyase family 10 | | | | 46.7 |
| BACOVA_03170 | Predicted Protein | | 22.0 | 15.6 | |
| BACOVA_03171 | Hypothetical Protein | | 18.7 | 14.5 | |
| BACOVA_03172 | Conserved Hypothetical Protein | | 12.3 | 10.9 | |
| BACOVA_03173 | Conserved Hypothetical Protein | | 12.6 | | |
| BACOVA_03175 | Hypothetical Protein | | 10.4 | | |
| BACOVA_03333 | Glycoside hydrolase family 2 | | 10.3 | | 18.1 |
| BACOVA_03402 | susD-like | | 13.8 | | |
| BACOVA_03406 | Similar to transcriptional regulator | | 11.3 | | 12.0 |
| BACOVA_03412 | Conserved Hypothetical Protein | 17.0 | | | |
| BACOVA_03413 | Conserved Hypothetical Protein | 12.9 | | | |
| BACOVA_03414 | Similar to fucose permease | 17.3 | | | |
| BACOVA_03416 | Similar to sorbitol dehydrogenase | 11.4 | | | |
| BACOVA_03419 | Glycoside hydrolase family 3 | 24.2 | 31.2 | | |
| BACOVA_03420 | Predicted Protein | 17.6 | 26.4 | | |
| BACOVA_03438 | Glycoside hydrolase family 95 | | 39.3 | | |
| BACOVA_03440 | Predicted Protein | 18.0 | 57.4 | | |
| BACOVA_03443 | susC-like | 24.1 | 12.3 | | |
| BACOVA_03444 | susD-like | 13.8 | | | |
| BACOVA_03445 | Predicted Protein | 20.0 | | | |
| BACOVA_03446 | Predicted Protein | 32.3 | | | |
| BACOVA_03447 | Predicted Protein | 17.0 | | | |
| BACOVA_03448 | Predicted Protein | | 16.4 | | |
| BACOVA_03484 | Glycoside hydrolase family 97 | 10.8 | | | |
| BACOVA_03520 | Glycoside hydrolase family 13 | | | | 50.9 |
| BACOVA_03829 | Similar to keto-hydroxyglutarate-aldolase/keto-deoxy-phosphogluconate aldolase | | | | 16.7 |
| BACOVA_03830 | Similar to 2-dehydro-3-deoxygluconokinase | | | | 16.5 |
| BACOVA_03831 | Similar to transcriptional regulator | | | | 12.8 |
| BACOVA_03832 | Similar to altronate hydrolase | | | | 25.8 |
| BACOVA_03967 | Conserved Hypothetical Protein | | | | 12.3 |
| BACOVA_04265 | Predicted Protein | | 18.5 | | |
| BACOVA_04266 | Conserved Hypothetical Protein | | 20.8 | | |
| BACOVA_04271 | Hypothetical Protein | | 12.8 | | |
| BACOVA_04272 | Hypothetical Protein | | 20.8 | | |
| BACOVA_04273 | Similar to ABC transporter ATP-binding protein | | 15.1 | | |
| BACOVA_04274 | Similar to ABC transporter permease | | 22.2 | | |
| BACOVA_04311 | Predicted Protein | | | | 11.6 |

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|--------------|--|------|------|------|-------|
| BACOVA_04312 | Similar to RNA polymerase ECF-type sigma factor | | | | 17.3 |
| BACOVA_04315 | Hypothetical Protein | | | | 21.2 |
| BACOVA_04384 | Predicted Protein | 27.0 | 15.3 | | |
| BACOVA_04896 | Similar to hexuronate transporter | 12.1 | | | 38.8 |
| BACOVA_04900 | Glycoside hydrolase family 105 | | | | 104.2 |
| BACOVA_04901 | Carbohydrate esterase family 8 | | | | 108.6 |
| BACOVA_04902 | Carbohydrate esterase family 12- Carbohydrate esterase family 8 | | | | 53.4 |
| BACOVA_04903 | Predicted Protein | | | | 62.2 |
| BACOVA_04905 | Polysaccharide lyase family 1 | | | | 30.6 |
| BACOVA_04906 | Polysaccharide lyase family 1 | | | | 381.5 |
| BACOVA_04907 | Polysaccharide lyase family 1 | | | | 482.9 |
| BACOVA_04908 | Carbohydrate esterase family 8 | | | | 316.1 |
| BACOVA_04909 | Predicted Protein | | | | 164.5 |
| BACOVA_04910 | susD-like | | | | 224.1 |
| BACOVA_04916 | Polysaccharide lyase family 1 | | | | 27.4 |
| BACOVA_04982 | Hypothetical Protein | | | | 10.1 |
| BACOVA_05018 | Predicted Protein | | 11.8 | | |
| BACOVA_05037 | Glycoside hydrolase family 43 | | | | 69.3 |
| BACOVA_05039 | Conserved Hypothetical Protein | | | | 10.5 |
| BACOVA_05040 | Glycoside hydrolase family 28 | | | | 251.9 |
| BACOVA_05176 | Hypothetical Protein | | | | 14.4 |
| BACOVA_05203 | Hypothetical Protein | | | | 13.7 |
| BACOVA_05541 | Hypothetical Protein | | 14.8 | | |
| BACOVA_05601 | Similar to NADH-ubiquinone oxidoreductase subunit | | | 21.6 | |
| BACOVA_05603 | Similar to NADH:ubiquinone oxidoreductase subunit | | | 14.0 | |

