

MAG

Ega\_18-Q3-R5-49\_BATAC.239\_A  
p:Proteobacteria,o:midas\_o\_26,g:midas\_g\_523

Ega\_18-Q3-R5-49\_BAT3C.230  
p:Bacteroidetes,o:Flavobacteriales,g:midas\_g\_225

Ega\_18-Q3-R5-49\_BAT3C.215  
p:Bacteroidetes,o:Chitinophagales,g:midas\_g\_65

Damh\_18-Q3-R51-60\_MAXAC.126\_sub  
p:Bacteroidetes,o:Sphingobacteriales,g:midas\_g\_3846

Damh\_18-Q3-R51-60\_MAXAC.107\_B  
p:Bacteroidetes,o:Sphingobacteriales,g:midas\_g\_1061

Damh\_18-Q3-R51-60\_MAXAC.107\_A  
p:Bacteroidetes,o:Sphingobacteriales,g:midas\_g\_1061

Damh\_18-Q3-R51-60\_BATAC.249  
p:Bacteroidetes,o:Chitinophagales,g:midas\_g\_108

Bjer\_18-Q3-R1-45\_MAXAC.114  
p:Spirochaetes,o:Leptospirales,g:Leptospira

Bjer\_18-Q3-R1-45\_MAXAC.090  
p:Ca\_Fermentibacterota,o:midas\_o\_753,g:midas\_g\_753

Bjer\_18-Q3-R1-45\_MAXAC.014  
p:Proteobacteria,o:Betaproteobacteriales,g:Sulfuritalea

Bjer\_18-Q3-R1-45\_MAXAC.011  
p:Proteobacteria,o:Betaproteobacteriales,g:Sulfuritalea

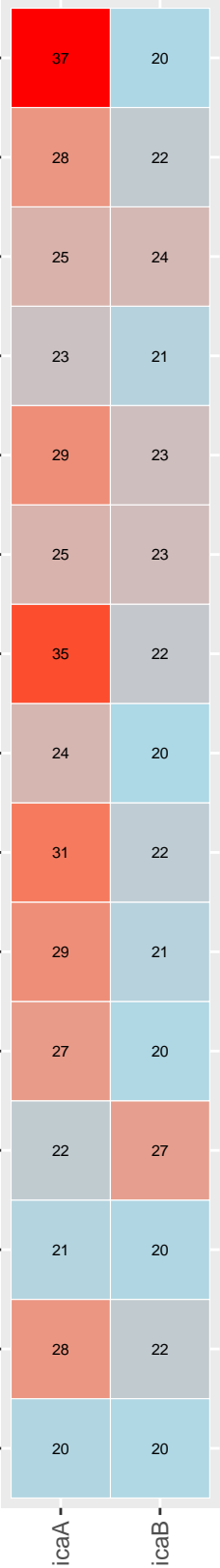
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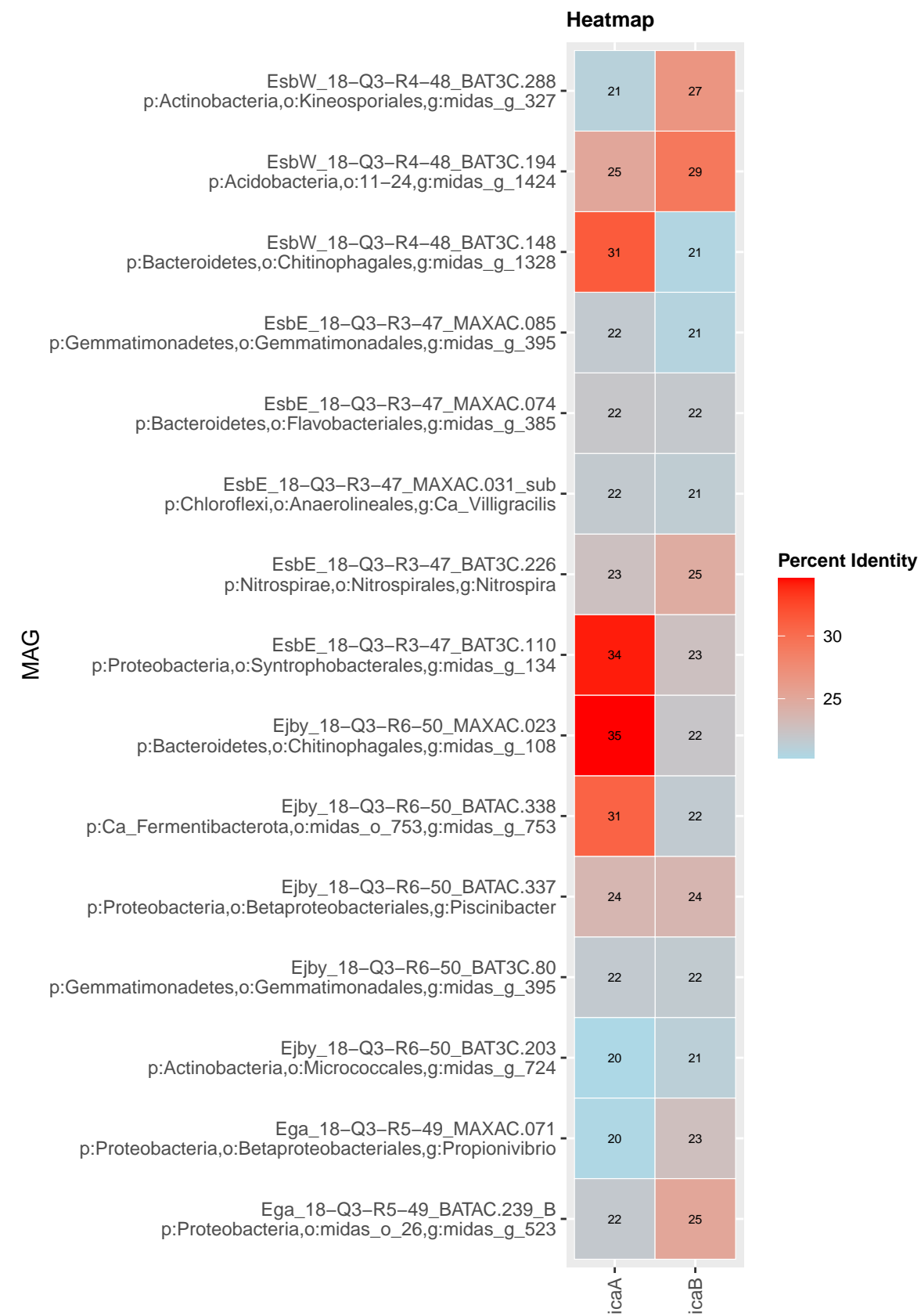
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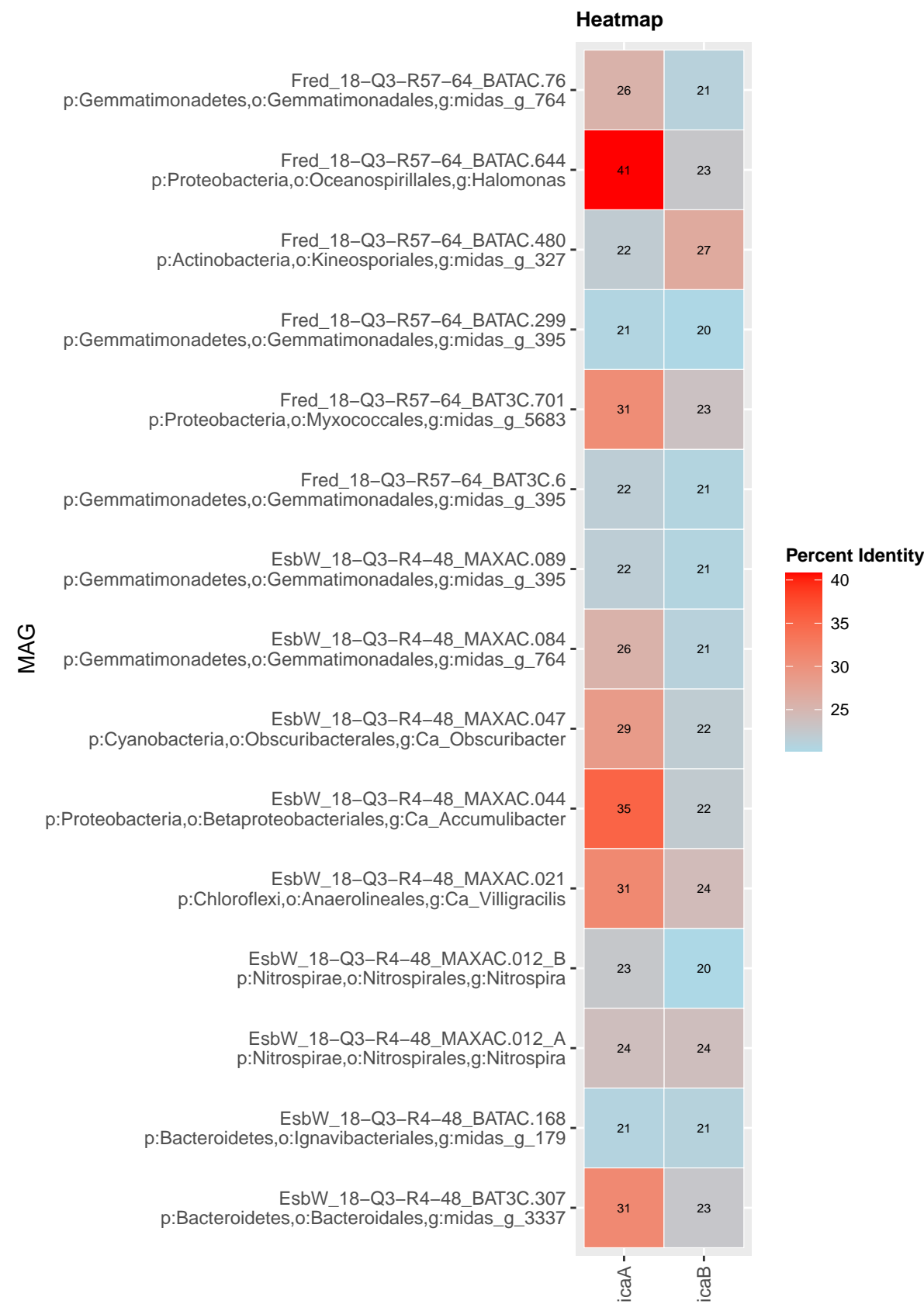
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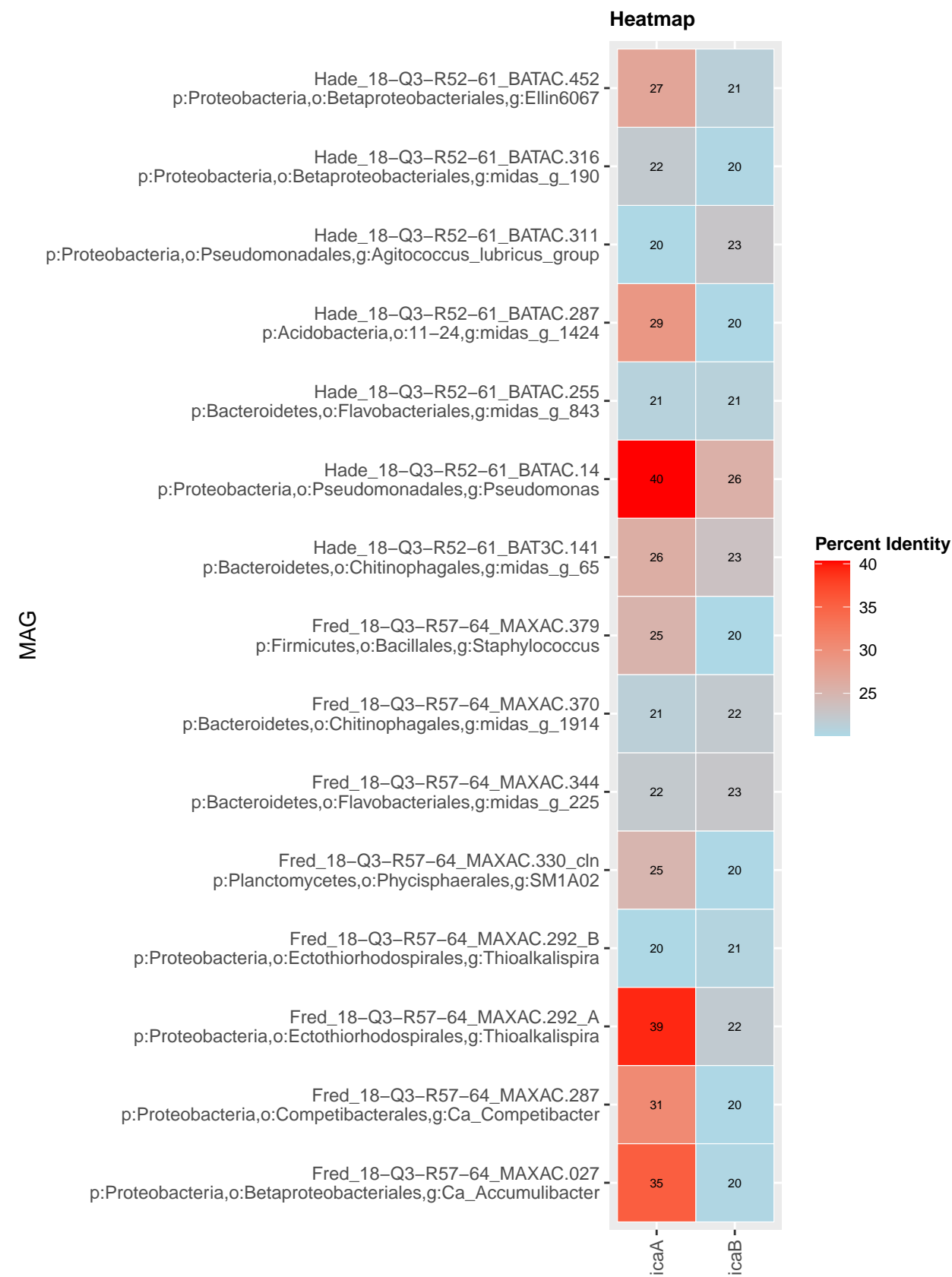
Aved\_18-Q3-R54-62\_MAXAC.297  
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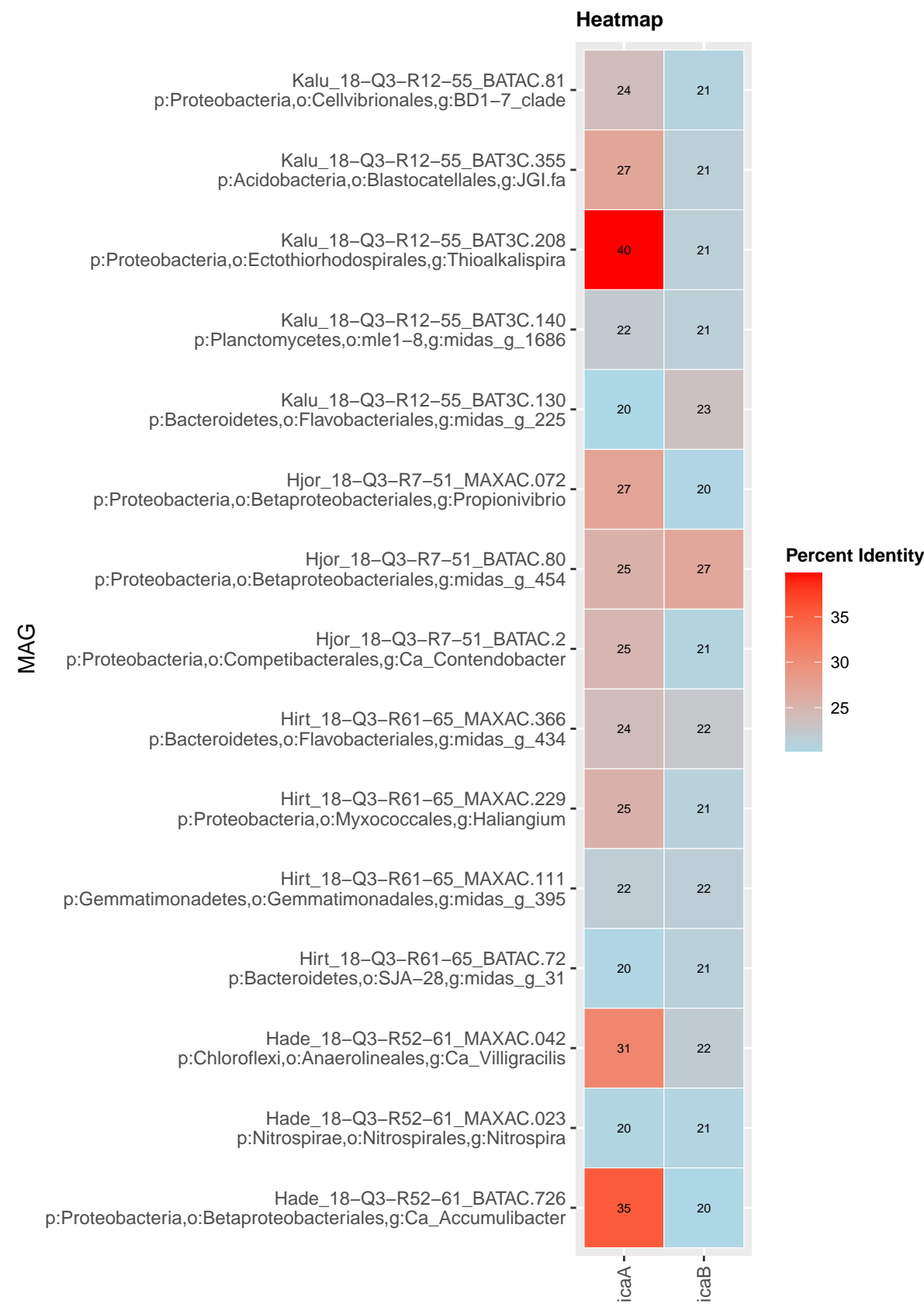
Heatmap

