## Protein Prevalence Heatmap Across Timepoints (Annotation+ProteinID) 4/5 GCH1, folE; GTP cyclohydrolase IA [EC:3.5.4.16] (E100081120\_L01\_235\_1.fq.gz\_ctg157544\_105) GCH1, folE; GTP cyclohydrolase IA [EC:3.5.4.16] (E100081114\_L01\_225\_1.fq.gz\_ctg55036\_126) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (DQML5200-240522-01B-1\_1.fq.gz\_ctg118231|provirus\_21654\_76150\_46) mgsA; methylglyoxal synthase [EC:4.2.3.3] (DQML5200-240504-02B-1\_1.fq.gz\_ctg127994\_92) cobT; cobaltochelatase CobT [EC:6.6.1.2] (DQML5200-240504-02B-1 1.fq.qz ctq127994 99) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081120\_L01\_177\_1.fq.gz\_ctg48116||full\_23) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081120\_L01\_149\_1.fq.gz\_ctg15585|provirus\_3\_35046\_35) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081114\_L01\_247\_1.fq.gz\_ctg203248|provirus\_37210\_80145\_52) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (DQML3800-240416-01B-1\_1.fq.gz\_ctg8338|provirus\_3\_42705\_34) nadE; NAD+ synthase [EC:6.3.1.5] (E100081120\_L01\_201\_1.fq.gz\_ctg34074\_71) $iscS, NFS1; cysteine \ desulfurase \ [EC:2.8.1.7] \ (DQML5800-240428-04B-1\_1.fq.gz\_ctg189383| provirus\_514\_69956\_72) \\$ cysH; phosphoadenosine phosphosulfate reductase [EC:1.8.4.8 1.8.4.10] (E100081120\_L01\_168\_1.fg.gz\_ctg58906\_36) ahbD; heme synthase (E100081120\_L01\_242\_1.fq.gz\_ctg5050\_49) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081120 L01 242 1.fq.gz ctg139587|provirus 2 29330 43) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081114\_L01\_208\_1.fq.gz\_ctg123792\_29) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (DQML6500-240426-03B-1\_1.fq.gz\_ctg52274\_42) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (DQML5200-240522-01B-1\_1.fq.gz\_ctg78160\_15) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (DQML5200-240504-02B-1\_1.fq.gz\_ctg18779)provirus\_1\_44021\_50) folD; methylenetetrahydrofolate dehydrogenase (NADP+) / methenyltetrahydrofolate cyclohydrolase [EC:1.5.1.5 3.5.4.9] (E100081114\_L01\_221\_1... cysH; phosphoadenosine phosphosulfate reductase [EC:1.8.4.8 1.8.4.10] (E100081120\_L01\_236\_1.fq.gz\_ctg41788|provirus\_18502\_46348\_33) NAMPT; nicotinamide phosphoribosyltransferase [EC:2.4.2.12] (E100081114\_L01\_221\_1.fq.gz\_ctg103044\_128) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081120\_L01\_146\_1.fq.gz\_ctg88569|provirus\_155811\_220681\_20) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081120\_L01\_146\_1.fq.qz\_ctq88569)provirus\_155811\_220681\_19) NAMPT; nicotinamide phosphoribosyltransferase [EC:2.4.2.12] (E100081120\_L01\_201\_1.fq.gz\_ctg34074\_77) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (DQML5200-240504-01B-1\_1.fq.gz\_ctg178431\_36) cysH; phosphoadenosine phosphosulfate reductase [EC:1.8.4.8 1.8.4.10] (E100081120\_L01\_235\_1.fq.gz\_ctg92044\_9) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081120 L01 226 1.fq.gz ctg103425|provirus 38716 81280 17) pncB, NAPRT1; nicotinate phosphoribosyltransferase [EC:6.3.4.21] (DQML3800-240416-07B-1\_1.fq.gz\_ctg95792|provirus\_30948\_216162\_206) nadE; NAD+ synthase [EC:6.3.1.5] (DQML3800-240416-07B-1\_1.fq.gz\_ctg95792|provirus\_30948\_216162\_208) nadD; nicotinate-nucleotide adenylyltransferase [EC:2.7.7.18] (DQML3800-240416-07B-1\_1.fq.gz\_ctg95792|provirus\_30948\_216162\_207) iscS, NFS1; cysteine desulfurase [EC:2.8.1.7] (DQML3800-240416-07B-1\_1.fq.gz\_ctg95792|provirus\_30948\_216162\_38) cysH; phosphoadenosine phosphosulfate reductase [EC:1.8.4.8 1.8.4.10] (DQML3800-240416-07B-1\_1.fq.gz\_ctg181337|provirus\_77620\_133960\_64) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (DQML3800-240416-07B-1\_1.fq.gz\_ctg8214\_19) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081120\_L01\_143\_1.fq.gz\_ctg61773|provirus\_24487\_59120\_24) waaC, rfaC; heptosyltransferase I [EC:2.4.-.-] (E100081114\_L01\_225\_1.fq.gz\_ctg99420||full\_57) ubiG; 2-polyprenyl-6-hydroxyphenyl methylase / 3-demethylubiquinone-9 3-methyltransferase [EC:2.1.1.222 2.1.1.64] (E100081114\_L01\_225\_1.fq.... queE; 7-carboxy-7-deazaguanine synthase [EC:4.3.99.3] (E100081114\_L01\_225\_1.fq.gz\_ctg55036\_19) queD, ptpS, PTS; 6-pyruvoyltetrahydropterin/6-carboxytetrahydropterin synthase [EC:4.2.3.12 4.1.2.50] (E100081114\_L01\_225\_1.fq.gz\_ctg55036\_ pncB, NAPRT1; nicotinate phosphoribosyltransferase [EC:6.3.4.21] (DQML5200-240511-03B-1\_1.fq.gz\_ctg150601\_172) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081120\_L01\_146\_1.fq.gz\_ctg26193||full\_21) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081120\_L01\_146\_1.fq.gz\_ctg177625\_39) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081114\_L01\_225\_1.fq.gz\_ctg99420||full\_32) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (DQML6500-240426-03B-1\_1.fg.gz\_ctg2439\_55) pncA; nicotinamidase/pyrazinamidase [EC:3.5.1.19 3.5.1.-] (DQML5200-240504-02B-1\_1.fq.gz\_ctg113116||full\_12) nadE; NAD+ synthase [EC:6.3.1.5] (DQML5200-240504-02B-1\_1.fq.gz\_ctg113116||full\_9) NAMPT; nicotinamide phosphoribosyltransferase [EC:2.4.2.12] (DQML5200-240504-02B-1\_1.fq.gz\_ctg113116]|full\_10) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081120\_L01\_149\_1.fq.gz\_ctg26932\_2) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (FP400003218\_L01\_206\_1.fq.gz\_ctg41018\_1) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (DQML5200-240504-02B-1\_1.fq.gz\_ctg18779|provirus\_1\_44021\_51) DNMT3A; DNA (cytosine-5)-methyltransferase 3A [EC:2.1.1.37] (E100081114\_L01\_225\_1.fq.gz\_ctg76385\_6) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081120\_L01\_165\_1.fq.gz\_ctg171283|provirus\_3\_51103\_19) metK; S-adenosylmethionine synthetase [EC:2.5.1.6] (DQML3800-240416-01B-1\_1.fq.gz\_ctg253676|provirus\_7494\_48782\_32) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081120\_L01\_164\_1.fq.gz\_ctg51619\_10) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081114\_L01\_209\_1.fq.gz\_ctg169728\_35) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (DQML5200-240504-02B-1\_1.fq.gz\_ctg181434\_43) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (DQML5200-240504-01B-1\_1.fq.gz\_ctg209562|provirus\_2\_24741\_23) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (DQML3800-240416-01B-1\_1.fq.gz\_ctg253676|provirus\_7494\_48782\_42) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (DQML3800-240416-01B-1\_1.fq.gz\_ctg253676|provirus\_7494\_48782\_19) cysH; phosphoadenosine