Sector 2 (in vitro, in vivo shared)

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|--------------|---|------|------|------|-------|
| BACOVA_00030 | Conserved Hypothetical Protein | | | 12.5 | 176.1 |
| BACOVA_00035 | Predicted Protein | | | 14.7 | 10.0 |
| BACOVA_00557 | susD-like | 10.1 | | 18.2 | 19.3 |
| BACOVA_00558 | susC-like | | 12.3 | 18.1 | 23.0 |
| BACOVA_00725 | Conserved Hypothetical Protein | | | 11.3 | 15.0 |
| BACOVA_00876 | Similar to biotin carboxyl carrier protein | | | 13.4 | 32.2 |
| BACOVA_00877 | Similar to biotin carboxylase | 11.3 | 10.7 | 20.8 | 41.4 |
| BACOVA_01282 | Similar to tRNA (5-methylaminomethyl-2-thiouridylate)-methyltransferase | | 42.7 | | 22.7 |

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|--------------|---|-------|-------|-------|-------|-------|-------|-------|
| BACOVA_01331 | Similar to D-mannonate oxidoreductase | | 127.4 | | | | 11.9 | 10.8 |
| BACOVA_01708 | Glycoside hydrolase family 51 | | 69.2 | 47.4 | | | 13.4 | 16.7 |
| BACOVA_01710 | Similar to xylulose kinase (xylulokinase) | | 34.2 | 27.1 | | | | 13.8 |
| BACOVA_01714 | Similar to Na ⁺ /glucose cotransporter | | 41.1 | 29.7 | | | 13.2 | 12.1 |
| BACOVA_01889 | Hypothetical Protein | | 18.9 | 21.7 | | 22.8 | 35.7 | 12.6 |
| BACOVA_02052 | susD-like | | 12.9 | | | | | 59.4 |
| BACOVA_02054 | Hypothetical Protein | | 12.1 | | | | | 56.7 |
| BACOVA_02055 | Hypothetical Protein | 39.5 | 157.0 | 10.6 | | 70.6 | 16.4 | 822.2 |
| BACOVA_02058 | Hypothetical Protein | | 15.9 | | | | | 88.9 |
| BACOVA_02059 | Predicted Protein | | 27.7 | | | 10.9 | | 145.0 |
| BACOVA_02088 | Hypothetical Protein | | | | 237.3 | 126.2 | | 12.0 |
| BACOVA_02089 | Hypothetical Protein | | | | 411.7 | 248.3 | | 17.7 |
| BACOVA_02096 | susC-like | | | | 631.9 | 529.6 | | 15.5 |
| BACOVA_02526 | Similar to succinyl-CoA synthetase alpha chain | 16.9 | 24.1 | 18.6 | | 34.0 | | 28.8 |
| BACOVA_02527 | Similar to succinyl-CoA synthetase beta chain | 11.3 | 15.4 | 13.9 | | 22.8 | | 21.0 |
| BACOVA_02534 | Similar to xylose isomerase | | 42.9 | 32.8 | | | 30.9 | 10.6 |
| BACOVA_02535 | Similar to D-xylose-proton symporter (D-xylose transporter) | | 65.7 | 32.7 | | | 37.7 | 11.4 |
| BACOVA_02601 | Similar to RNA polymerase ECF-type sigma factor | | | | 11.5 | | | 16.3 |
| BACOVA_02629 | Hypothetical Protein | | | | | 11.5 | | 81.2 |
| BACOVA_02650 | Predicted Protein | | | | | | 303.3 | 25.9 |
| BACOVA_02651 | susD-like | | | | | | 161.5 | 12.8 |
| BACOVA_02652 | susC-like | | | | | | 289.7 | 18.6 |
| BACOVA_02653 | Glycoside hydrolase family 5 | | | | | | 183.7 | 14.9 |
| BACOVA_02741 | Glycoside hydrolase family 16 | 228.8 | | | | 14.5 | | 149.7 |
| BACOVA_02742 | susC-like | 259.7 | | | | 14.8 | | 147.3 |
| BACOVA_02743 | susD-like | 124.9 | | | | | | 70.7 |
| BACOVA_02744 | Predicted Protein | 298.3 | | | | 17.9 | | 204.3 |
| BACOVA_02745 | Glycoside hydrolase family 3 | 180.7 | | | | 12.1 | | 79.9 |
| BACOVA_02746 | Hypothetical Protein | 232.8 | | | | 17.8 | | 123.6 |
| BACOVA_02747 | Predicted Protein | 156.5 | | | | 13.3 | | 111.9 |
| BACOVA_02771 | Similar to cysteine synthase A | | | | 21.6 | | 17.5 | 17.6 |
| BACOVA_03178 | Similar to elongation factor G | 11.8 | 22.4 | 17.1 | | 24.9 | 22.9 | 26.7 |
| BACOVA_03415 | Similar to fucose permease | | 16.9 | | | | | 21.6 |
| BACOVA_03417 | Glycoside hydrolase family 43 | | 48.2 | 106.3 | | | | 24.0 |
| BACOVA_03421 | TM-Glycoside hydrolase family 43 | | 71.3 | 103.4 | | | | 25.4 |
| BACOVA_03422 | Glycoside hydrolase family 31 | | 79.2 | 150.4 | | | | 39.0 |
| BACOVA_03423 | Glycoside hydrolase family 97 | | 109.5 | 186.4 | | | | 52.8 |