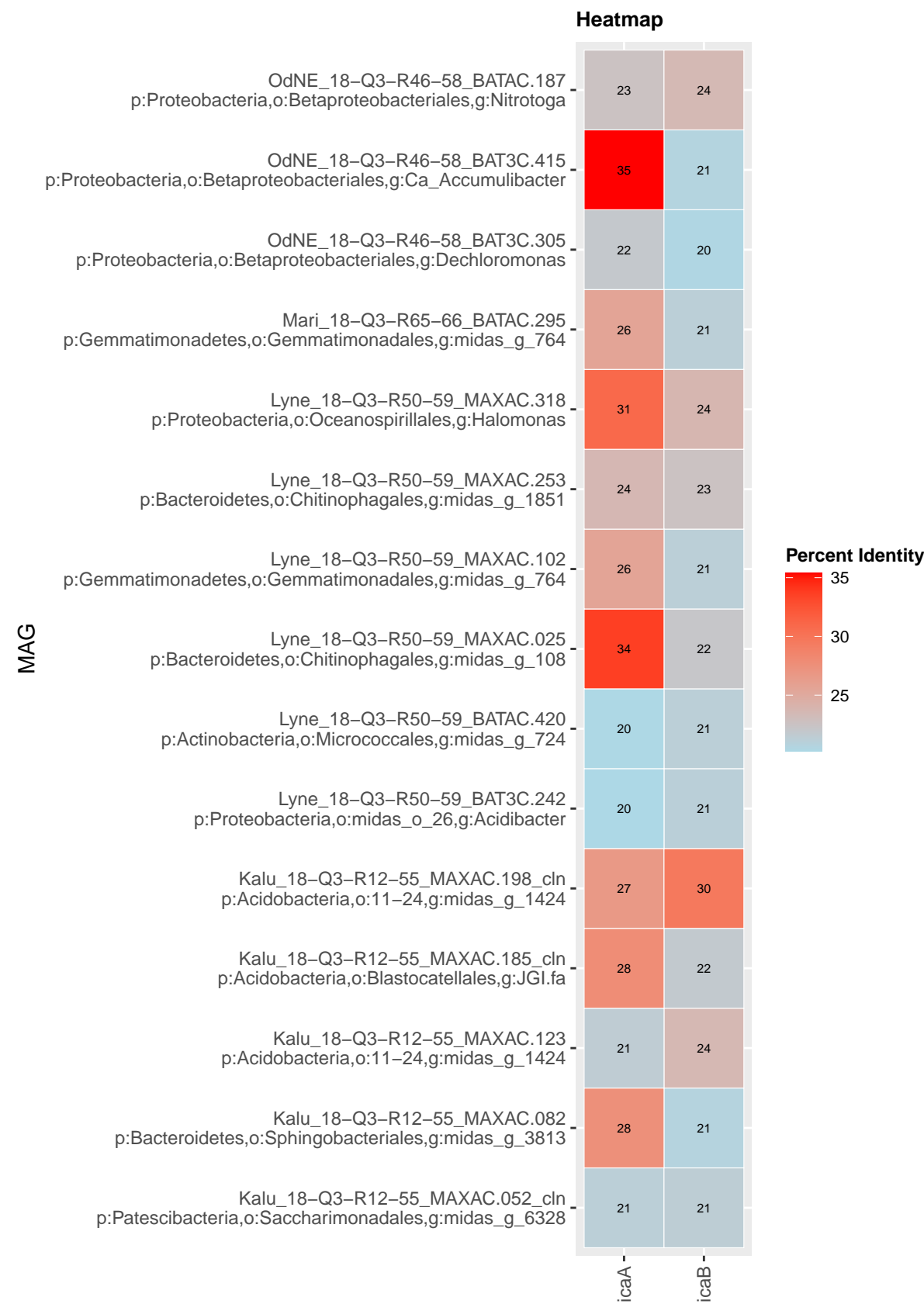


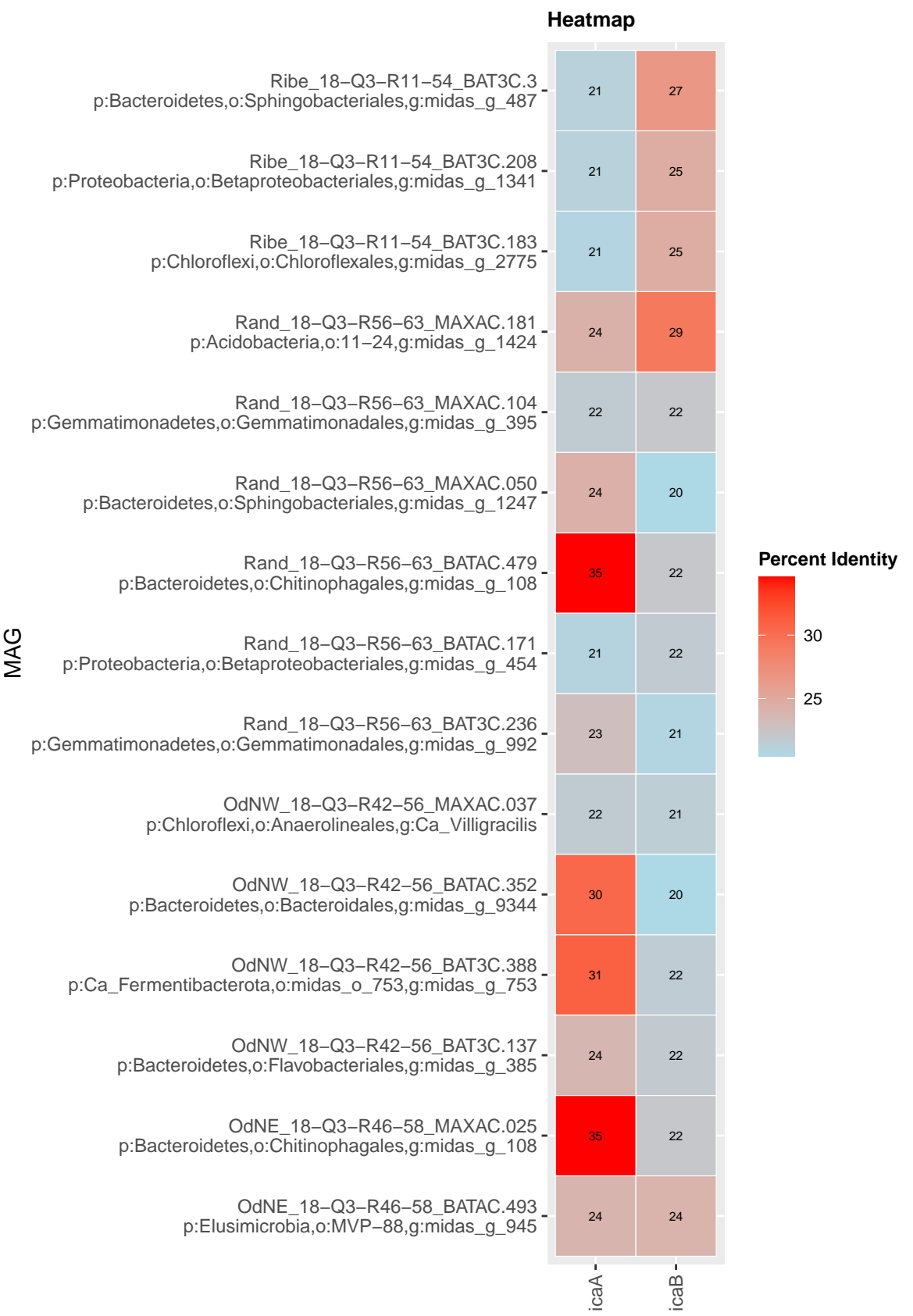






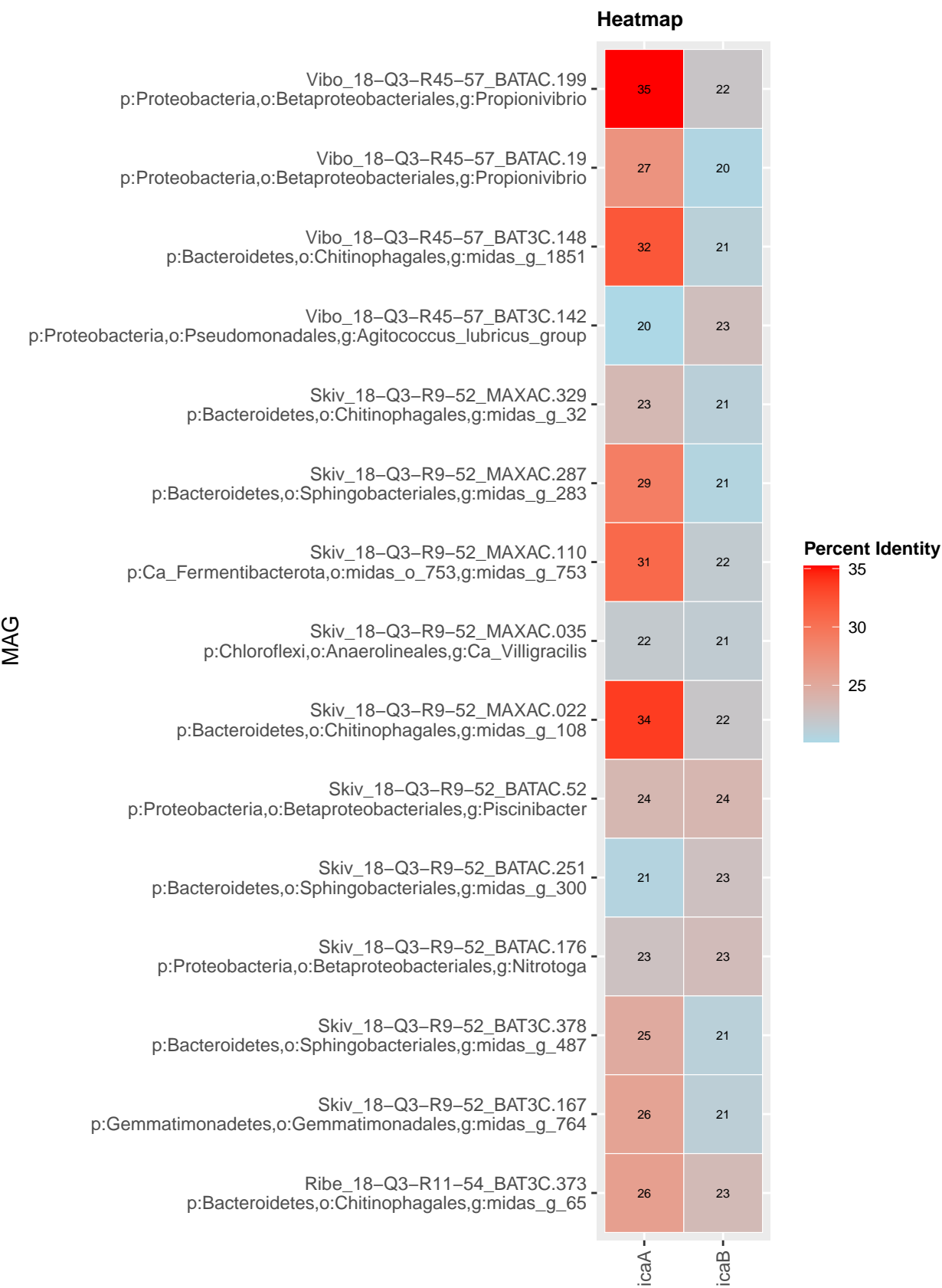




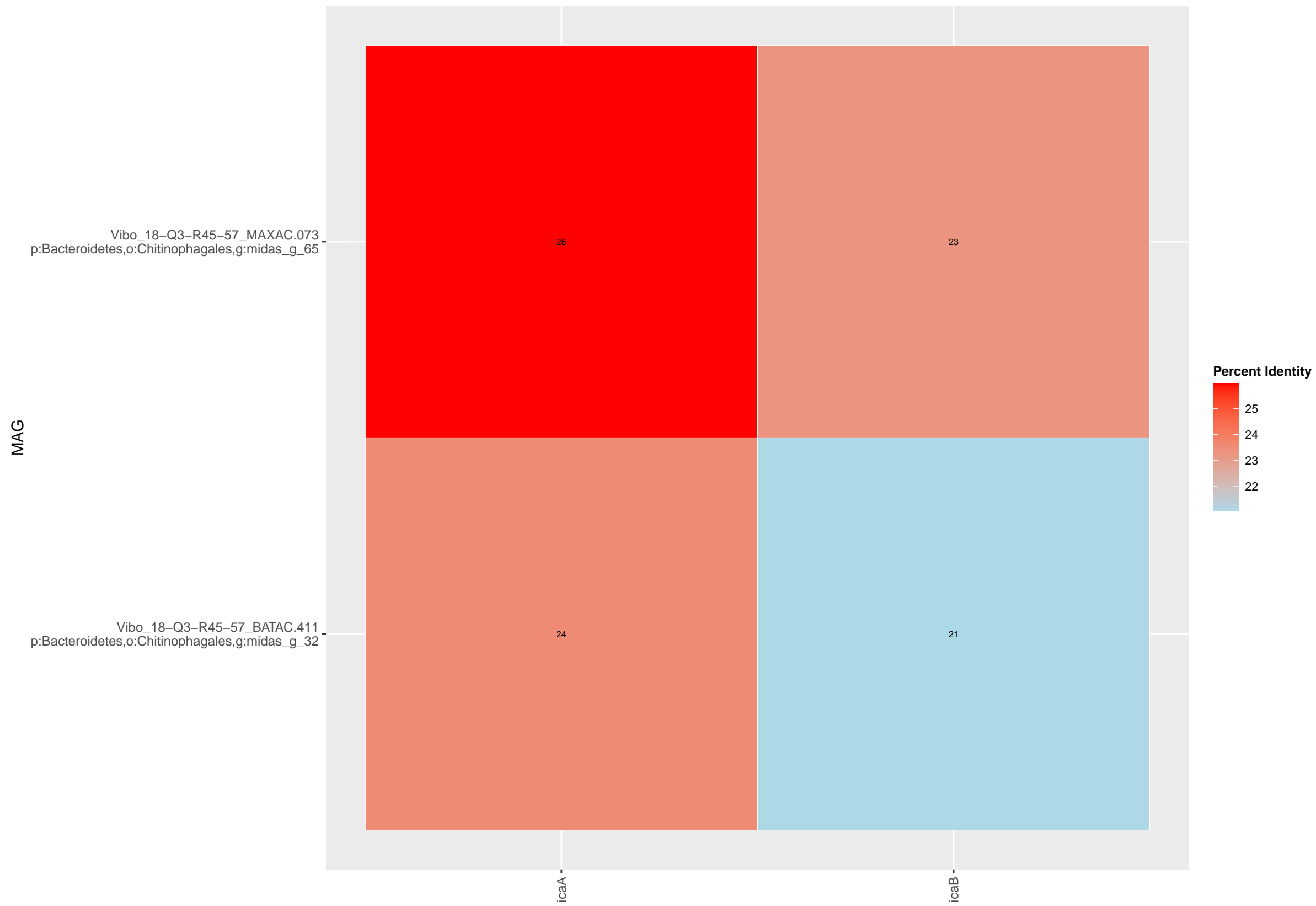




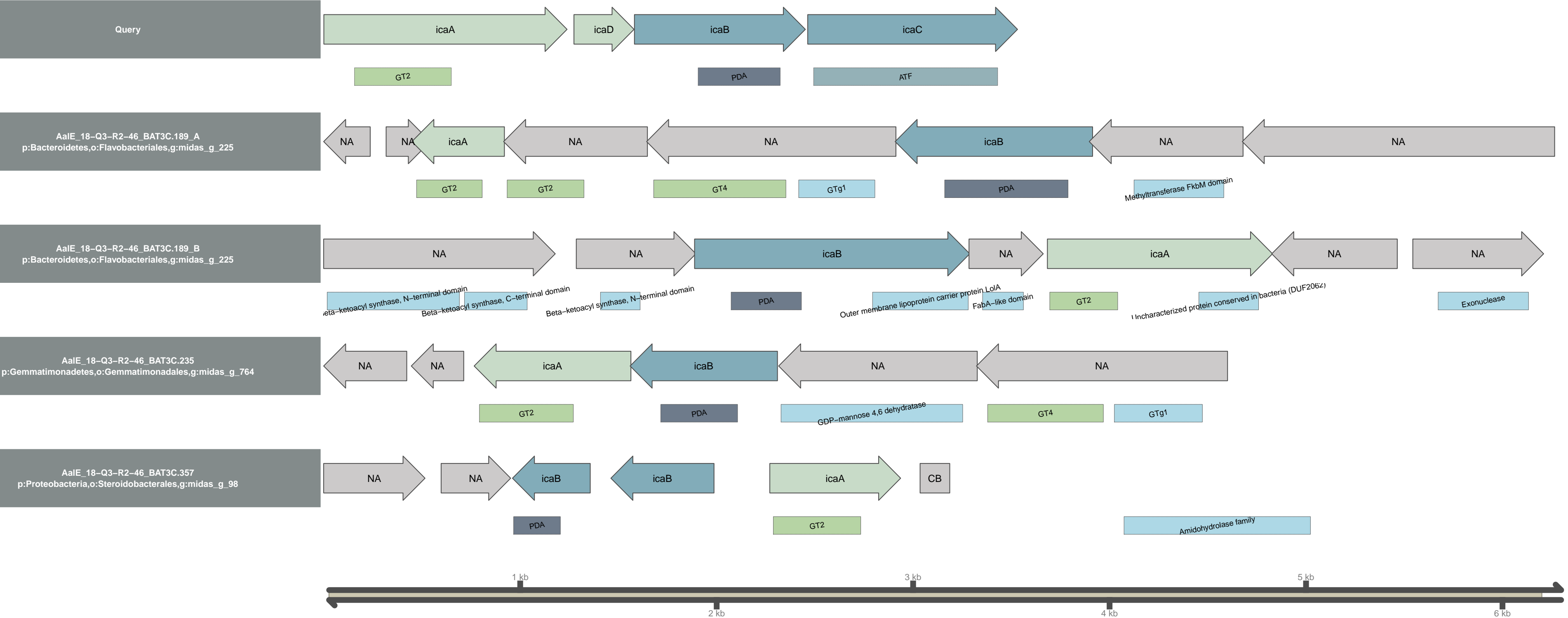
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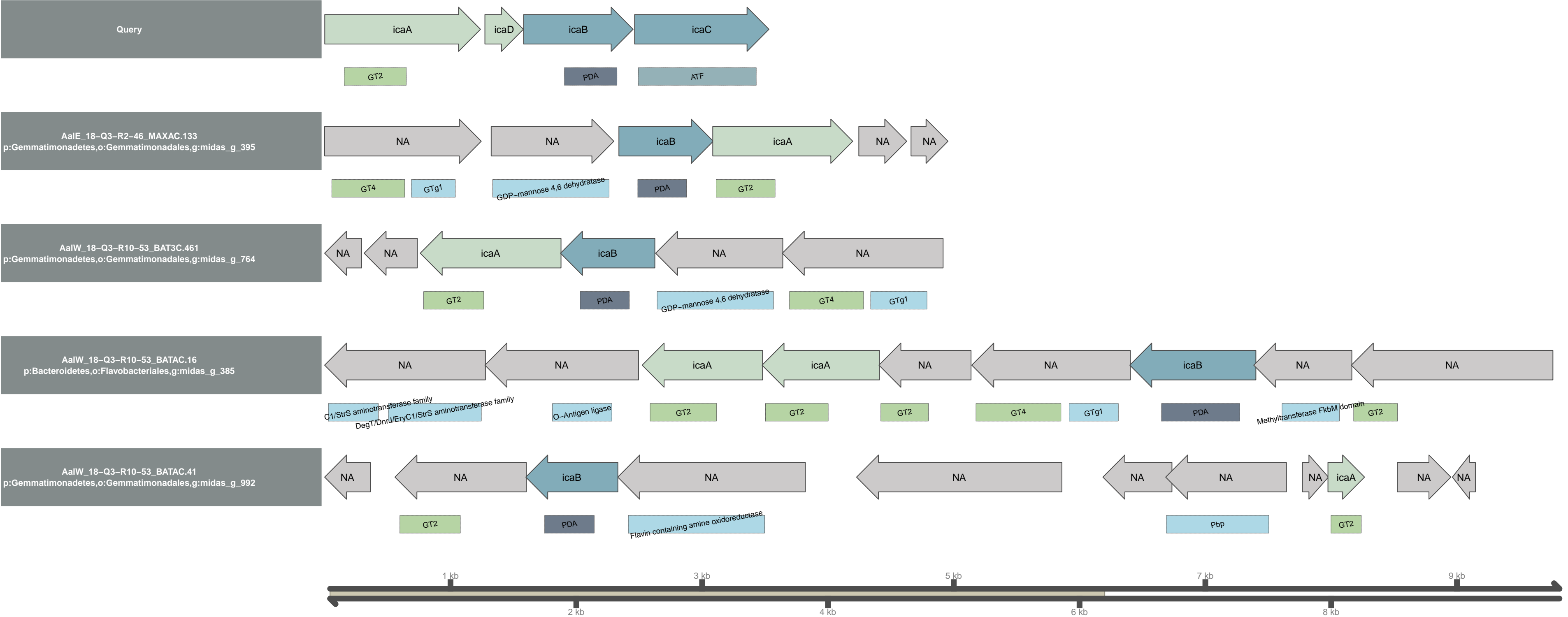
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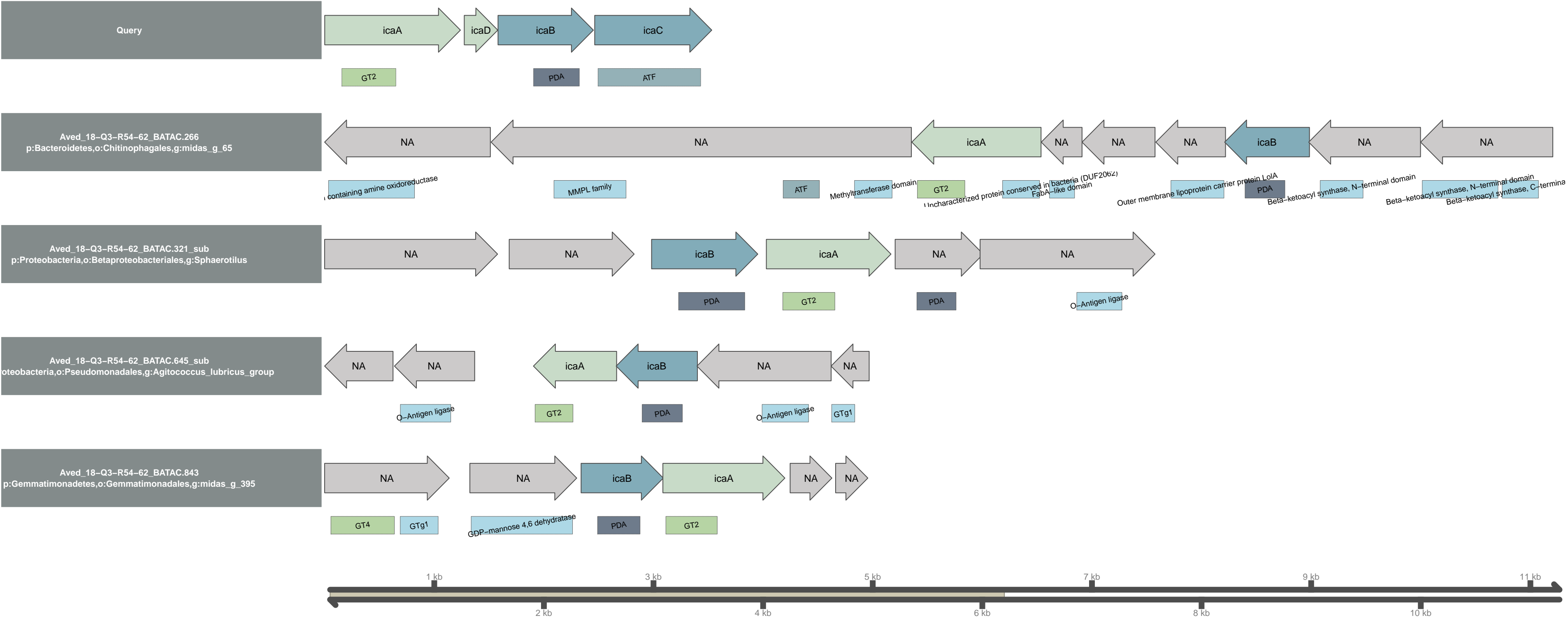