phosphosulfate reductase [EC:1.8.4.8 1.8.4.10] (E100081120\_L01\_170\_1.fq.gz\_ctg149243||full\_94) cobS; cobaltochelatase CobS [EC:6.6.1.2] (E100081120\_L01\_150\_1.fq.gz\_ctg164256\_20) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081120\_L01\_152\_1.fq.gz\_ctg14552||full\_18) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (DQML6500-240426-09B-1\_1.fg.gz\_ctg114991||full\_72) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081120\_L01\_242\_1.fq.gz\_ctg102524|provirus\_3\_33840\_9) pncA; nicotinamidase/pyrazinamidase [EC:3.5.1.19 3.5.1.-] (E100081114 L01 221 1.fg.qz ctq103044 130) nadE; NAD+ synthase [EC:6.3.1.5] (E100081114\_L01\_221\_1.fq.gz\_ctg103044\_127) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081120\_L01\_226\_1.fq.gz\_ctg20633|provirus\_10353\_62966\_47) cysH; phosphoadenosine phosphosulfate reductase [EC:1.8.4.8 1.8.4.10] (DQML6500-240426-03B-1\_1.fq.gz\_ctg107748\_34) queF; 7-cyano-7-deazaguanine reductase [EC:1.7.1.13] (DQML5200-240522-03B-1\_1.fq.gz\_ctg151736\_61) queE; 7-carboxy-7-deazaquanine synthase [EC:4.3.99.3] (DQML5200-240522-03B-1\_1.fq.gz\_ctg151736\_68) $queD, ptpS, PTS; 6-pyruvoyltetrahydropterin/6-carboxytetrahydropterin synthase \\ [EC:4.2.3.12 \pm 1.2.50] \\ (DQML5200-240522-03B-1\_1.fq.gz\_ctg151...) \\ (DQML5200-24052-03B-1\_1.fq.gz\_ctg151...) \\ (DQML5200-24052-03B-1\_1.fq.g$ DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (E100081120\_L01\_227\_1.fq.gz\_ctg104796\_12) mec; [CysO sulfur-carrier protein]-S-L-cysteine hydrolase [EC:3.13.1.6] (FP400003218\_L01\_139\_1.fq.gz\_ctg82935\_4) DNMT3A; DNA (cytosine-5)-methyltransferase 3A [EC:2.1.1.37] (E100081120\_L01\_200\_.1fg.gz\_ctg154700|provirus\_81563\_231211\_167) purA, ADSS; adenylosuccinate synthase [EC:6.3.4.4] (E100081120\_L01\_181\_1.fq.gz\_ctg82244\_58) purA, ADSS; adenylosuccinate synthase [EC:6.3.4.4] (DQML5800-240423-11B-1\_1.fq.gz\_ctg111993|provirus\_114809\_244618\_98) pncA; nicotinamidase/pyrazinamidase [EC:3.5.1.19 3.5.1.-] (DQML5200-240511-03B-1\_1.fq.gz\_ctg150601\_170) nadE; NAD+ synthase [EC:6.3.1.5] (DQML5800-240423-11B-1\_1.fq.gz\_ctg111993|provirus\_114809\_244618\_106) nadE; NAD+ synthase [EC:6.3.1.5] (DQML5200-240511-03B-1 1.fg.gz ctg150601 175) nadD; nicotinate-nucleotide adenylyltransferase [EC:2.7.7.18] (DQML5200-240511-03B-1\_1.fq.gz\_ctg150601\_177) iscS, NFS1; cysteine desulfurase [EC:2.8.1.7] (E100081114\_L01\_225\_1.fq.gz\_ctg76385\_27) iscS, NFS1; cysteine desulfurase [EC:2.8.1.7] (DQML5800-240423-11B-1\_1.fq.gz\_ctg111993|provirus\_114809\_244618\_41) folD; methylenetetrahydrofolate dehydrogenase (NADP+) / methenyltetrahydrofolate cyclohydrolase [EC:1.5.1.5 3.5.4.9] (DQML5800-240423-11B-1... E3.6.1.22, NUDT12, nudC; NAD+ diphosphatase [EC:3.6.1.22] (E100081114\_L01\_215\_1.fq.gz\_ctg63181\_3) DNMT1, dcm; DNA (cytosine-5)-methyltransferase 1 [EC:2.1.1.37] (DQML5800-240423-11B-1\_1.fq.gz\_ctg67163|provirus\_17340\_72670\_36)

## Timepoint

Prevalence

1.00

0.75

0.50

0.25

0.00