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|--------------|---|-------|-------|-------|-------|
| BACOVA_03424 | Glycoside hydrolase family 43-Carbohydrate binding module 6 | 271.8 | 364.1 | | 98.8 |
| BACOVA_03425 | TM-Glycoside hydrolase family 43 | 163.2 | 263.9 | | 98.0 |
| BACOVA_03426 | susC-like | 356.5 | 417.3 | | 149.9 |
| BACOVA_03427 | susD-like | 186.9 | 227.4 | | 83.0 |
| BACOVA_03428 | susC-like | 107.4 | 124.8 | | 56.5 |
| BACOVA_03429 | susD-like | 111.3 | 138.7 | | 57.8 |
| BACOVA_03430 | Predicted Protein | 169.9 | 184.8 | | 96.2 |
| BACOVA_03431 | Glycoside hydrolase family 10 | 84.9 | 90.1 | | 47.7 |
| BACOVA_03432 | Glycoside hydrolase family 5 | 92.9 | 124.5 | | 44.8 |
| BACOVA_03433 | Glycoside hydrolase family 98-Carbohydrate binding module 35 | 65.3 | 95.6 | | 32.0 |
| BACOVA_03434 | Glycoside Hydrolase Family 115 | 89.8 | 120.1 | | 23.1 |
| BACOVA_03435 | Carbohydrate esterase family6-Carbohydrate esterase family 1 | 52.2 | 64.3 | | 14.3 |
| BACOVA_03436 | Glycoside hydrolase family 43-Carbohydrate binding module 6 | 95.7 | 139.5 | | 33.4 |
| BACOVA_03437 | Hypothetical Protein | 17.4 | 19.7 | | 15.2 |
| BACOVA_03449 | Glycoside Hydrolase Family 115 | 36.6 | 81.4 | | 25.4 |
| BACOVA_03450 | Carbohydrate esterase family 6-Carbohydrate esterase family 6 | 36.6 | 155.1 | | 27.4 |
| BACOVA_03483 | Glycoside hydrolase family 51 | 14.5 | 10.0 | | 10.6 |
| BACOVA_03514 | Glycoside hydrolase family 13 | 31.9 | | 146.4 | 34.8 |
| BACOVA_03515 | Hypothetical Protein | 41.8 | | 176.3 | 46.5 |
| BACOVA_03516 | Hypothetical Protein | 14.5 | | 72.0 | 15.8 |
| BACOVA_03517 | susD-like | 17.2 | | 90.8 | 20.3 |
| BACOVA_03518 | susC-like | 16.4 | | 84.3 | 20.4 |
| BACOVA_03519 | Glycoside hydrolase family 97 | 15.1 | | 144.9 | 27.9 |
| BACOVA_03965 | Similar to outer membrane efflux protein | 28.6 | | | 12.4 |
| BACOVA_04103 | susC-like | | | 10.3 | 207.1 |
| BACOVA_04111 | Glycoside hydrolase family 92 | | | 10.6 | 66.4 |
| BACOVA_04134 | Similar to propionyl-CoA carboxylase beta chain | | | 11.1 | 28.8 |
| BACOVA_04385 | Glycoside hydrolase family 67 | 413.2 | 339.7 | | 12.5 |
| BACOVA_04386 | Glycoside hydrolase family 43 | 158.1 | 160.9 | | 51.7 |
| BACOVA_04387 | Glycoside hydrolase family 10 | 207.8 | 184.3 | | 53.7 |
| BACOVA_04388 | Hypothetical Protein | 189.5 | 153.8 | | 44.5 |
| BACOVA_04389 | Carbohydrate esterase family 6-Carbohydrate esterase family 6 | 298.4 | 240.7 | | 10.1 |
| | | | | | 65.8 |