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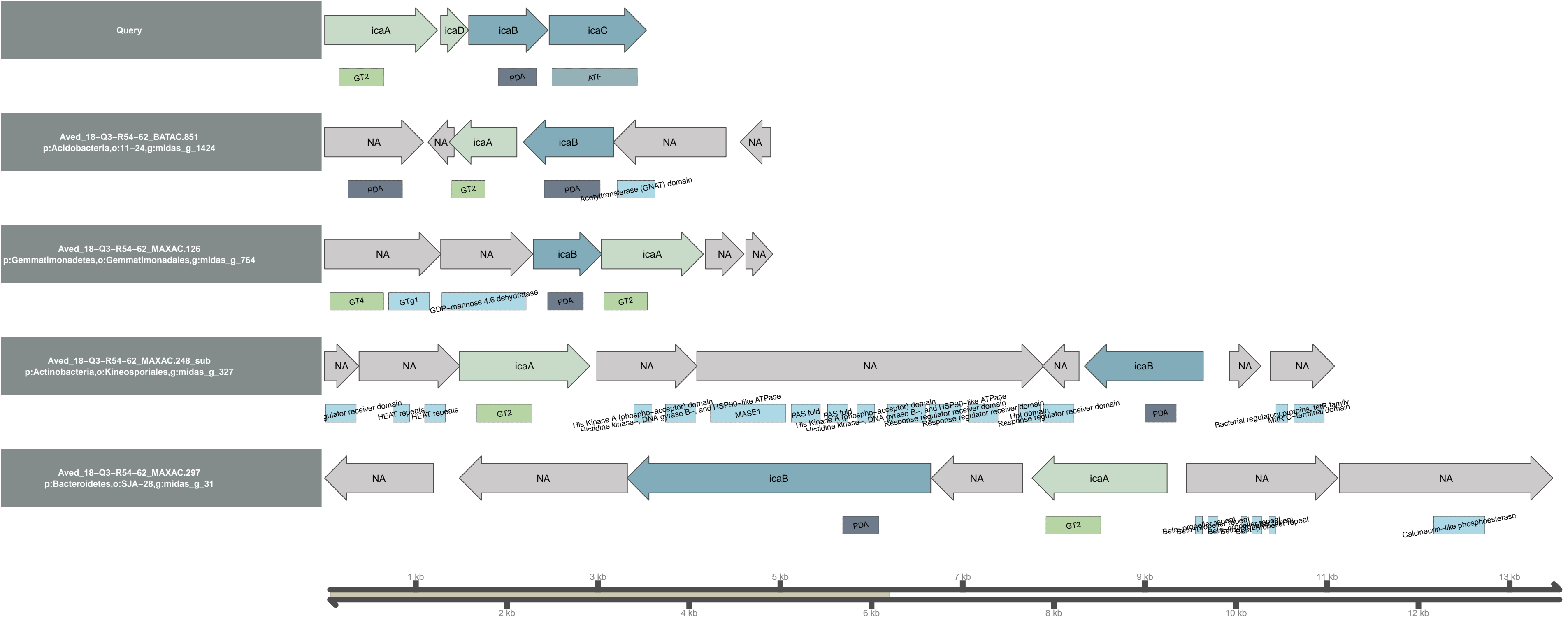
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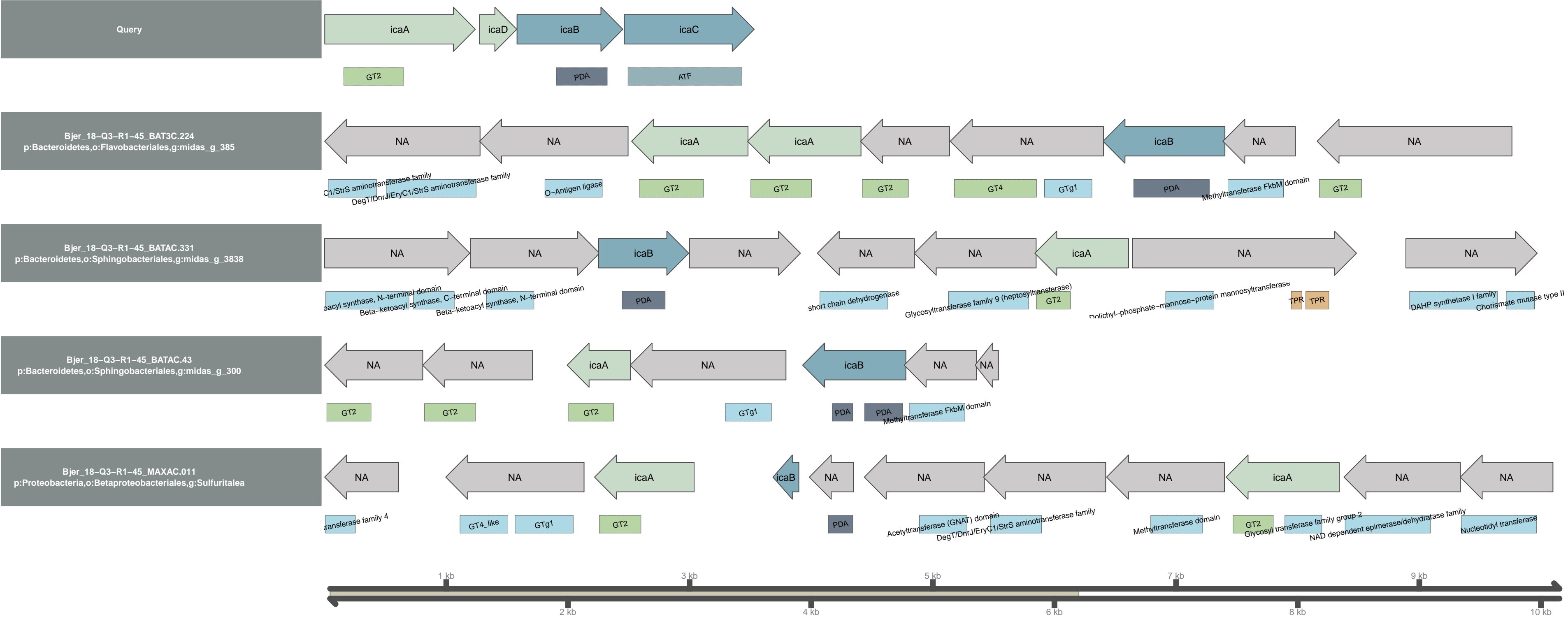
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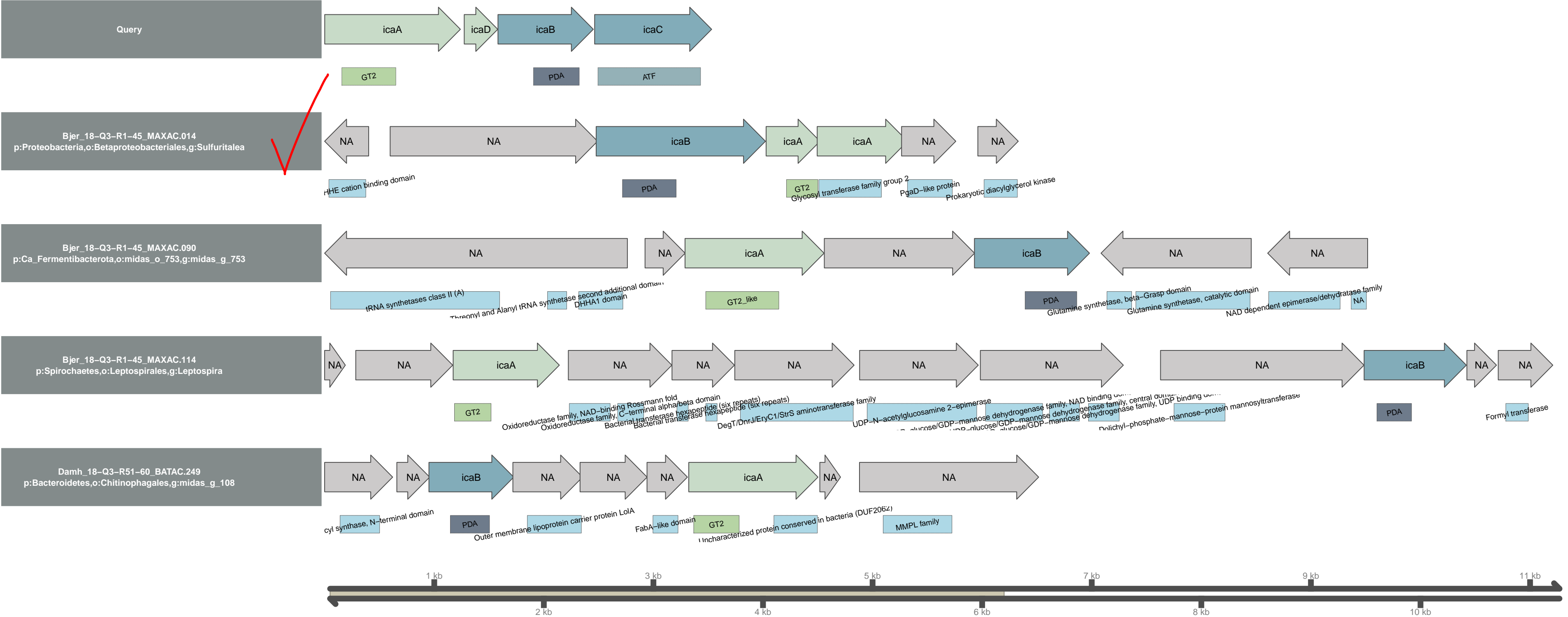
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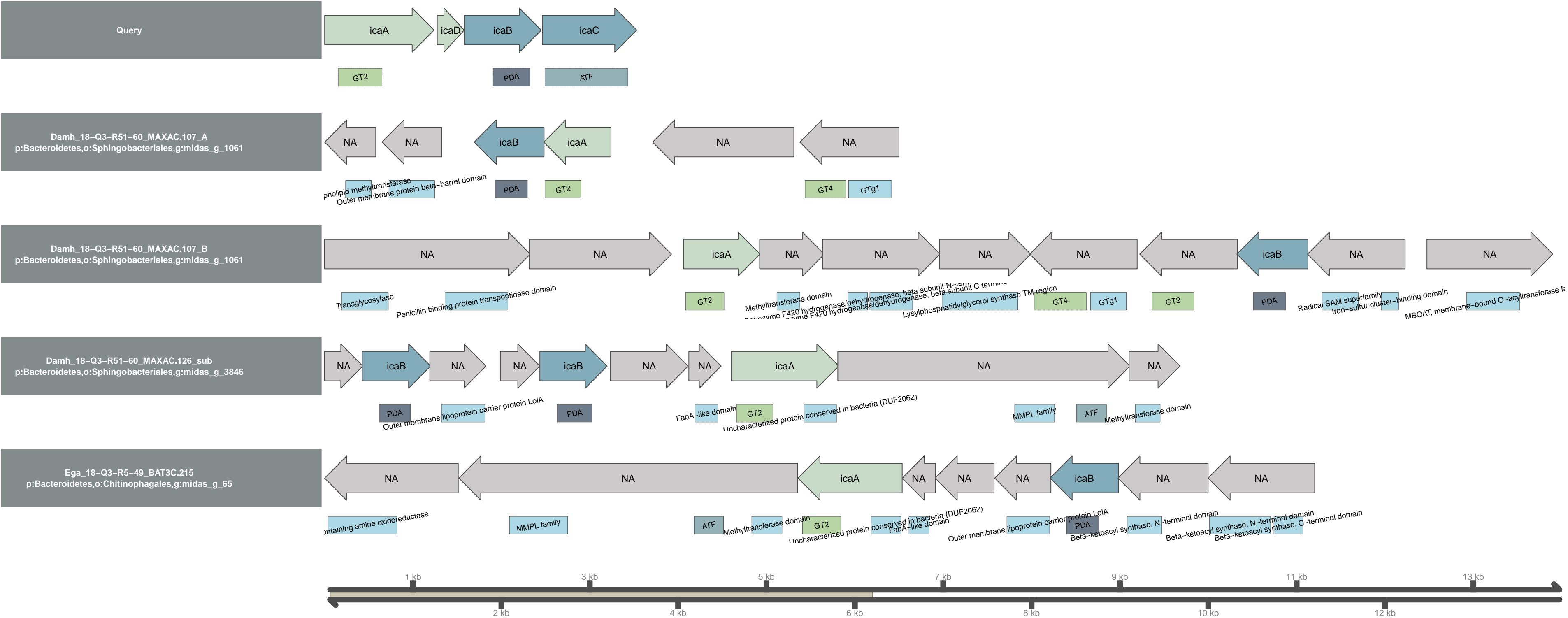


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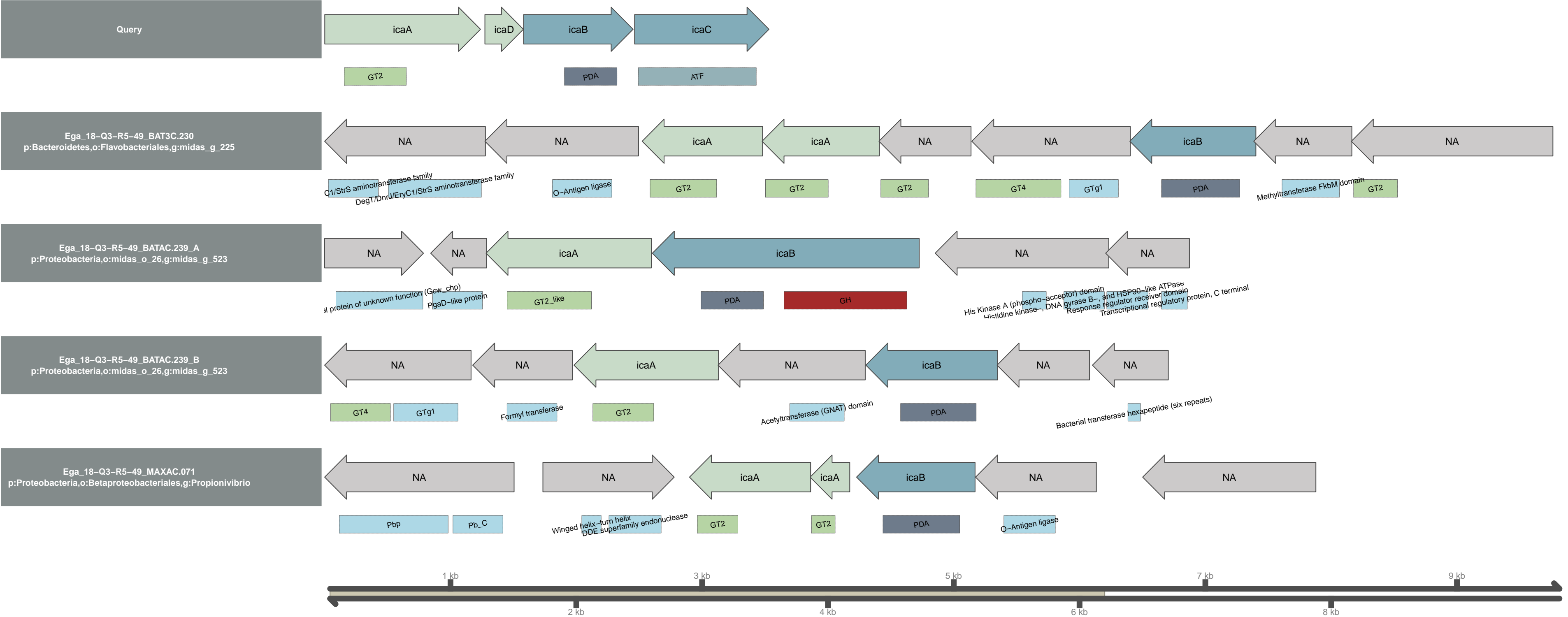




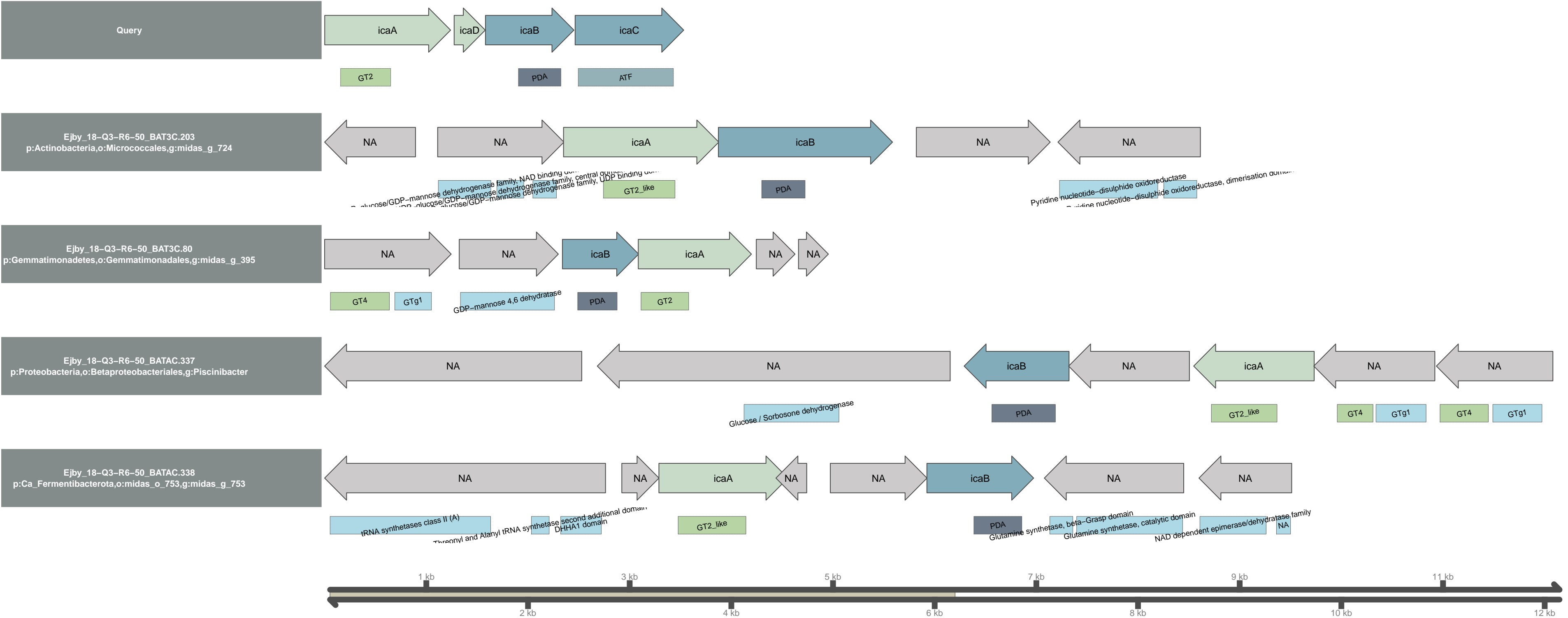
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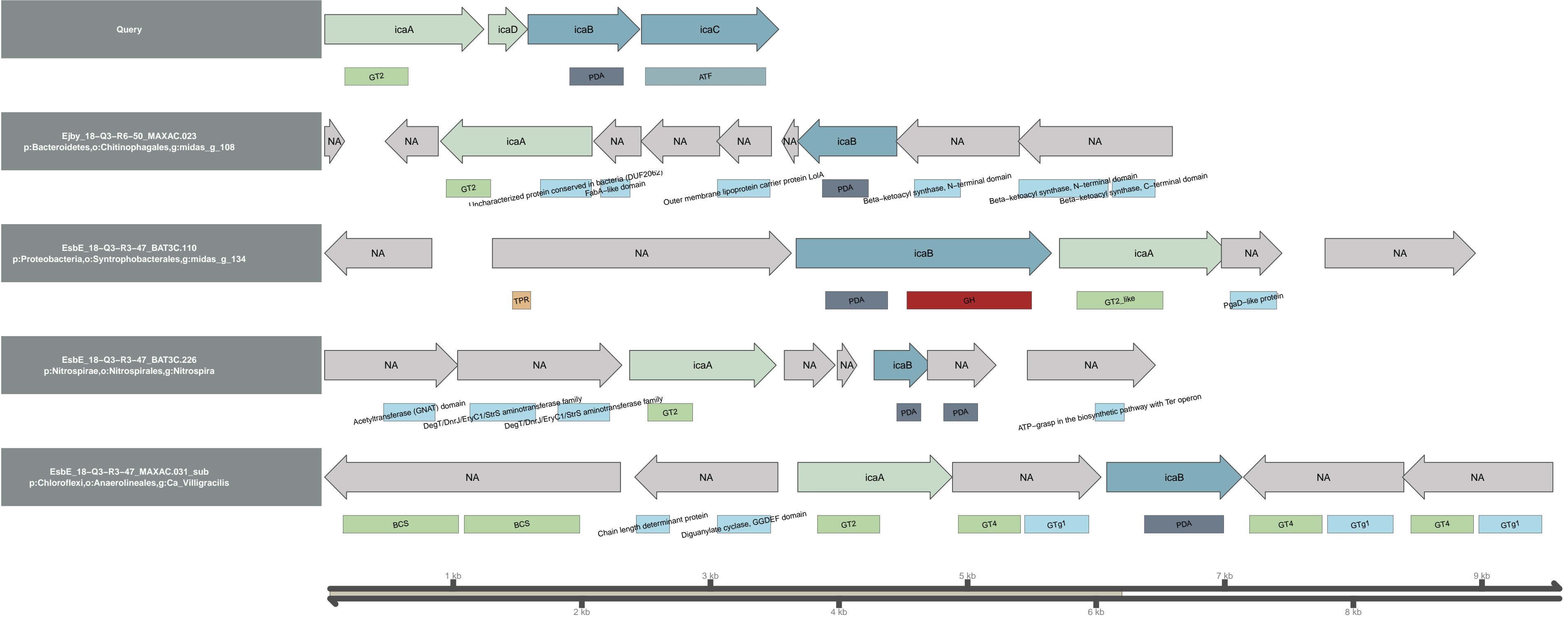
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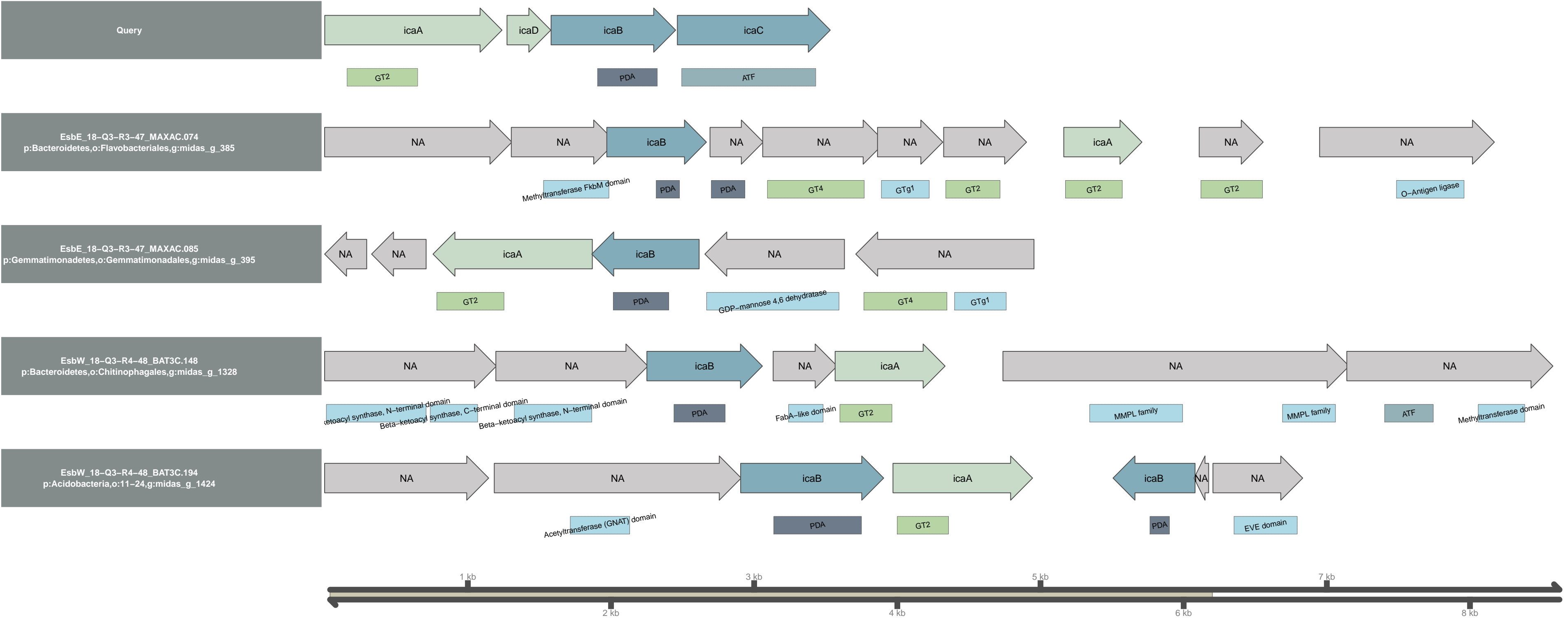
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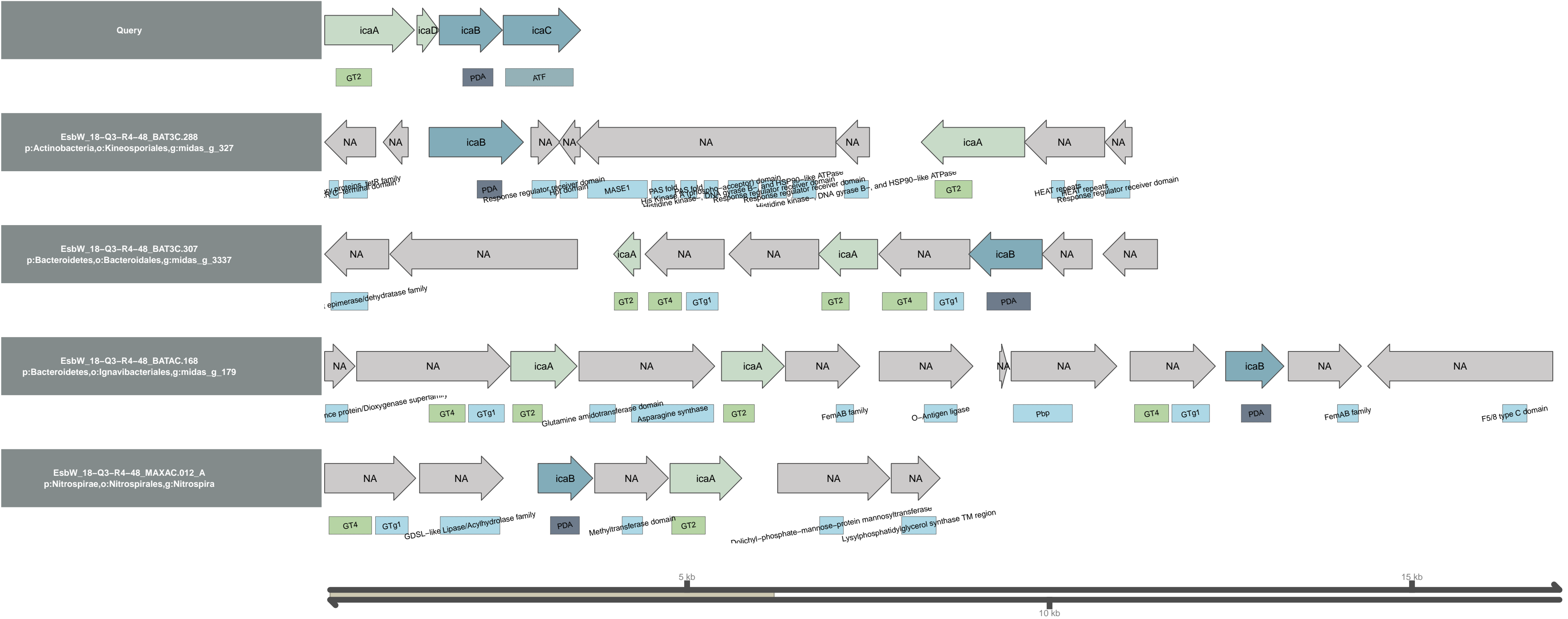
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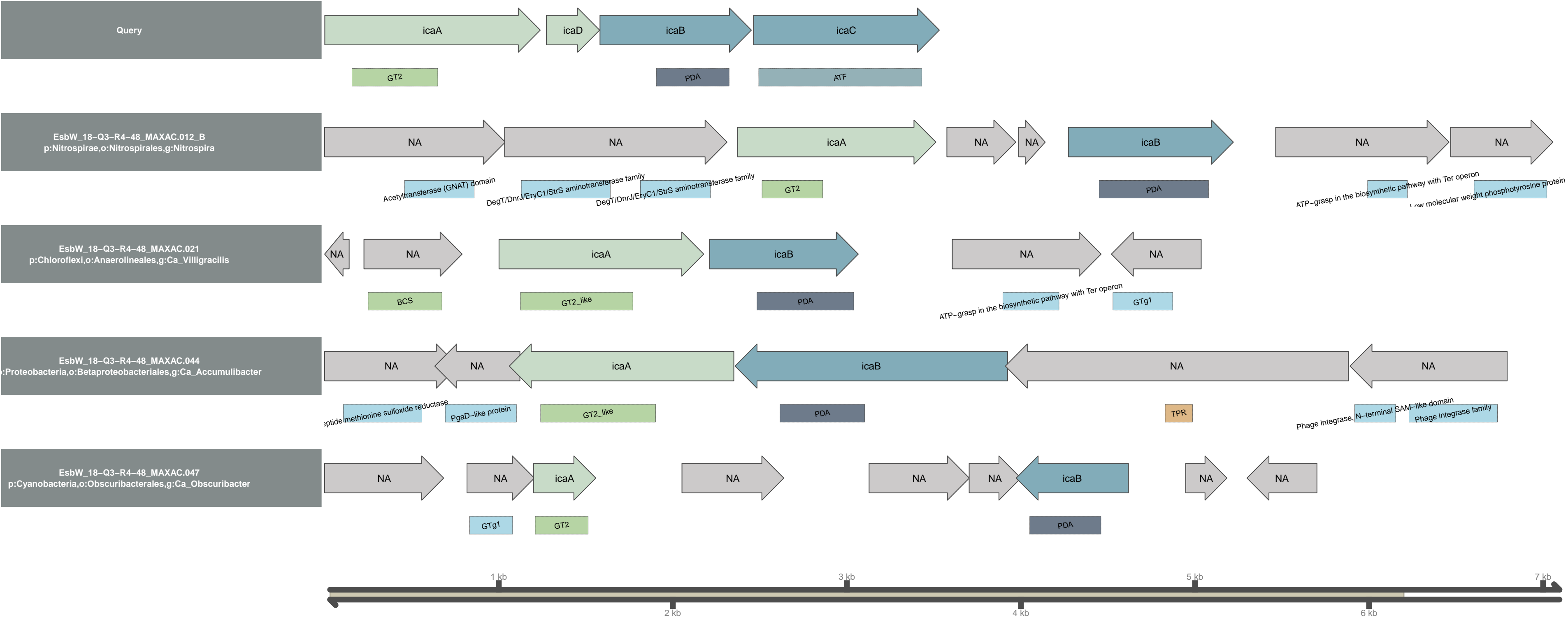
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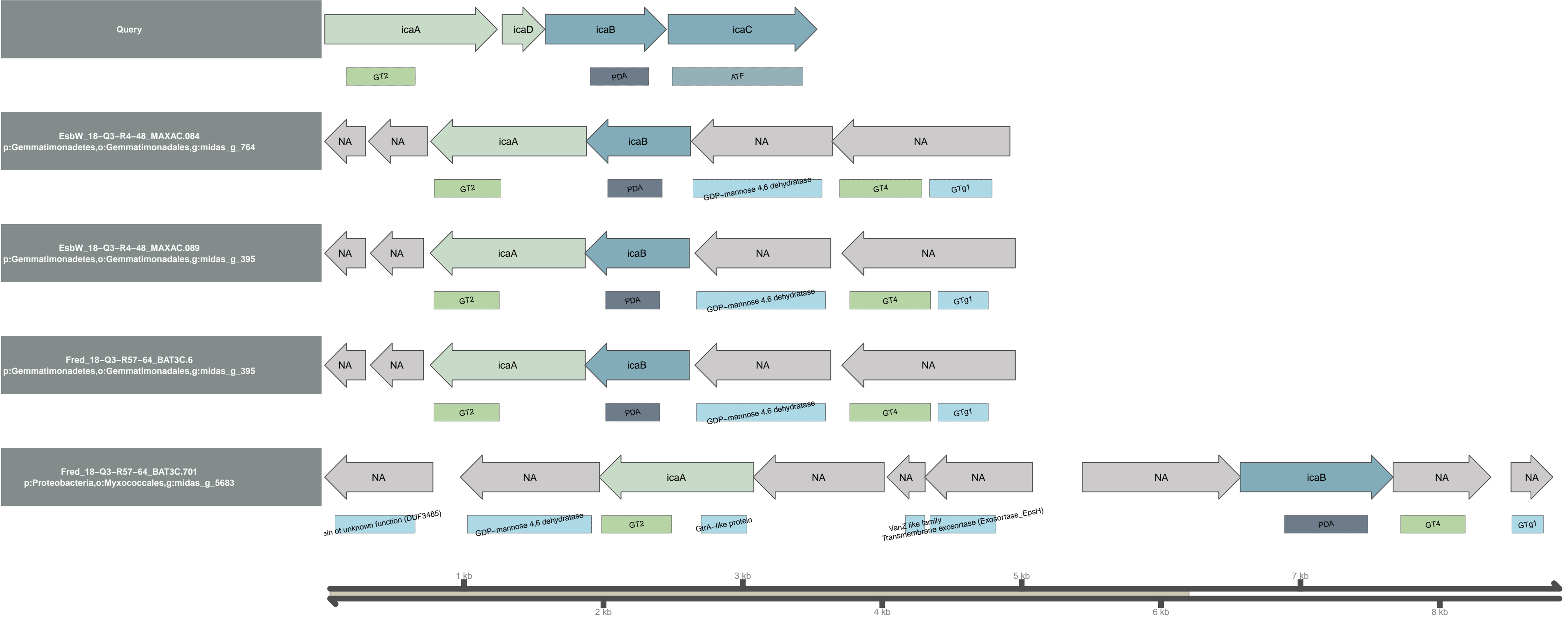
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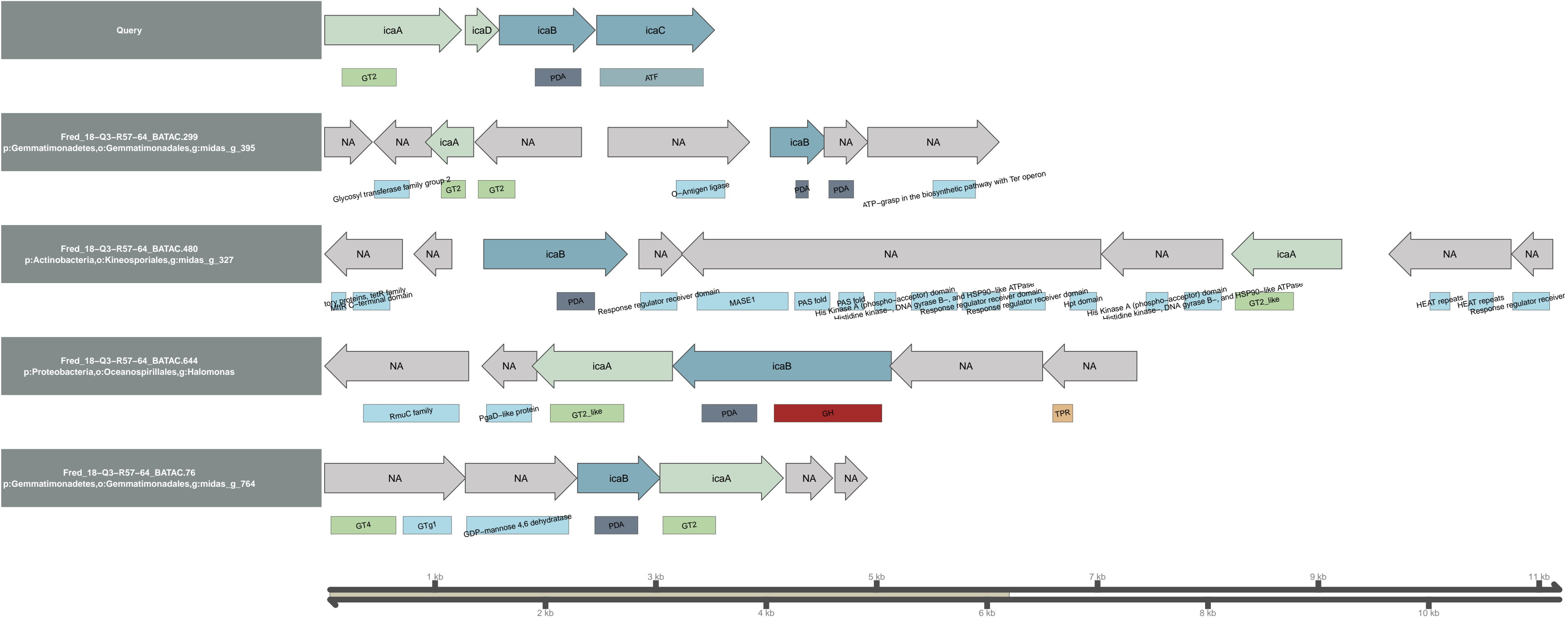


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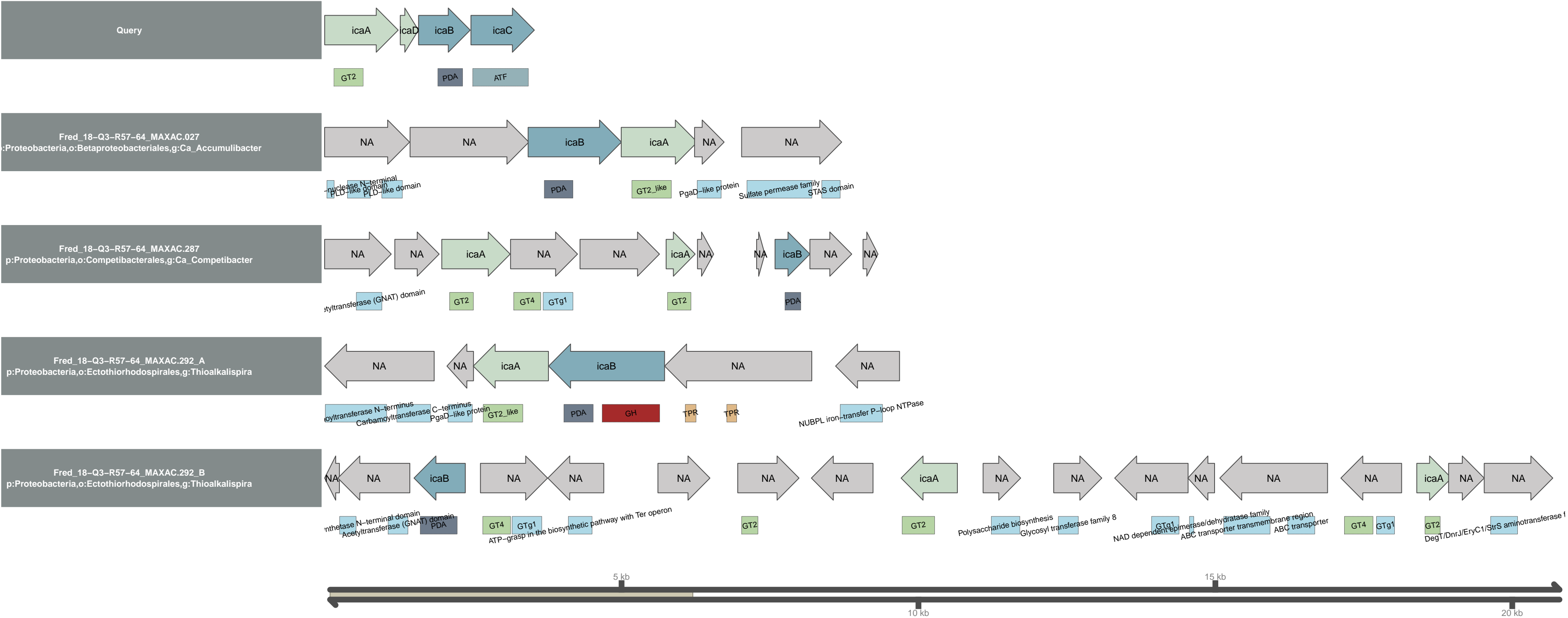