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|--------------|---|--------|-------|------|------|-------|-------|
| BACOVA_04390 | Glycoside hydrolase family10-Carbohydrate binding module 22-Glycoside hydrolase family 10 | 1706.9 | 886.6 | 13.1 | 11.5 | 98.6 | 305.0 |
| BACOVA_04391 | Hypothetical Protein | 180.9 | 82.4 | | | | 25.4 |
| BACOVA_04392 | susD-like | 235.3 | 95.5 | | | 14.3 | 36.5 |
| BACOVA_04393 | susC-like | 311.6 | 122.7 | | | 13.9 | 42.8 |
| BACOVA_04500 | Similar to glucose/galactose transporter | | | 20.9 | | 60.6 | 145.9 |
| BACOVA_04501 | Glycoside hydrolase family 32 | | | | | 20.6 | 39.3 |
| BACOVA_04502 | Glycoside hydrolase family 91 | | | | | 31.7 | 81.4 |
| BACOVA_04503 | Glycoside hydrolase family 91 | | | | | 17.4 | 41.6 |
| BACOVA_04504 | susD-like | | | | | 12.0 | 25.0 |
| BACOVA_04505 | susC-like | | | | | 25.3 | 44.0 |
| BACOVA_04507 | Glycoside hydrolase family 32 | | | | | 34.7 | 25.5 |
| BACOVA_04622 | Predicted Protein | 10.8 | | | | | 28.1 |
| BACOVA_04623 | Predicted Protein | 12.6 | | | | | 26.1 |
| BACOVA_04911 | susC-like | | | | | 283.4 | 10.2 |
| BACOVA_05038 | Predicted Protein | | | | | 61.3 | 10.5 |
| BACOVA_05488 | Glycoside hydrolase family 53 | | | | | 64.7 | 81.0 |
| BACOVA_05489 | Hypothetical Protein | | | | | 47.2 | 62.6 |
| BACOVA_05490 | susD-like | | | | | 47.7 | 80.5 |
| BACOVA_05491 | susC-like | | | | | 287.8 | 541.9 |
| BACOVA_05493 | Glycoside hydrolase family 5 | | | | | 23.2 | 43.3 |
| BACOVA_05542 | susC-like | | 14.0 | | | | 19.0 |
| BACOVA_05543 | susD-like | | 15.7 | | | | 27.7 |
| BACOVA_05544 | Hypothetical Protein | | 30.6 | | | 14.7 | 75.9 |
| BACOVA_05561 | Glycoside hydrolase family 18 | | | 10.9 | | | 14.3 |
| BACOVA_05563 | Hypothetical Protein | 10.7 | | 20.7 | | 13.6 | 30.2 |
| BACOVA_05602 | Similar to NADH:ubiquinone oxidoreductase subunit | 15.8 | | 36.3 | | 10.1 | 12.4 |

Sector 3 (*in vivo* only)

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|--------------|--|--|--|--|--|--|------|
| BACOVA_00016 | Conserved Hypothetical Protein | | | | | | 30.7 |
| BACOVA_00092 | Similar to catalase | | | | | | 11.9 |
| BACOVA_00108 | Conserved Hypothetical Protein | | | | | | 12.5 |
| BACOVA_00109 | Conserved Hypothetical Protein | | | | | | 11.4 |
| BACOVA_00112 | Conserved Hypothetical Protein | | | | | | 13.4 |
| BACOVA_00116 | Similar to glutamate/gamma-aminobutyrate anti-porter | | | | | | 17.8 |
| BACOVA_00238 | Predicted Protein | | | | | | 13.1 |
| BACOVA_00365 | Predicted Protein | | | | | | 11.4 |
| BACOVA_00505 | Predicted Protein | | | | | | 10.4 |