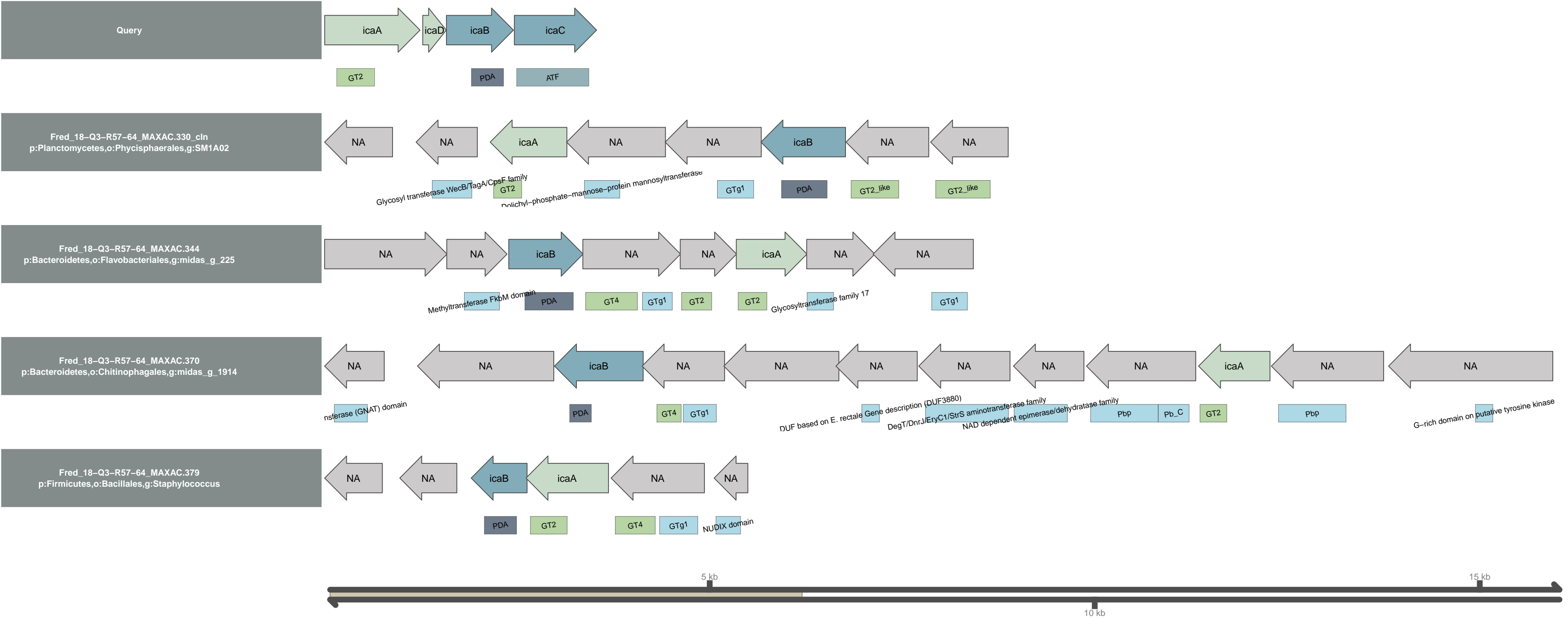
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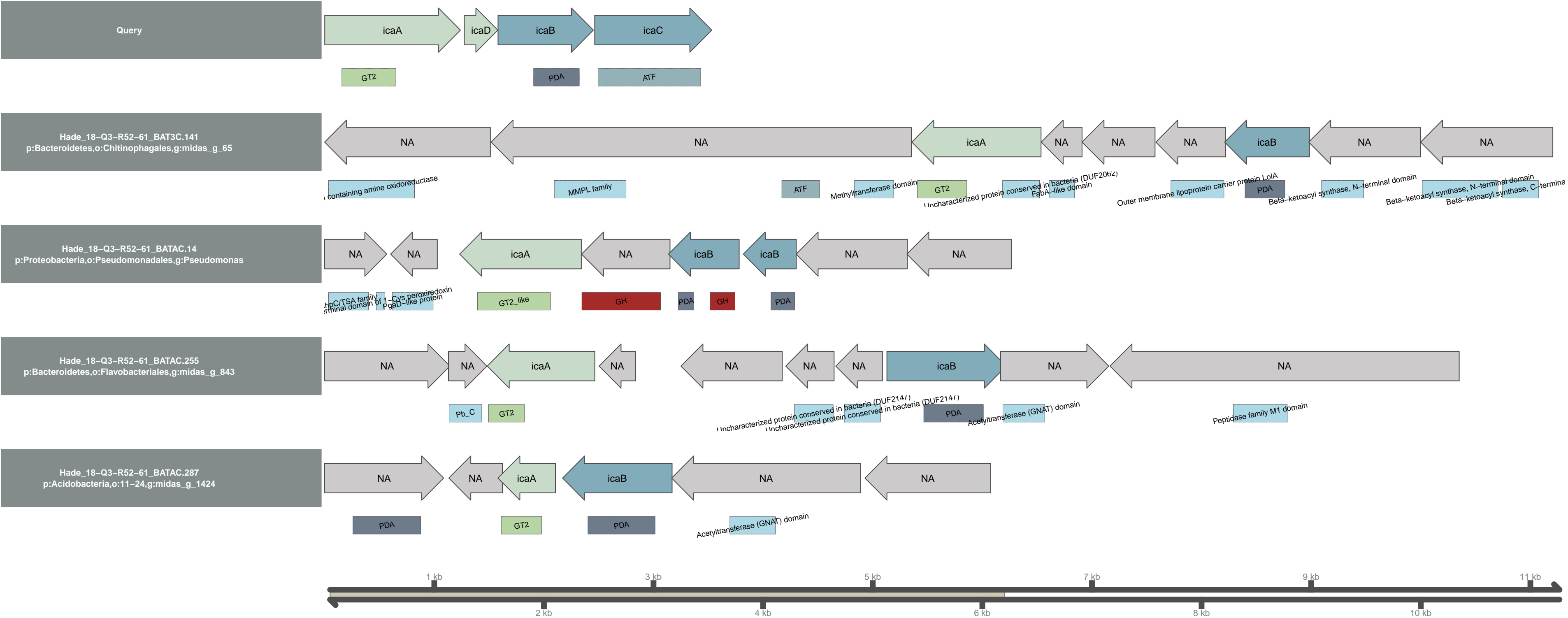
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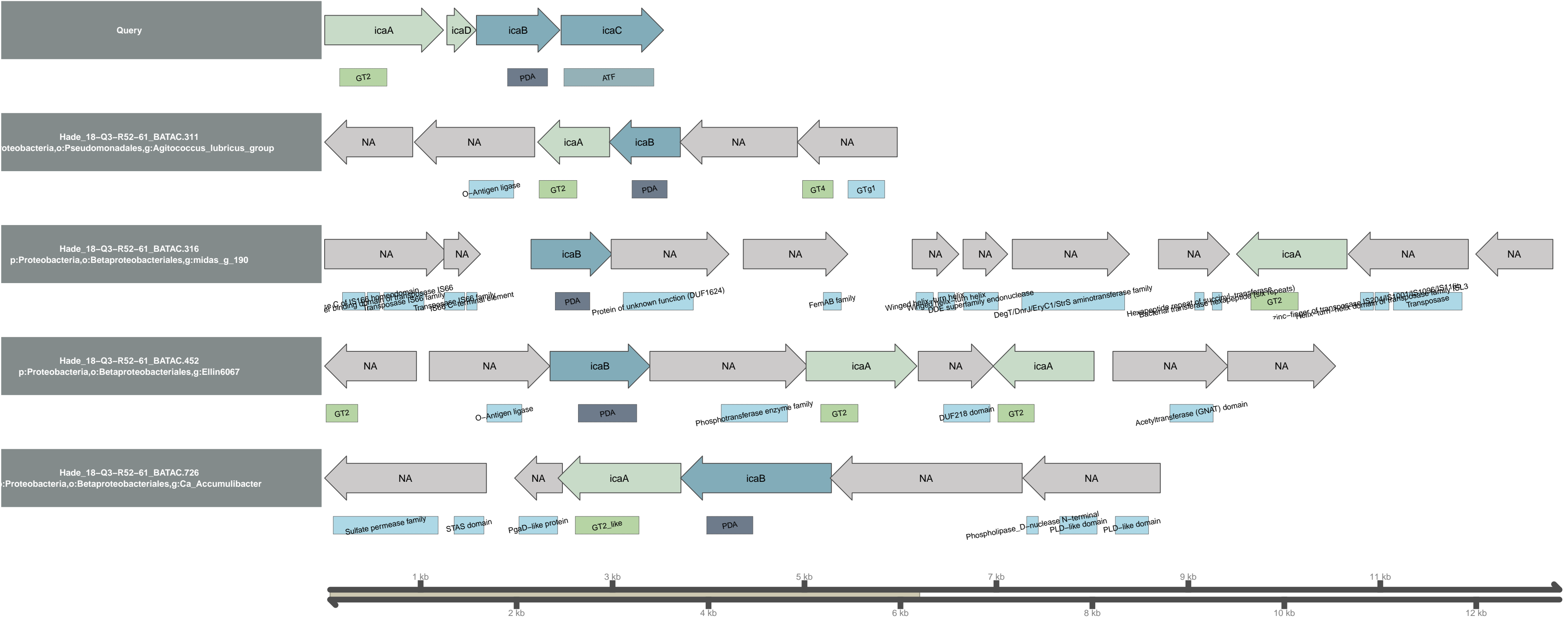
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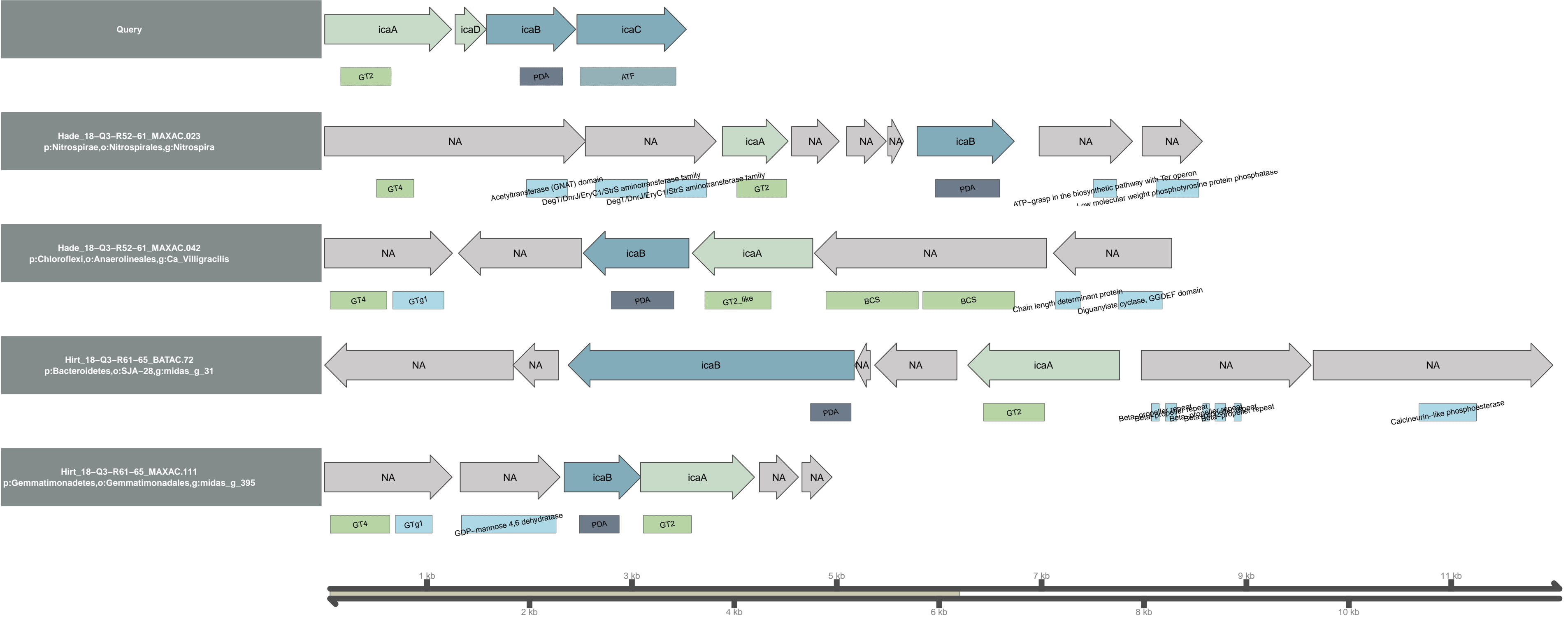
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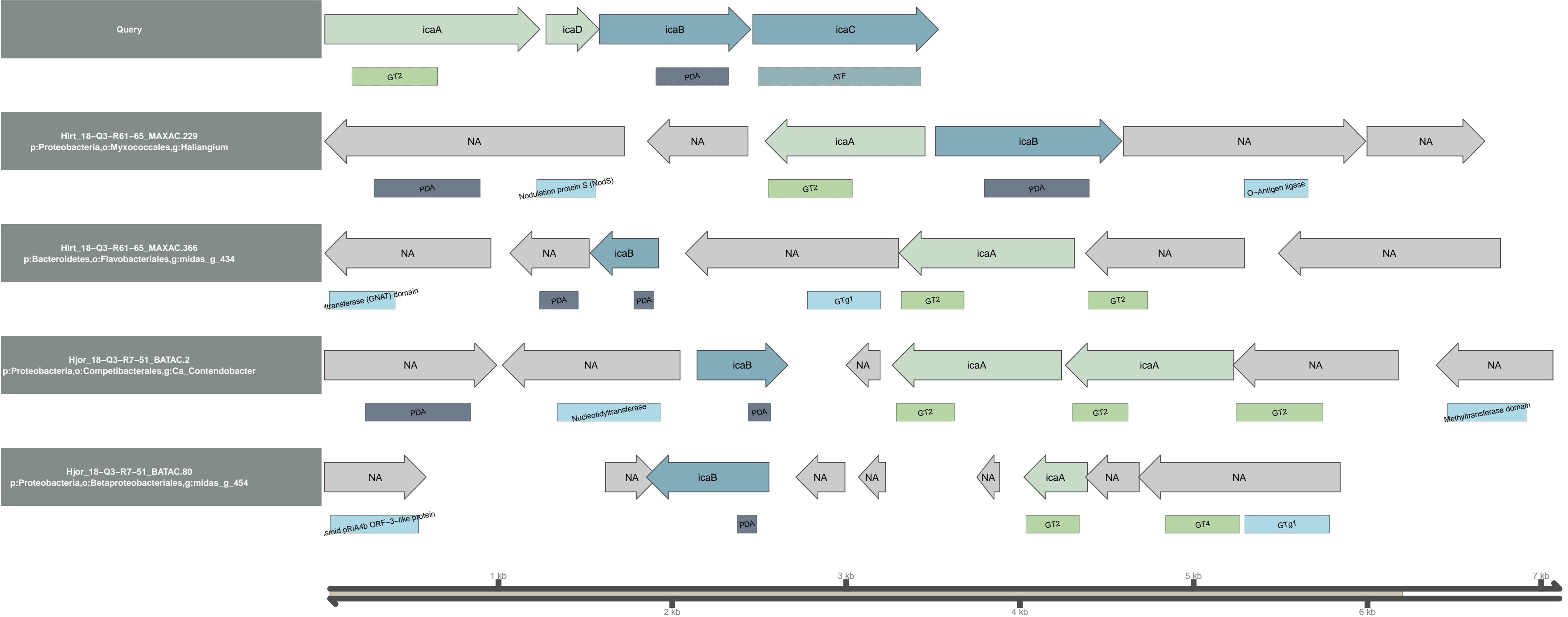
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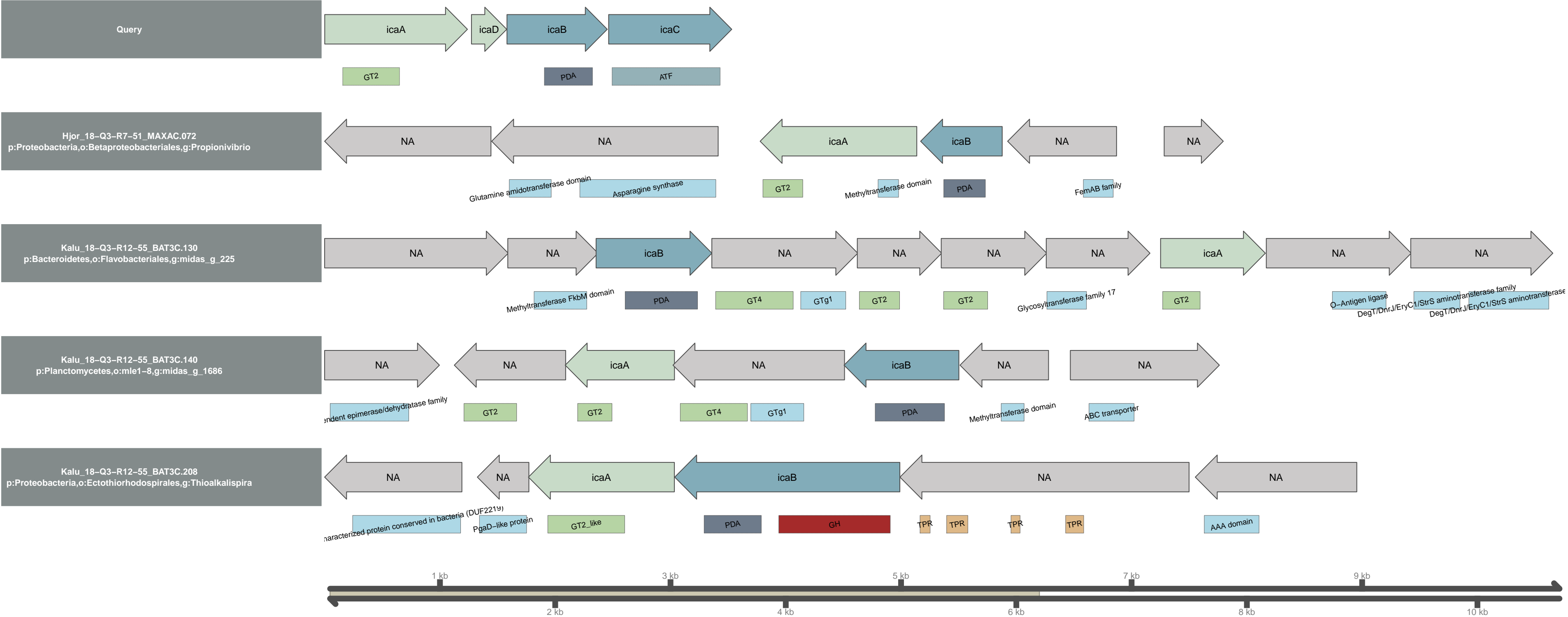
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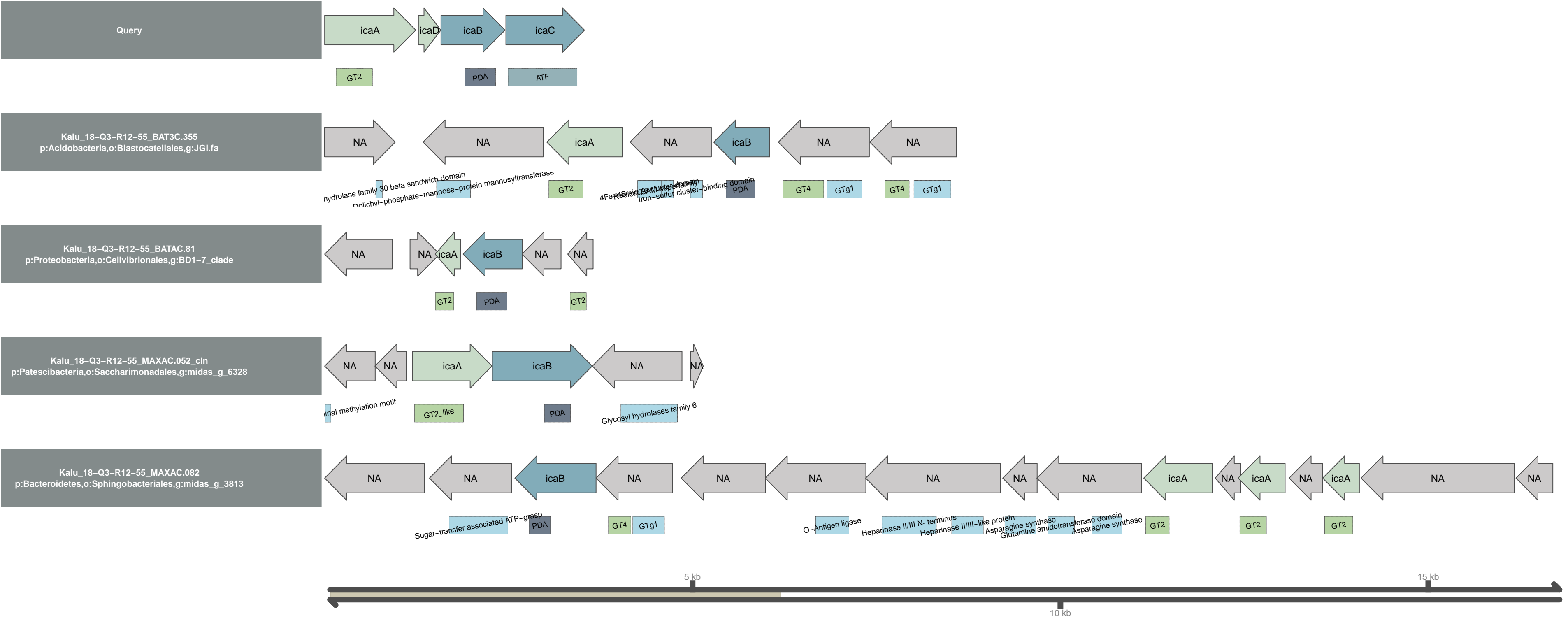