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|--------------|--|-------|
| BACOVA_00559 | Glycoside hydrolase family 20-Carbohydrate binding module 32 | 10.1 |
| BACOVA_00560 | Glycoside hydrolase family 20-Carbohydrate binding module 32 | 16.5 |
| BACOVA_00591 | Conserved Hypothetical Protein | 12.6 |
| BACOVA_00597 | Conserved Hypothetical Protein | 10.1 |
| BACOVA_00746 | Conserved Hypothetical Protein | 13.7 |
| BACOVA_00801 | Hypothetical Protein | 18.2 |
| BACOVA_00802 | Hypothetical Protein | 40.9 |
| BACOVA_00991 | Similar to histidine ammonia-lyase | 19.0 |
| BACOVA_00992 | Similar to methenyltetrahydrofolate cyclohydrolase | 24.0 |
| BACOVA_00993 | Similar to imidazolonepropionase | 14.1 |
| BACOVA_00994 | Similar to formiminotransferase-cyclodeaminase | 18.6 |
| BACOVA_00995 | Similar to urocanate hydratase | 19.0 |
| BACOVA_01069 | Similar to aspartate ammonia-lyase | 12.1 |
| BACOVA_01071 | Similar to L-asparaginase II precursor | 16.1 |
| BACOVA_01072 | Conserved Hypothetical Protein | 26.8 |
| BACOVA_01270 | Conserved Hypothetical Protein | 17.8 |
| BACOVA_01290 | Conserved Hypothetical Protein | 15.7 |
| BACOVA_01329 | Similar to oxidoreductase, aldo/keto reductase | 12.3 |
| BACOVA_01355 | Conserved Hypothetical Protein | 92.8 |
| BACOVA_01415 | Predicted Protein | 31.0 |
| BACOVA_01467 | Hypothetical Protein | 13.5 |
| BACOVA_01476 | Conserved Hypothetical Protein | 12.4 |
| BACOVA_01482 | Hypothetical Protein | 10.7 |
| BACOVA_01654 | Similar to flavodoxin | 10.2 |
| BACOVA_01792 | Hypothetical Protein | 65.8 |
| BACOVA_01793 | Conserved Hypothetical Protein | 113.3 |
| BACOVA_01794 | Similar to arabinose-proton symporter | 52.7 |
| BACOVA_01795 | Similar to N-acylglucosamine 2-epimerase | 99.2 |
| BACOVA_01796 | susC-like | 99.8 |
| BACOVA_01797 | susD-like | 105.7 |
| BACOVA_01798 | Conserved Hypothetical Protein | 105.0 |
| BACOVA_01799 | Hypothetical Protein | 53.6 |
| BACOVA_01800 | Conserved Hypothetical Protein | 85.7 |
| BACOVA_01801 | Conserved Hypothetical Protein | 49.4 |
| BACOVA_01802 | Carbohydrate esterase family6 | 45.7 |
| BACOVA_01803 | Conserved Hypothetical Protein | 83.5 |

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|--------------|--|-------|
| BACOVA_01807 | Hypothetical Protein | 26.5 |
| BACOVA_01808 | Carbohydrate esterase family 6 | 35.5 |
| BACOVA_01809 | Hypothetical Protein | 73.1 |
| BACOVA_01810 | Predicted Protein | 27.4 |
| BACOVA_01811 | Predicted Protein | 48.4 |
| BACOVA_01812 | Predicted Protein | 64.8 |
| BACOVA_01813 | Hypothetical Protein | 113.7 |
| BACOVA_01814 | susD-like | 37.7 |
| BACOVA_01815 | susC-like | 87.2 |
| BACOVA_01816 | Similar to N-acylglucosamine 2-epimerase | 77.4 |
| BACOVA_01818 | Similar to arabinose-proton symporter | 65.4 |
| BACOVA_01819 | Conserved Hypothetical Protein | 62.5 |
| BACOVA_01893 | Similar to pyrophosphate-energized vacuolar membrane proton pump | 10.6 |
| BACOVA_01895 | Hypothetical Protein | 88.1 |
| BACOVA_01896 | Glycoside hydrolase family 36 | 17.0 |
| BACOVA_02051 | susC-like | 34.1 |
| BACOVA_02053 | Hypothetical Protein | 10.6 |
| BACOVA_02056 | Carbohydrate esterase family 1 | 34.3 |
| BACOVA_02057 | Carbohydrate esterase family 1 | 49.8 |
| BACOVA_02168 | Hypothetical Protein | 10.3 |
| BACOVA_02174 | susD-like | 17.1 |
| BACOVA_02175 | susC-like | 13.0 |
| BACOVA_02205 | Similar to RNA polymerase ECF-type sigma factor | 26.5 |
| BACOVA_02364 | Hypothetical Protein | 27.3 |
| BACOVA_02442 | Conserved Hypothetical Protein | 10.9 |
| BACOVA_02495 | Hypothetical Protein | 16.3 |
| BACOVA_02504 | Hypothetical Protein | 17.1 |
| BACOVA_02539 | Conserved Hypothetical Protein | 18.2 |
| BACOVA_02602 | Similar to RNA polymerase ECF-type sigma factor | 17.5 |
| BACOVA_02626 | Glycoside hydrolase family 5 | 36.2 |
| BACOVA_02627 | susC-like | 64.3 |
| BACOVA_02628 | susD-like | 34.0 |
| BACOVA_02630 | Glycoside hydrolase family 5 | 23.1 |
| BACOVA_02631 | Glycoside hydrolase family 2 | 14.5 |
| BACOVA_02632 | Glycoside hydrolase family 5 | 19.3 |
| BACOVA_02634 | Hypothetical Protein | 11.5 |
| BACOVA_02635 | Hypothetical Protein | 10.6 |
| BACOVA_02636 | Glycoside hydrolase family 78 | 10.0 |