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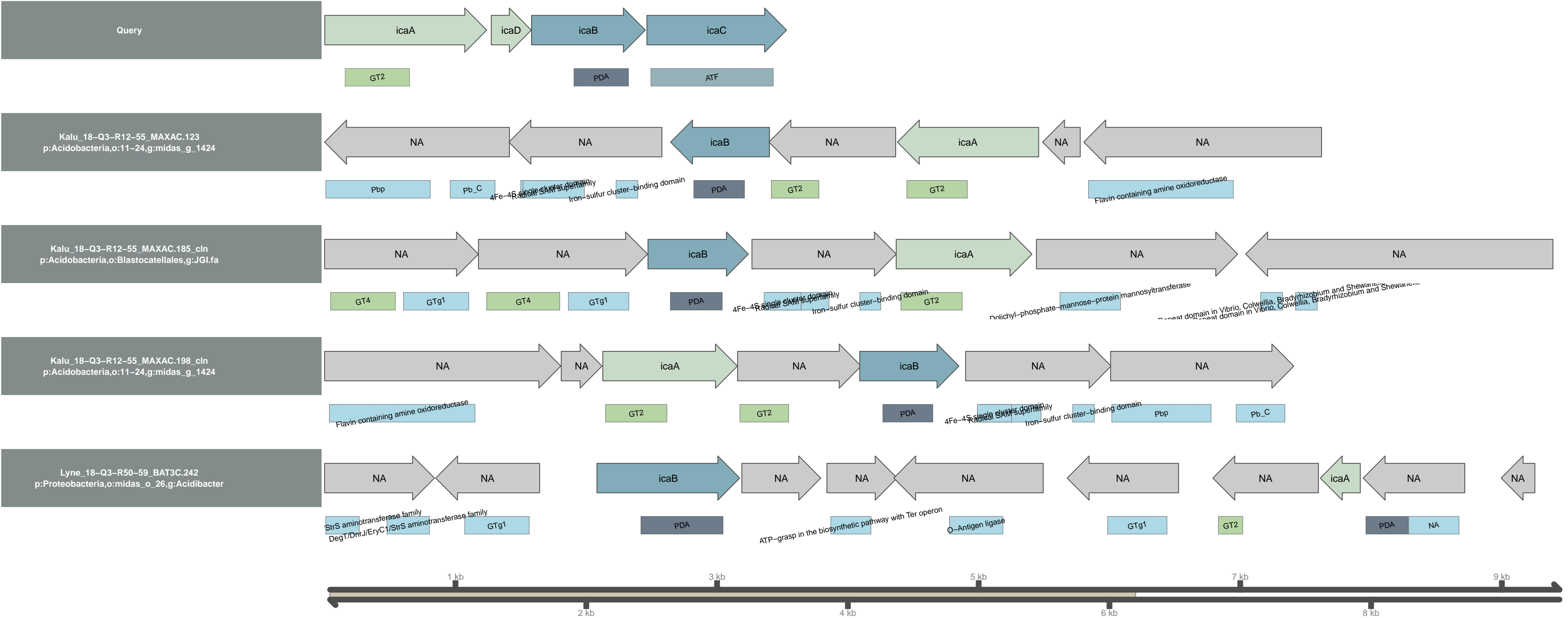




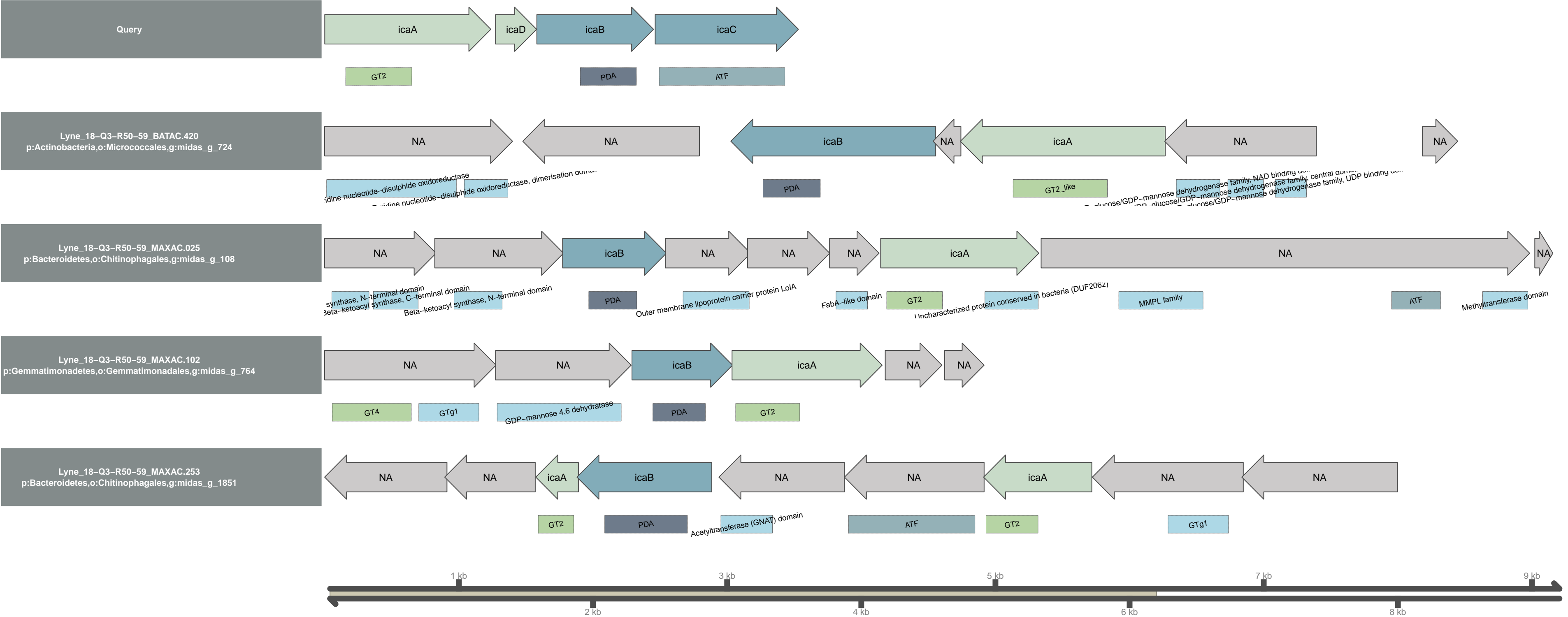
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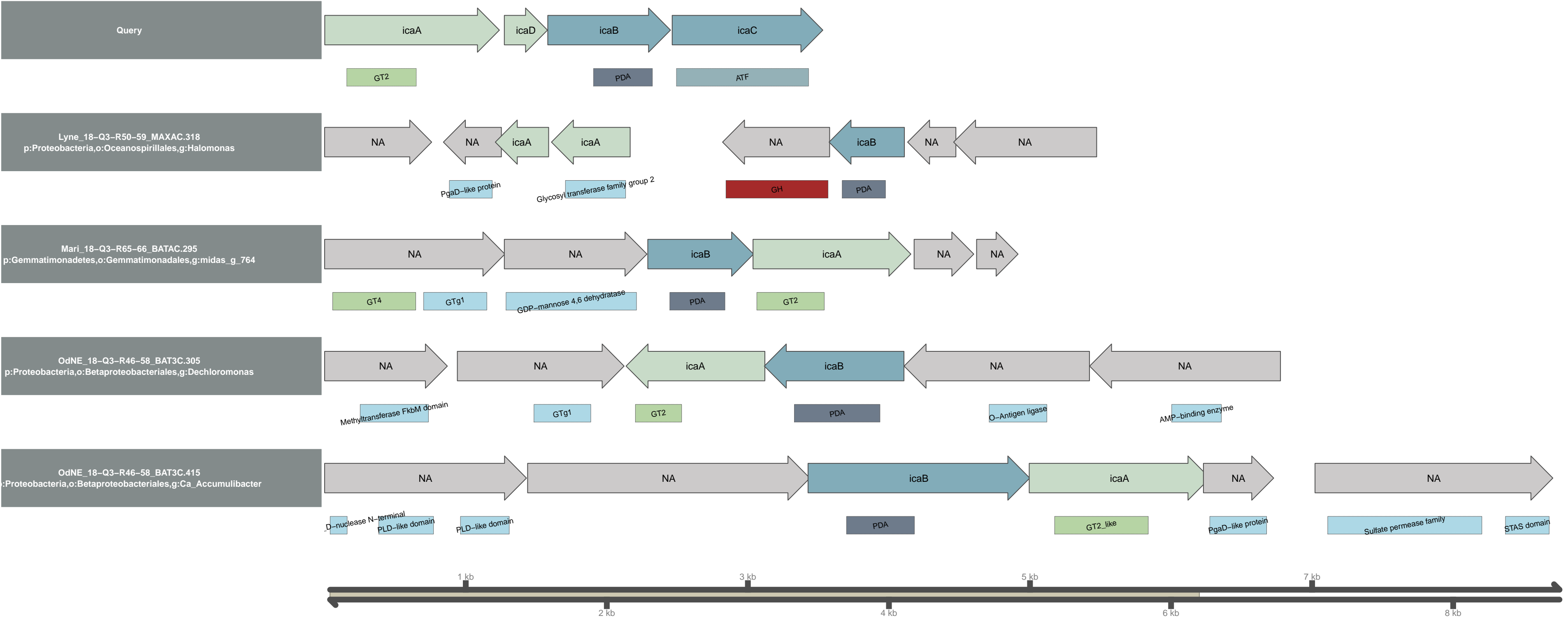
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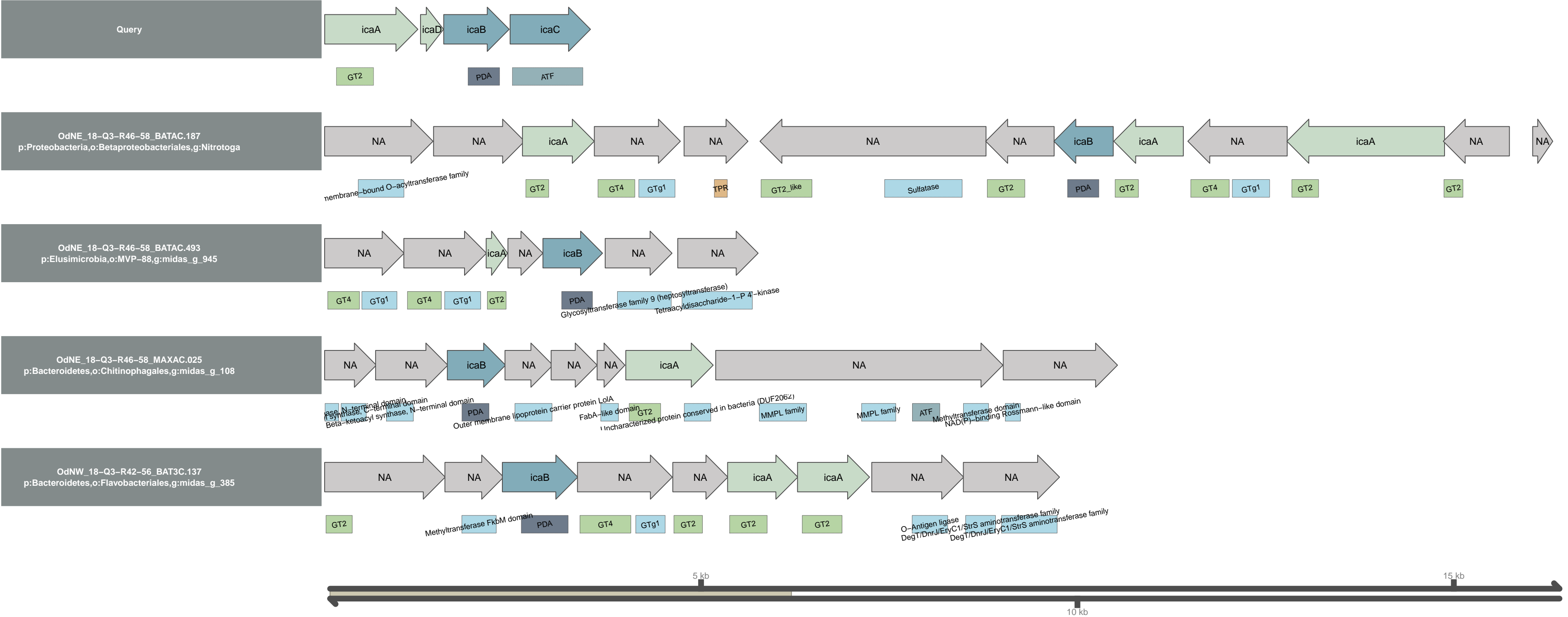
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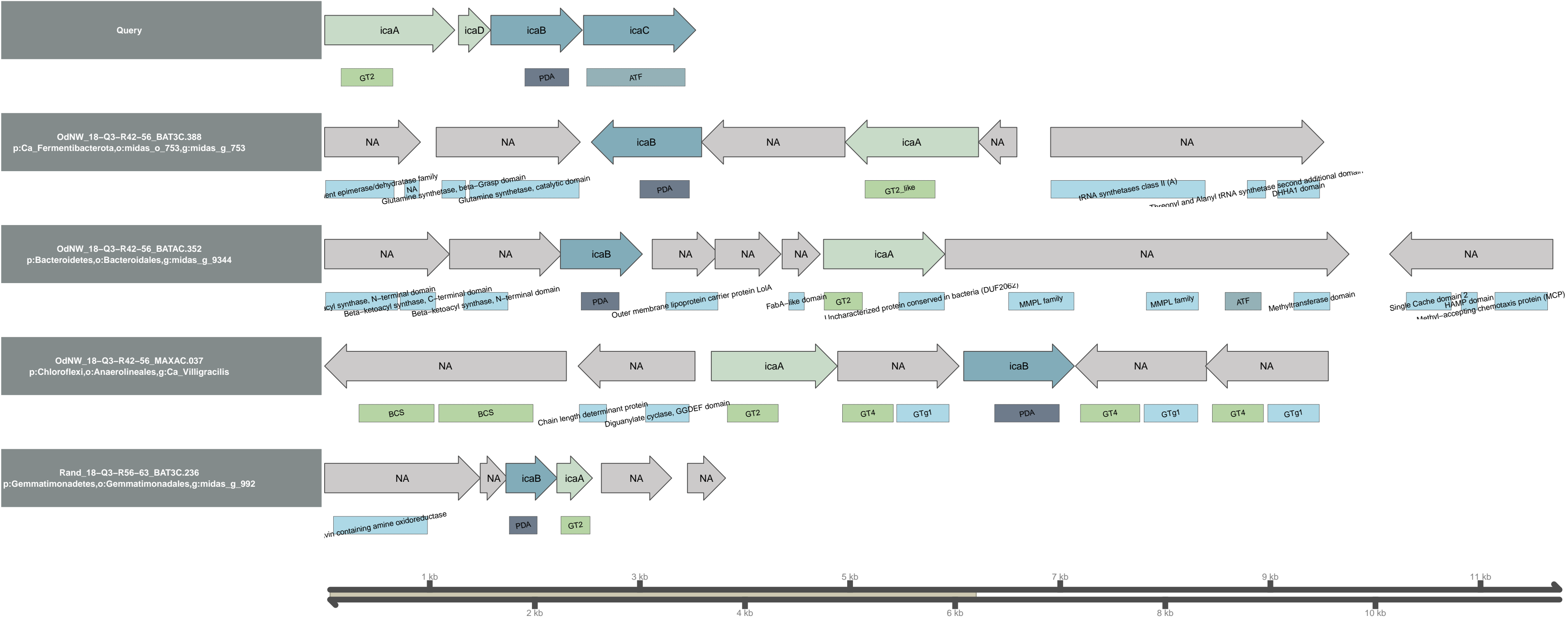
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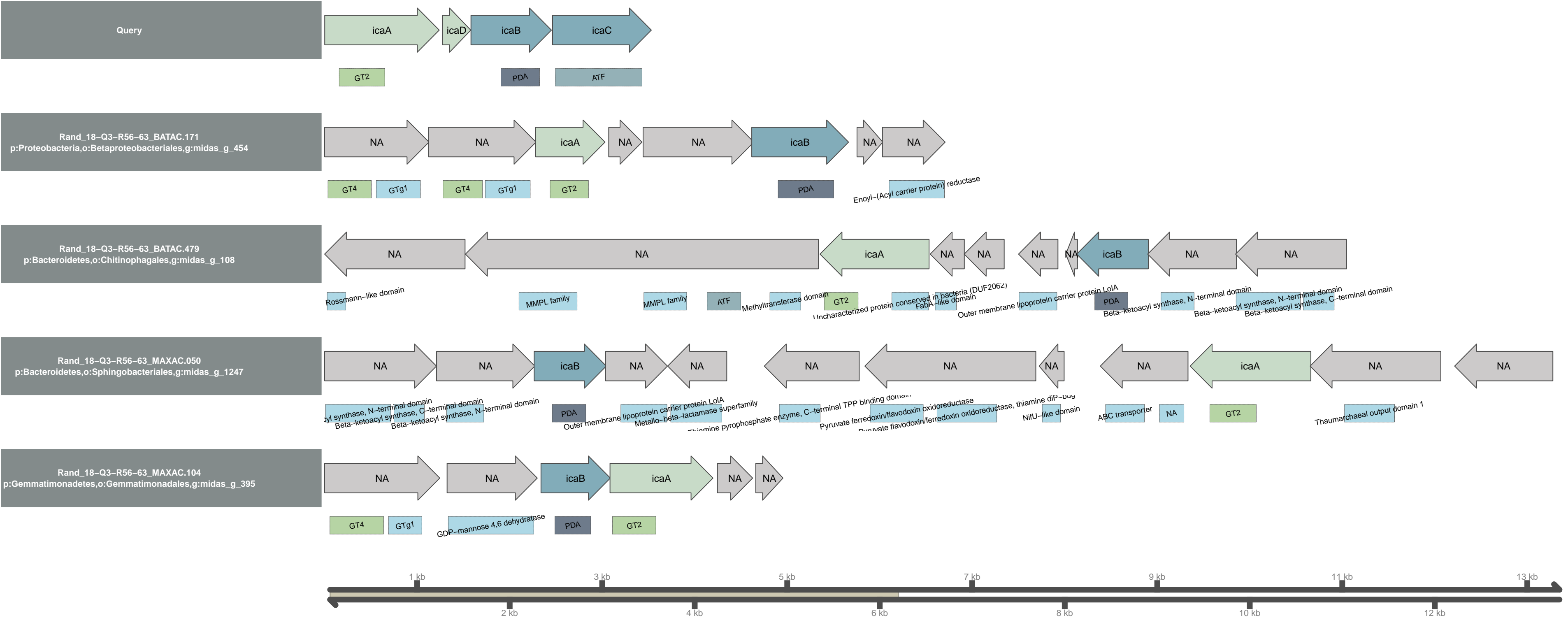
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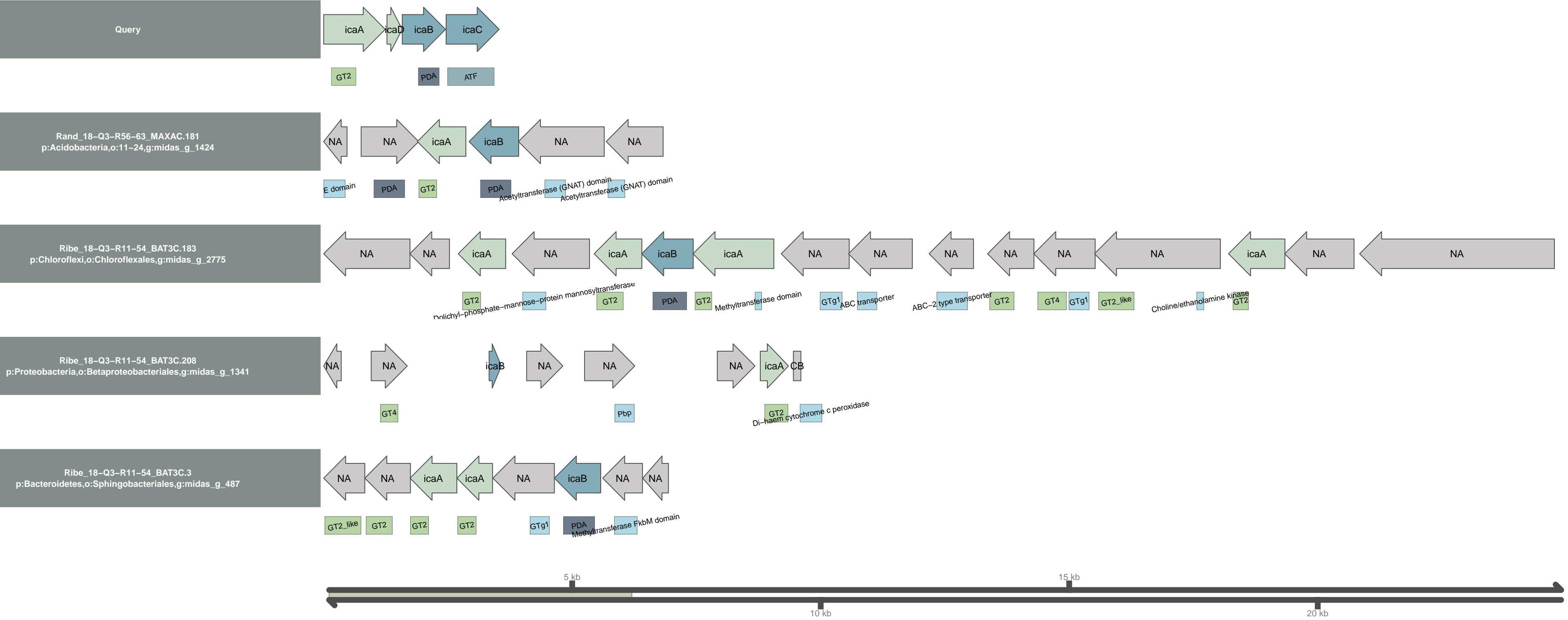
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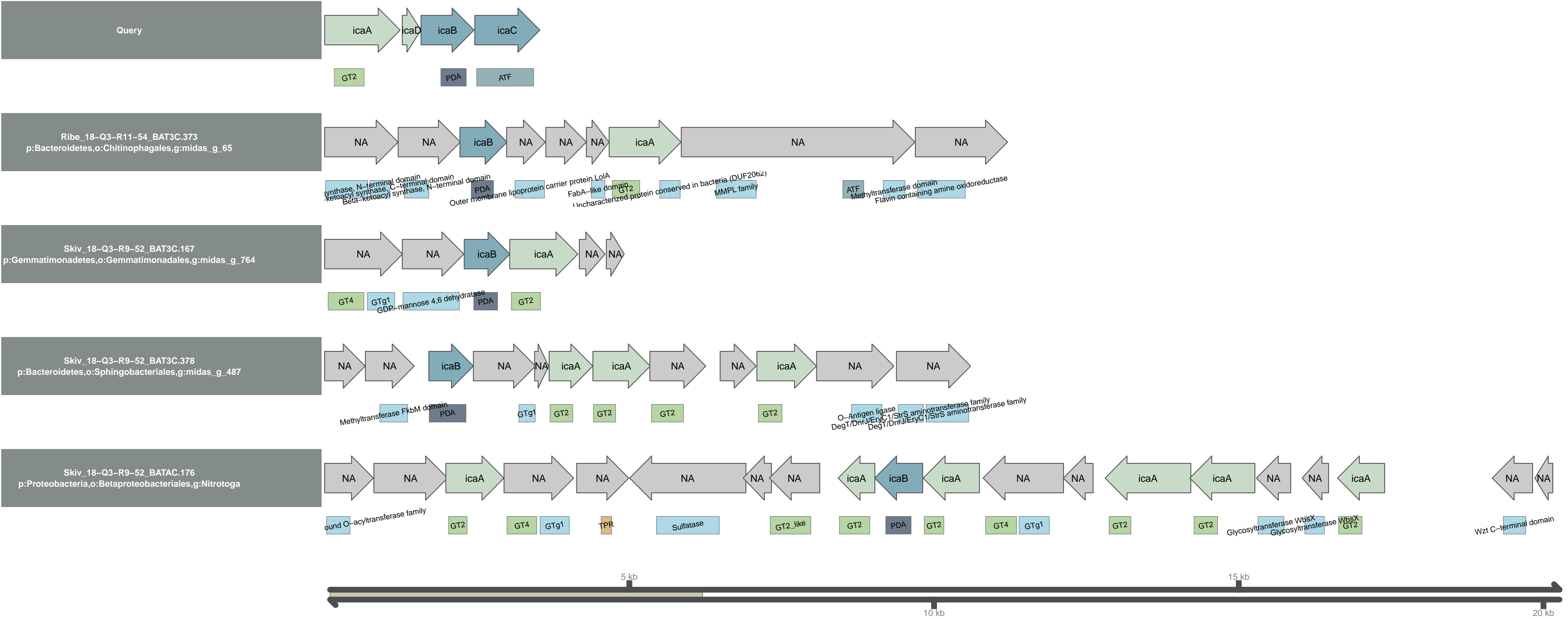