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| BACOVA_02663 | Hypothetical Protein | 19.5 |
| BACOVA_02664 | susD-like | 11.3 |
| BACOVA_02665 | susC-like | 12.3 |
| BACOVA_02690 | Similar to pyruvate carboxylase subunit B) | 15.1 |
| BACOVA_02976 | Predicted Protein | 15.8 |
| BACOVA_03020 | Similar to L-asparaginase I | 10.1 |
| BACOVA_03027 | Predicted Protein | 14.4 |
| BACOVA_03089 | Conserved Hypothetical Protein | 11.1 |
| BACOVA_03090 | Similar to multidrug efflux membrane fusion protein | 11.8 |
| BACOVA_03130 | Hypothetical Protein | 17.1 |
| BACOVA_03131 | Hypothetical Protein | 31.2 |
| BACOVA_03153 | susD-like | 80.5 |
| BACOVA_03154 | susC-like | 28.8 |
| BACOVA_03190 | Conserved Hypothetical Protein | 10.7 |
| BACOVA_03262 | Hypothetical Protein | 43.3 |
| BACOVA_03263 | Hypothetical Protein | 97.7 |
| BACOVA_03264 | Hypothetical Protein | 116.2 |
| BACOVA_03265 | Hypothetical Protein | 16.4 |
| BACOVA_03294 | Similar to choloylglycine hydrolase | 10.8 |
| BACOVA_03335 | Predicted Protein | 15.0 |
| BACOVA_03379 | Conserved Hypothetical Protein | 14.4 |
| BACOVA_03380 | Glycoside hydrolase family 3 | 16.6 |
| BACOVA_03381 | susD-like | 19.3 |
| BACOVA_03382 | susC-like | 18.4 |
| BACOVA_03485 | Hypothetical Protein | 11.6 |
| BACOVA_03556 | susC-like | 22.2 |
| BACOVA_03557 | susD-like | 26.1 |
| BACOVA_03558 | Glycoside hydrolase family 18 | 21.2 |
| BACOVA_03559 | Hypothetical Protein | 22.2 |
| BACOVA_03579 | susD-like | 17.0 |
| BACOVA_03580 | Hypothetical Protein | 10.8 |
| BACOVA_03601 | Similar to rhamnulose kinase/L-fuculose kinase | 13.7 |
| BACOVA_03602 | Similar to L-rhamnose isomerase | 33.0 |
| BACOVA_03603 | Similar to L-rhamnose/H+ symporter | 22.1 |
| BACOVA_03625 | Predicted Protein | 12.4 |
| BACOVA_03641 | Predicted Protein | 11.1 |
| BACOVA_03667 | Conserved Hypothetical Protein | 27.5 |
| BACOVA_03761 | Hypothetical Protein | 20.6 |
| BACOVA_03769 | Similar to polyphosphate kinase | 12.0 |

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| BACOVA_03770 | Conserved Hypothetical Protein | 11.0 |
| BACOVA_03810 | Glycoside hydrolase family 20 | 10.8 |
| BACOVA_03843 | Conserved Hypothetical Protein | 10.0 |
| BACOVA_03864 | Hypothetical Protein | 16.9 |
| BACOVA_04005 | Hypothetical Protein | 20.9 |
| BACOVA_04094 | Predicted Protein | 44.6 |
| BACOVA_04095 | Hypothetical Protein | 35.5 |
| BACOVA_04096 | Hypothetical Protein | 21.6 |
| BACOVA_04097 | Glycoside hydrolase family 18 | 29.9 |
| BACOVA_04098 | susD-like | 17.1 |
| BACOVA_04099 | susC-like | 26.1 |
| BACOVA_04104 | susD-like | 147.8 |
| BACOVA_04105 | Glycoside hydrolase family 18 | 131.0 |
| BACOVA_04106 | Hypothetical Protein | 130.7 |
| BACOVA_04107 | Hypothetical Protein | 113.8 |
| BACOVA_04108 | Carbohydrate binding module 32 | 29.5 |
| BACOVA_04109 | Conserved Hypothetical Protein | 31.0 |
| BACOVA_04110 | Conserved Hypothetical Protein | 55.6 |
| BACOVA_04131 | Hypothetical Protein | 39.3 |
| BACOVA_04132 | Hypothetical Protein | 29.4 |
| BACOVA_04136 | Conserved Hypothetical Protein | 10.3 |
| BACOVA_04138 | Similar to L-lactate permease | 11.1 |
| BACOVA_04222 | Similar to tyrosine phenol-lyase | 12.2 |
| BACOVA_04235 | Predicted Protein | 15.9 |
| BACOVA_04297 | Similar to alanine dehydrogenase | 10.3 |
| BACOVA_04314 | Conserved Hypothetical Protein | 17.3 |
| BACOVA_04408 | Hypothetical Protein | 12.7 |
| BACOVA_04497 | Predicted Protein | 14.7 |
| BACOVA_04565 | Similar to pyruvate dehydrogenase | 11.7 |
| BACOVA_04684 | Conserved Hypothetical Protein | 32.8 |
| BACOVA_04700 | Hypothetical Protein | 10.0 |
| BACOVA_04701 | Hypothetical Protein | 26.2 |
| BACOVA_04702 | Hypothetical Protein | 56.3 |
| BACOVA_04703 | Similar to Fe ³⁺ ABC transporter, permease protein | 24.2 |
| BACOVA_04704 | Similar to Fe ³⁺ ABC transporter, periplasmic iron-binding protein | 27.7 |
| BACOVA_04705 | Hypothetical Protein | 19.7 |
| BACOVA_04706 | Hypothetical Protein | 27.3 |
| BACOVA_04707 | Hypothetical Protein | 45.1 |
| BACOVA_04708 | Hypothetical Protein | 43.6 |

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|--------------|--------------------------------|-------|
| BACOVA_04735 | Predicted Protein | 19.7 |
| BACOVA_04786 | Hypothetical Protein | 15.2 |
| BACOVA_04799 | Predicted Protein | 298.5 |
| BACOVA_04800 | Glycoside hydrolase family 18 | 254.1 |
| BACOVA_04801 | Hypothetical Protein | 189.1 |
| BACOVA_04802 | Glycoside hydrolase family 18 | 108.3 |
| BACOVA_04803 | susD-like | 134.2 |
| BACOVA_04804 | susC-like | 73.6 |
| BACOVA_04805 | Hypothetical Protein | 31.5 |
| BACOVA_04806 | Hypothetical Protein | 19.6 |
| BACOVA_04807 | Glycoside hydrolase family 18 | 25.5 |
| BACOVA_04808 | Hypothetical Protein | 17.1 |
| BACOVA_04809 | Glycoside hydrolase family 92 | 13.1 |
| BACOVA_04810 | Glycoside hydrolase family 92 | 10.3 |
| BACOVA_04811 | Hypothetical Protein | 12.2 |
| BACOVA_04851 | Predicted Protein | 15.4 |
| BACOVA_04960 | Predicted Protein | 15.3 |
| BACOVA_04974 | Polysaccharide lyase family 11 | 27.1 |
| BACOVA_04975 | Glycoside hydrolase family 105 | 16.7 |
| BACOVA_04976 | Conserved Hypothetical Protein | 17.7 |
| BACOVA_05006 | Hypothetical Protein | 13.6 |
| BACOVA_05024 | Predicted Protein | 38.2 |
| BACOVA_05031 | Glycoside hydrolase family 105 | 12.4 |
| BACOVA_05125 | Predicted Protein | 10.6 |
| BACOVA_05295 | Conserved Hypothetical Protein | 11.9 |
| BACOVA_05305 | Conserved Hypothetical Protein | 11.5 |
| BACOVA_05351 | Predicted Protein | 25.1 |
| BACOVA_05401 | Conserved Hypothetical Protein | 31.0 |
| BACOVA_05433 | Hypothetical Protein | 31.2 |
| BACOVA_05503 | Predicted Protein | 10.0 |
| BACOVA_05559 | susC-like | 12.2 |
| BACOVA_05560 | susD-like | 12.2 |
| BACOVA_05564 | Hypothetical Protein | 10.5 |
| BACOVA_05569 | Hypothetical Protein | 11.9 |

Downregulated:

Sector 1

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|--------------|--------------------------------|------|------|------|
| BACOVA_01128 | Conserved Hypothetical Protein | | | 10.8 |
| BACOVA_01198 | susC | 36.6 | 17.0 | 36.0 |
| BACOVA_01199 | susD | 12.5 | | |