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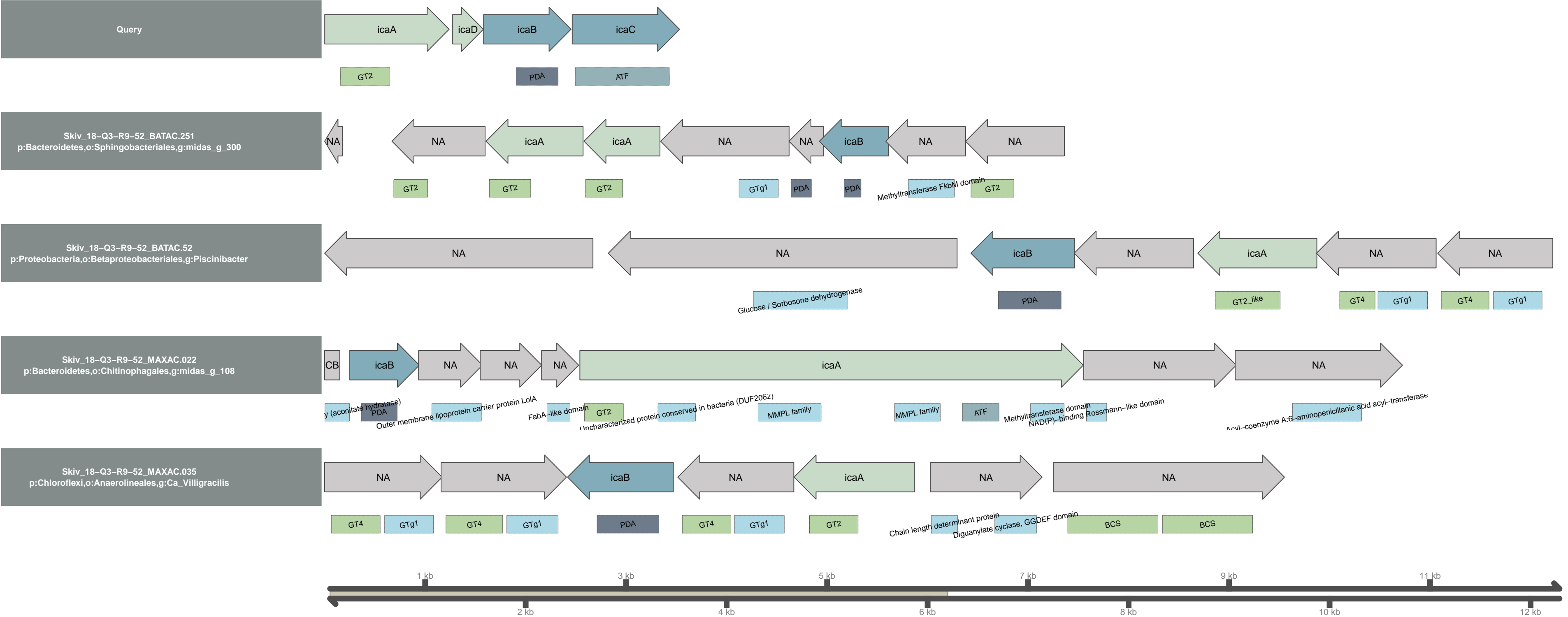




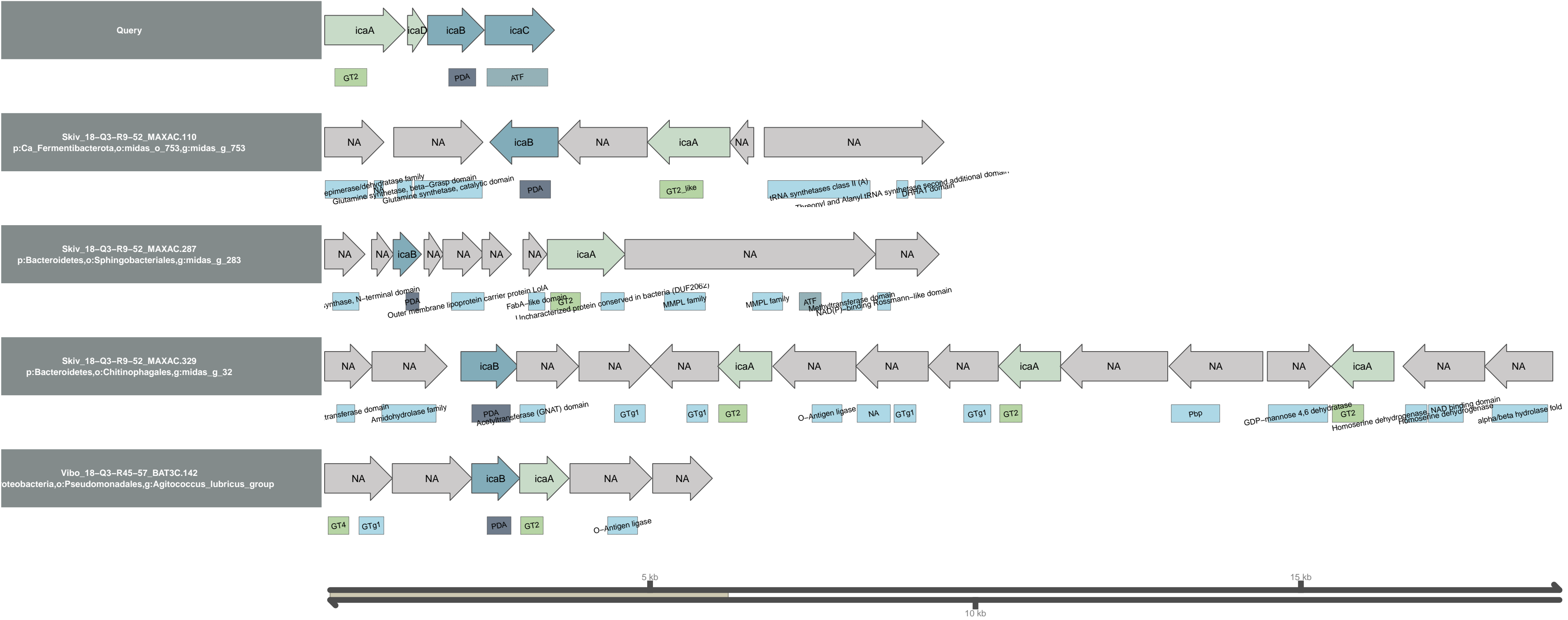
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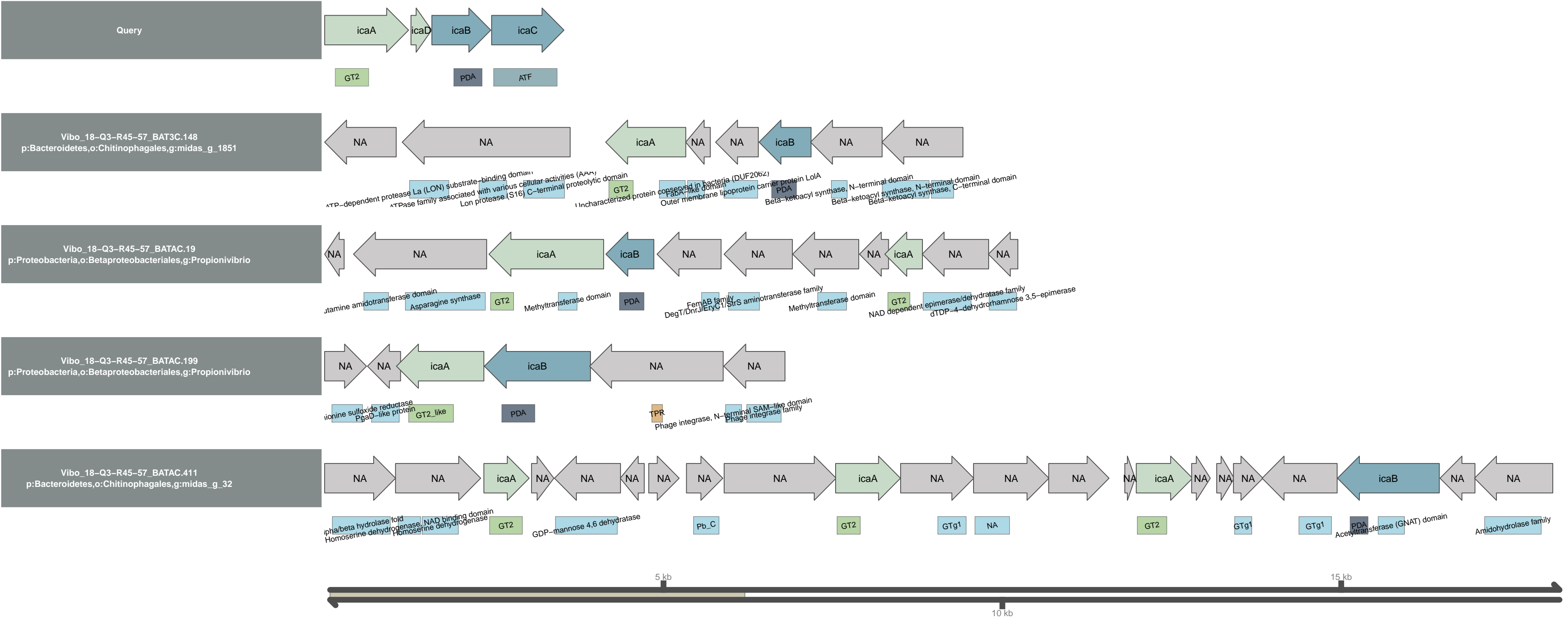
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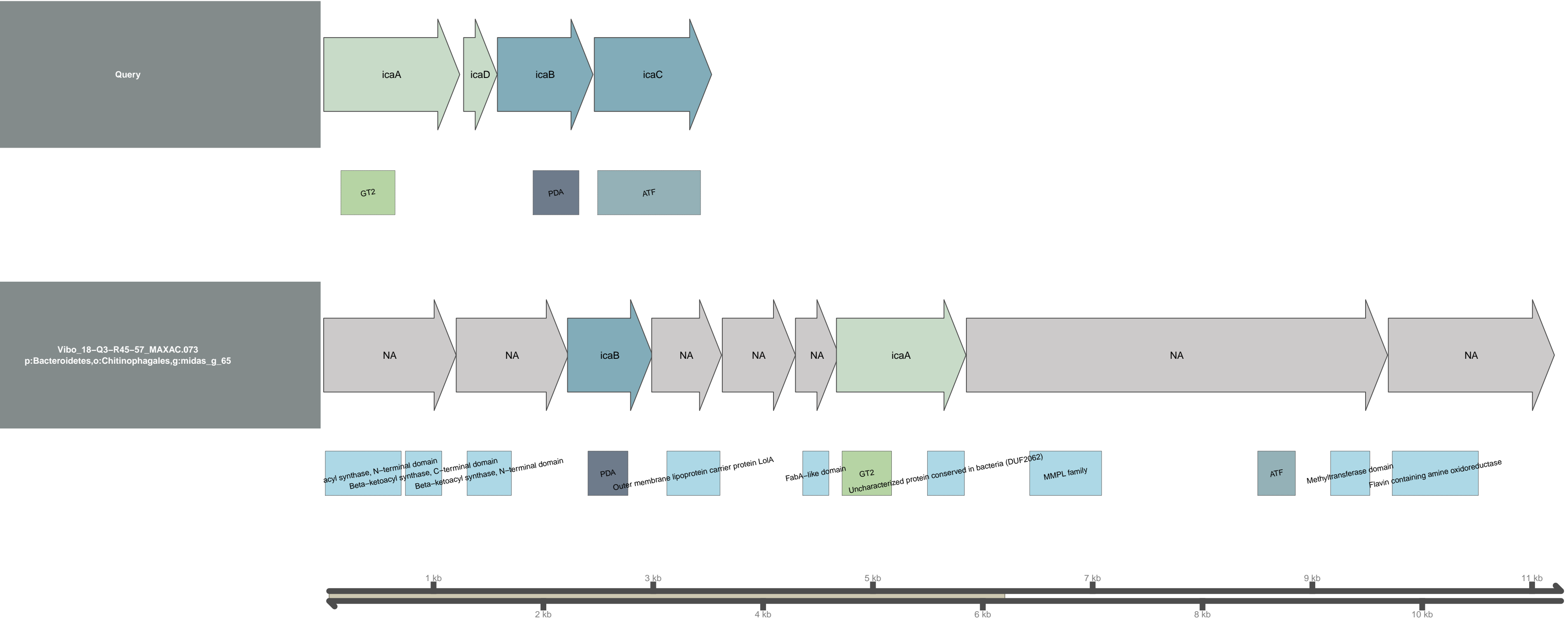
Operon Structure