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|-----------------|--|------|-------|------|-------|
| BACOVA_02195 | Similar to transcriptional regulator | | 11.6 | | |
| BACOVA_02732 | Hypothetical Protein | 13.2 | | | |
| BACOVA_02733 | Hypothetical Protein | 17.4 | | | |
| BACOVA_02734 | Predicted Protein | 12.3 | | | |
| BACOVA_02735 | Hypothetical Protein | 12.7 | | | |
| BACOVA_02814 | Conserved Hypothetical Protein | 10.0 | 18.6 | 18.4 | |
| BACOVA_02953 | Predicted Protein | | | 16.6 | 10.8 |
| BACOVA_02953 | Predicted Protein | | | 15.7 | |
| BACOVA_03637 | Predicted Protein | | | | 23.1 |
| BACOVA_03722 | Similar to small heat shock protein | | | | 12.4 |
| BACOVA_03757 | Similar to glutamate synthase, small subunit | 23.7 | | | |
| BACOVA_03765 | Similar to nitrogen regulatory protein P-II | 10.2 | | | |
| BACOVA_03767 | Similar to glutamine synthetase | | 10.6 | | |
| BACOVA_04836 | Predicted Protein | | 11.3 | | |
| Sector 2 | | | | | |
| BACOVA_02729 | susC | 12.5 | 14.8 | | 12.8 |
| BACOVA_02028 | Predicted Protein | 11.9 | 19.2 | | 10.9 |
| BACOVA_02730 | susD | 10.0 | | | 16.2 |
| BACOVA_02382 | Similar to cation efflux system protein czcB | | 390.6 | | 55.2 |
| BACOVA_02381 | Similar to cation efflux system protein czcC | | 123.3 | | 39.3 |
| BACOVA_02383 | Similar to cation efflux system protein czcA | | 73.5 | | 50.8 |
| BACOVA_00178 | Similar to Mg ²⁺ transport ATPase protein B | | 20.5 | | 553.6 |
| BACOVA_02194 | Hypothetical Protein | | 14.8 | | 12.5 |
| BACOVA_04142 | Hypothetical Protein | | 14.0 | | 27.6 |
| BACOVA_04144 | Similar to protein rtcB | | 12.0 | | 18.1 |
| BACOVA_04143 | Hypothetical Protein | | 10.4 | | 32.9 |
| BACOVA_03166 | Conserved Hypothetical Protein | | | 22.2 | 17.8 |
| BACOVA_03813 | Similar to TonB-dependent outer membrane receptor | | | 10.2 | 19.1 |
| Sector 3 | | | | | |
| BACOVA_04528 | Hypothetical Protein | | | | 299.4 |
| BACOVA_01521 | Conserved Hypothetical Protein | | | | 93.5 |
| BACOVA_03780 | Similar to anthranilate synthase component I | | | | 72.6 |
| BACOVA_04530 | Conserved Hypothetical Protein | | | | 47.6 |
| BACOVA_03015 | Predicted Protein | | | | 45.5 |
| BACOVA_03016 | Hypothetical Protein | | | | 42.0 |
| BACOVA_00832 | Hypothetical Protein | | | | 39.6 |
| BACOVA_00833 | Conserved Hypothetical Protein | | | | 35.4 |
| BACOVA_03015 | Predicted Protein | | | | 33.2 |

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|--------------|---|------|
| BACOVA_03815 | Similar to TonB-dependent outer membrane receptor | 30.9 |
| BACOVA_04529 | Hypothetical Protein | 28.9 |
| BACOVA_04526 | Hypothetical Protein | 28.6 |
| BACOVA_01522 | Conserved Hypothetical Protein | 27.6 |
| BACOVA_00095 | Predicted Protein | 27.6 |
| BACOVA_04262 | Conserved Hypothetical Protein | 23.3 |
| BACOVA_01520 | Hypothetical Protein | 23.1 |
| BACOVA_03782 | Similar to anthranilate phosphoribosyltransferase | 21.5 |
| BACOVA_03781 | Similar to anthranilate synthase component II | 14.7 |
| BACOVA_03014 | Predicted Protein | 13.5 |
| BACOVA_00270 | Hypothetical Protein | 13.4 |
| BACOVA_01519 | Predicted Protein | 13.3 |
| BACOVA_04368 | HTCS | 12.8 |
| BACOVA_04307 | Conserved Hypothetical Protein | 12.2 |
| BACOVA_01233 | Similar to histidinol-phosphate aminotransferase | 12.2 |
| BACOVA_04307 | Conserved Hypothetical Protein | 12.0 |
| BACOVA_02394 | Conserved Hypothetical Protein | 11.9 |
| BACOVA_02395 | Hypothetical Protein | 11.6 |
| BACOVA_03731 | Similar to polysaccharide export outer membrane protein | 11.3 |
| BACOVA_04306 | Conserved Hypothetical Protein | 11.3 |
| BACOVA_03789 | Hypothetical Protein | 10.2 |
| BACOVA_05110 | Similar to NADPH-dependent glutamate synthase small chain | 10.0 |
| BACOVA_05596 | Similar to pyruvate formate-lyase activating enzyme | 10.0 |