Operon Structure



Operon Structure



|    | ID2                             | plot_tax  | seqname                 | start   | Query_label | ProkkaNO |
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| 1  | AalE_18-Q3-R2-46_BAT3C.189_A    | p:Bacteroidetes,o:Flavobacteriales,g:midas_g_225                | tig00002183-10-4622890  | 126309  | icaA        | 01254    |
| 2  | AalE_18-Q3-R2-46_BAT3C.189_B    | p:Bacteroidetes,o:Flavobacteriales,g:midas_g_225                | tig00006033-10-1929260  | 132344  | icaA        | 02138    |
| 3  | AalE_18-Q3-R2-46_BAT3C.235      | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_764             | tig01009788-10-515940   | 6681    | icaA        | 05210    |
| 4  | AalE_18-Q3-R2-46_BAT3C.357      | NA,NA,NA  | tig00029814-10-182340   | 17676   | CB          | 02370    |
| 5  | AalE_18-Q3-R2-46_MAXAC.133      | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_395             | tig00000473-10-14677400 | 265315  | icaA        | 00219    |
| 6  | AalW_18-Q3-R10-53_BAT3C.461     | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_764             | tig00009994-10-3040060  | 248767  | icaA        | 04212    |
| 7  | AalW_18-Q3-R10-53_BATAC.16      | p:Bacteroidetes,o:Flavobacteriales,g:midas_g_385                | tig00000385-10-13536900 | 870941  | icaA        | 02990    |
| 8  | AalW_18-Q3-R10-53_BATAC.41      | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_992             | tig00002970-10-7907830  | 455935  | icaA        | 00444    |
| 9  | Aved_18-Q3-R54-62_BATAC.266     | p:Bacteroidetes,o:Chitinophagales,g:midas_g_65                  | tig00373071-10-30212060 | 2542574 | icaA        | 03984    |
| 10 | Aved_18-Q3-R54-62_BATAC.321_sub | p:Proteobacteria,o:Betaproteobacteriales,g:Sphaerotilus         | tig00025397-10-1346360  | 107890  | icaA        | 02312    |
| 11 | Aved_18-Q3-R54-62_BATAC.645_sub | p:Proteobacteria,o:Pseudomonadales,g:Agitococcus_lubricus_group | tig01608697-10-2107820  | 44484   | icaA        | 02828    |
| 12 | Aved_18-Q3-R54-62_BATAC.843     | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_395             | tig00000726-10-21197290 | 47562   | icaA        | 00038    |
| 13 | Aved_18-Q3-R54-62_BATAC.851     | p:Acidobacteria,o:11-24,g:midas_g_1424                          | tig00003571-10-6372010  | 220785  | icaA        | 02790    |
| 14 | Aved_18-Q3-R54-62_MAXAC.126     | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_764             | tig00004441-10-6364520  | 276830  | icaA        | 02890    |
| 15 | Aved_18-Q3-R54-62_MAXAC.248_sub | p:Actinobacteria,o:Kineosporiales,g:midas_g_327                 | tig00005456-10-5182910  | 320925  | icaA        | 04068    |
| 16 | Aved_18-Q3-R54-62_MAXAC.297     | p:Bacteroidetes,o:SJA-28,g:midas_g_31                           | tig00008919-10-4700140  | 263554  | icaA        | 01792    |
| 17 | Bjer_18-Q3-R1-45_BAT3C.224      | p:Bacteroidetes,o:Flavobacteriales,g:midas_g_385                | tig00000714-10-11330210 | 483244  | icaA        | 02319    |
| 18 | Bjer_18-Q3-R1-45_BATAC.331      | p:Bacteroidetes,o:Sphingobacteriales,g:midas_g_3838             | tig00003981-10-4282820  | 271241  | icaA        | 00268    |
| 19 | Bjer_18-Q3-R1-45_BATAC.43       | p:Bacteroidetes,o:Sphingobacteriales,g:midas_g_300              | tig00858158-10-2205830  | 97954   | icaA        | 03735    |
| 20 | Bjer_18-Q3-R1-45_MAXAC.011      | p:Proteobacteria,o:Betaproteobacteriales,g:Sulfuritalea         | tig00199983-10-9104530  | 703254  | icaA        | 01939    |
| 21 | Bjer_18-Q3-R1-45_MAXAC.014      | p:Proteobacteria,o:Betaproteobacteriales,g:Sulfuritalea         | tig00013944-10-761410   | 20370   | icaA        | 03047    |
| 22 | Bjer_18-Q3-R1-45_MAXAC.090      | p:Ca_Fermentibacterota,o:midas_o_753,g:midas_g_753              | tig00000439-10-26518310 | 2006414 | icaA        | 01690    |
| 23 | Bjer_18-Q3-R1-45_MAXAC.114      | p:Spirochaetes,o:Leptospirales,g:Leptospira                     | tig00005683-10-1103120  | 79775   | icaA        | 03211    |
| 24 | Damh_18-Q3-R51-60_BATAC.249     | p:Bacteroidetes,o:Chitinophagales,g:midas_g_108                 | tig00008541-10-1019230  | 21785   | icaA        | 01228    |
| 25 | Damh_18-Q3-R51-60_MAXAC.107_A   | p:Bacteroidetes,o:Sphingobacteriales,g:midas_g_1061             | tig00002485-10-2405980  | 204559  | icaA        | 00763    |

|    | ID2                             | plot_tax  | seqname                 | start   | Query_label | ProkkaNO |
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| 1  | Damh_18-Q3-R51-60_MAXAC.107_B   | p:Bacteroidetes,o:Sphingobacteriales,g:midas_g_1061       | tig00008676-10-965710   | 57916   | icaA        | 02947    |
| 2  | Damh_18-Q3-R51-60_MAXAC.126_sub | p:Bacteroidetes,o:Sphingobacteriales,g:midas_g_3846       | tig00020890-10-319300   | 4705    | icaA        | 02789    |
| 3  | Ega_18-Q3-R5-49_BAT3C.215       | p:Bacteroidetes,o:Chitinophagales,g:midas_g_65            | tig00000219-10-17099480 | 968419  | icaA        | 00778    |
| 4  | Ega_18-Q3-R5-49_BAT3C.230       | p:Bacteroidetes,o:Flavobacteriales,g:midas_g_225          | tig00000253-10-13173290 | 1296776 | icaA        | 01059    |
| 5  | Ega_18-Q3-R5-49_BATAC.239_A     | p:Proteobacteria,o:midas_o_26,g:midas_g_523               | tig00001202-10-4363950  | 346172  | icaA        | 00342    |
| 6  | Ega_18-Q3-R5-49_BATAC.239_B     | p:Proteobacteria,o:midas_o_26,g:midas_g_523               | tig00002446-10-2838800  | 42163   | icaA        | 00822    |
| 7  | Ega_18-Q3-R5-49_MAXAC.071       | p:Proteobacteria,o:Betaproteobacteriales,g:Propionivibrio | tig00032782-10-526310   | 37342   | icaA        | 02833    |
| 8  | Ejby_18-Q3-R6-50_BAT3C.203      | p:Actinobacteria,o:Micrococcales,g:midas_g_724            | tig00214211-10-16152460 | 503168  | icaA        | 02215    |
| 9  | Ejby_18-Q3-R6-50_BAT3C.80       | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_395       | tig00003915-10-2303560  | 36274   | icaA        | 02091    |
| 10 | Ejby_18-Q3-R6-50_BATAC.337      | p:Proteobacteria,o:Betaproteobacteriales,g:Piscinibacter  | tig00000693-10-7110010  | 187328  | icaA        | 00161    |
| 11 | Ejby_18-Q3-R6-50_BATAC.338      | p:Ca_Fermentibacterota,o:midas_o_753,g:midas_g_753        | tig00005712-10-1957820  | 12584   | icaA        | 01450    |
| 12 | Ejby_18-Q3-R6-50_MAXAC.023      | p:Bacteroidetes,o:Chitinophagales,g:midas_g_108           | tig00004309-10-1782560  | 134921  | icaA        | 00454    |
| 13 | EsbE_18-Q3-R3-47_BAT3C.110      | p:Proteobacteria,o:Syntrophobacterales,g:midas_g_134      | tig00004325-10-2346120  | 138740  | icaA        | 02225    |
| 14 | EsbE_18-Q3-R3-47_BAT3C.226      | p:Nitrospirae,o:Nitrospirales,g:Nitrospira                | tig00008291-10-1106160  | 105214  | icaA        | 03448    |
| 15 | EsbE_18-Q3-R3-47_MAXAC.031_sub  | p:Chloroflexi,o:Anaerolineales,g:Ca_Villigracilis         | tig00001625-10-805680   | 54712   | icaA        | 00062    |
| 16 | EsbE_18-Q3-R3-47_MAXAC.074      | p:Bacteroidetes,o:Flavobacteriales,g:midas_g_385          | tig00010249-10-850390   | 71445   | icaA        | 03623    |
| 17 | EsbE_18-Q3-R3-47_MAXAC.085      | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_395       | tig00000236-10-21381660 | 1574717 | icaA        | 01523    |
| 18 | EsbW_18-Q3-R4-48_BAT3C.148      | p:Bacteroidetes,o:Chitinophagales,g:midas_g_1328          | tig00251293-10-3984020  | 356186  | icaA        | 03475    |
| 19 | EsbW_18-Q3-R4-48_BAT3C.194      | p:Acidobacteria,o:11-24,g:midas_g_1424                    | tig00003338-10-6811220  | 646617  | icaA        | 00537    |
| 20 | EsbW_18-Q3-R4-48_BAT3C.288      | p:Actinobacteria,o:Kineosporiales,g:midas_g_327           | tig00004106-10-5054060  | 64122   | icaA        | 01542    |
| 21 | EsbW_18-Q3-R4-48_BAT3C.307      | p:Bacteroidetes,o:Bacteroidales,g:midas_g_3337            | tig00250445-10-19376960 | 674100  | icaA        | 02339    |
| 22 | EsbW_18-Q3-R4-48_BATAC.168      | p:Bacteroidetes,o:Ignavibacteriales,g:midas_g_179         | tig00250404-10-13725210 | 155948  | icaA        | 02163    |
| 23 | EsbW_18-Q3-R4-48_MAXAC.012_A    | p:Nitrospirae,o:Nitrospirales,g:Nitrospira                | tig00000127-10-30891270 | 1440185 | icaA        | 01478    |
| 24 | EsbW_18-Q3-R4-48_MAXAC.012_B    | p:Nitrospirae,o:Nitrospirales,g:Nitrospira                | tig00000864-10-8618410  | 773632  | icaA        | 04189    |
| 25 | EsbW_18-Q3-R4-48_MAXAC.021      | p:Chloroflexi,o:Anaerolineales,g:Ca_Villigracilis         | tig00020341-10-335180   | 21824   | icaA        | 02044    |

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|-----|---------------------------------|---|----------------------------|---------|-------------|----------|
| 1   | EsbW_18-Q3-R4-48_MAXAC.044      | p:Proteobacteria,o:Betaproteobacteriales,g:Ca_Accumulibacter    | tig01107798-10-2245570     | 117771  | icaA        | 04462    |
| 2   | EsbW_18-Q3-R4-48_MAXAC.047      | p:Cyanobacteria,o:Obscuribacterales,g:Ca_Obscuribacter          | tig00021461-10-174210      | 5663    | icaA        | 05925    |
| 3   | EsbW_18-Q3-R4-48_MAXAC.084      | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_764             | tig00250621-10-14217161416 | 539694  | icaA        | 02874    |
| 4   | EsbW_18-Q3-R4-48_MAXAC.089      | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_395             | tig00000105-10-26971300    | 1568484 | icaA        | 01515    |
| 5   | Fred_18-Q3-R57-64_BAT3C.6       | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_395             | tig01546545-10-26760560    | 1940970 | icaA        | 03447    |
| 6   | Fred_18-Q3-R57-64_BAT3C.701     | p:Proteobacteria,o:Myxococcales,g:midas_g_5683                  | tig00002470-10-11917410    | 468252  | icaA        | 00429    |
| 7   | Fred_18-Q3-R57-64_BATAC.299     | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_395             | tig00007168-10-4655090     | 183521  | icaA        | 03070    |
| 8   | Fred_18-Q3-R57-64_BATAC.480     | p:Actinobacteria,o:Kineosporiales,g:midas_g_327                 | tig01546779-10-5981460     | 169179  | icaA        | 04772    |
| 9   | Fred_18-Q3-R57-64_BATAC.644     | p:Proteobacteria,o:Oceanospirillales,g:Halomonas                | tig00000788-10-24304590    | 11682   | icaA        | 00012    |
| 10  | Fred_18-Q3-R57-64_BATAC.76      | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_764             | tig00352672-10-3356390     | 211415  | icaA        | 05060    |
| 11  | Fred_18-Q3-R57-64_MAXAC.027     | p:Proteobacteria,o:Betaproteobacteriales,g:Ca_Accumulibacter    | tig00351383-10-3762090     | 224662  | icaA        | 03689    |
| 12  | Fred_18-Q3-R57-64_MAXAC.287     | p:Proteobacteria,o:Competibacterales,g:Ca_Competibacter         | tig01546643-10-5313960     | 370598  | icaA        | 04345    |
| 13  | Fred_18-Q3-R57-64_MAXAC.292_A   | p:Proteobacteria,o:Ectothiorhodospirales,g:Thioalkalispira      | tig00005391-10-5845880     | 138635  | icaA        | 01549    |
| 14  | Fred_18-Q3-R57-64_MAXAC.292_B   | p:Proteobacteria,o:Ectothiorhodospirales,g:Thioalkalispira      | tig00005391-10-5845880     | 381979  | icaA        | 01770    |
| 15  | Fred_18-Q3-R57-64_MAXAC.330_cln | p:Planctomycetes,o:Phycisphaerales,g:SM1A02                     | tig00000055-10-33509940    | 2629474 | icaA        | 02159    |
| 16  | Fred_18-Q3-R57-64_MAXAC.344     | p:Bacteroidetes,o:Flavobacteriales,g:midas_g_225                | tig00000591-10-23971360    | 2244321 | icaA        | 01902    |
| 17  | Fred_18-Q3-R57-64_MAXAC.370     | p:Bacteroidetes,o:Chitinophagales,g:midas_g_1914                | tig00019043-10-1078140     | 45679   | icaA        | 03671    |
| 18  | Fred_18-Q3-R57-64_MAXAC.379     | p:Firmicutes,o:Bacillales,g:Staphylococcus                      | tig00350858-10-25518060    | 1871919 | icaA        | 02037    |
| 19  | Hade_18-Q3-R52-61_BAT3C.141     | p:Bacteroidetes,o:Chitinophagales,g:midas_g_65                  | tig00406178-10-51613330    | 1539372 | icaA        | 01293    |
| 20  | Hade_18-Q3-R52-61_BATAC.14      | p:Proteobacteria,o:Pseudomonadales,g:Pseudomonas                | tig00035928-10-409280      | 30139   | icaA        | 02495    |
| 21  | Hade_18-Q3-R52-61_BATAC.255     | p:Bacteroidetes,o:Flavobacteriales,g:midas_g_843                | tig00015650-10-654040      | 7632    | icaA        | 00686    |
| 22  | Hade_18-Q3-R52-61_BATAC.287     | p:Acidobacteria,o:11-24,g:midas_g_1424                          | tig00002277-10-6540280     | 132979  | icaA        | 00684    |
| 23  | Hade_18-Q3-R52-61_BATAC.311     | p:Proteobacteria,o:Pseudomonadales,g:Agitococcus_lubricus_group | tig00046256-10-410070      | 4441    | icaA        | 01479    |
| 24  | Hade_18-Q3-R52-61_BATAC.316     | p:Proteobacteria,o:Betaproteobacteriales,g:midas_g_190          | tig00000808-10-11321960    | 928929  | icaA        | 00828    |
| 25  | Hade_18-Q3-R52-61_BATAC.452     | p:Proteobacteria,o:Betaproteobacteriales,g:Ellin6067            | tig00000768-10-11872970    | 1013006 | icaA        | 02975    |



|    | ID2                             | plot_tax   | seqname                 | start   | Query_label | ProkkaNO |
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| 1  | Hade_18-Q3-R52-61_BATAC.726     | p:Proteobacteria,o:Betaproteobacteriales,g:Ca_Accumulibacter | tig00035480-10-796120   | 17742   | icaA        | 02527    |
| 2  | Hade_18-Q3-R52-61_MAXAC.023     | p:Nitrospirae,o:Nitrospirales,g:Nitrospira                   | tig01675009-10-1773000  | 107829  | icaA        | 04313    |
| 3  | Hade_18-Q3-R52-61_MAXAC.042     | p:Chloroflexi,o:Anaerolineales,g:Ca_Villigracilis            | tig00407603-10-1232450  | 96508   | icaA        | 03299    |
| 4  | Hirt_18-Q3-R61-65_BATAC.72      | p:Bacteroidetes,o:SJA-28,g:midas_g_31                        | tig00007568-10-3761280  | 329483  | icaA        | 02469    |
| 5  | Hirt_18-Q3-R61-65_MAXAC.111     | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_395          | tig01347732-10-21894770 | 274735  | icaA        | 02520    |
| 6  | Hirt_18-Q3-R61-65_MAXAC.229     | p:Proteobacteria,o:Myxococcales,g:Haliangium                 | tig00008943-10-2562490  | 92955   | icaA        | 03778    |
| 7  | Hirt_18-Q3-R61-65_MAXAC.366     | p:Bacteroidetes,o:Flavobacteriales,g:midas_g_434             | tig00005620-10-4484140  | 303865  | icaA        | 03171    |
| 8  | Hjor_18-Q3-R7-51_BATAC.2        | p:Proteobacteria,o:Competibacterales,g:Ca_Contentobacter     | tig00001945-10-6504960  | 81531   | icaA        | 00228    |
| 9  | Hjor_18-Q3-R7-51_BATAC.80       | p:Proteobacteria,o:Betaproteobacteriales,g:midas_g_454       | tig00005902-10-1512760  | 6428    | icaA        | 02681    |
| 10 | Hjor_18-Q3-R7-51_MAXAC.072      | p:Proteobacteria,o:Betaproteobacteriales,g:Propionivibrio    | tig00004100-10-2635310  | 248481  | icaA        | 00747    |
| 11 | Kalu_18-Q3-R12-55_BAT3C.130     | p:Bacteroidetes,o:Flavobacteriales,g:midas_g_225             | tig00000285-10-36554120 | 3098291 | icaA        | 02525    |
| 12 | Kalu_18-Q3-R12-55_BAT3C.140     | p:Planctomycetes,o:mle1-8,g:midas_g_1686                     | tig00000016-10-42368670 | 2451659 | icaA        | 01969    |
| 13 | Kalu_18-Q3-R12-55_BAT3C.208     | p:Proteobacteria,o:Ectothiorhodospirales,g:Thioalkalispira   | tig00000943-10-15208620 | 284338  | icaA        | 00281    |
| 14 | Kalu_18-Q3-R12-55_BAT3C.355     | p:Acidobacteria,o:Blastocatellales,g:JGI.fa                  | tig00100729-10-33526130 | 72838   | icaA        | 00446    |
| 15 | Kalu_18-Q3-R12-55_BATAC.81      | p:Proteobacteria,o:Cellvibrionales,g:BD1-7_clade             | tig00006239-10-856360   | 22142   | icaA        | 02747    |
| 16 | Kalu_18-Q3-R12-55_MAXAC.052_cln | p:Patescibacteria,o:Saccharimonadales,g:midas_g_6328         | tig00000614-10-9151600  | 445091  | icaA        | 00423    |
| 17 | Kalu_18-Q3-R12-55_MAXAC.082     | p:Bacteroidetes,o:Sphingobacteriales,g:midas_g_3813          | tig00000265-10-469080   | 32782   | icaA        | 00037    |
| 18 | Kalu_18-Q3-R12-55_MAXAC.123     | p:Acidobacteria,o:11-24,g:midas_g_1424                       | tig00002634-10-3925280  | 237623  | icaA        | 01890    |
| 19 | Kalu_18-Q3-R12-55_MAXAC.185_cln | p:Acidobacteria,o:Blastocatellales,g:JGI.fa                  | tig00000010-10-44899860 | 420258  | icaA        | 00349    |
| 20 | Kalu_18-Q3-R12-55_MAXAC.198_cln | p:Acidobacteria,o:11-24,g:midas_g_1424                       | tig00000005-10-63322080 | 2159207 | icaA        | 01617    |
| 21 | Lyne_18-Q3-R50-59_BAT3C.242     | p:Proteobacteria,o:midas_o_26,g:Acidibacter                  | tig01430999-10-570350   | 39824   | icaA        | 03870    |
| 22 | Lyne_18-Q3-R50-59_BATAC.420     | p:Actinobacteria,o:Micrococcales,g:midas_g_724               | tig00000369-10-34189540 | 2022188 | icaA        | 01843    |
| 23 | Lyne_18-Q3-R50-59_MAXAC.025     | p:Bacteroidetes,o:Chitinophagales,g:midas_g_108              | tig01437854-10-1574220  | 56318   | icaA        | 03588    |
| 24 | Lyne_18-Q3-R50-59_MAXAC.102     | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_764          | tig00003330-10-7903560  | 278185  | icaA        | 01509    |
| 25 | Lyne_18-Q3-R50-59_MAXAC.253     | p:Bacteroidetes,o:Chitinophagales,g:midas_g_1851             | tig00021339-10-1260610  | 65025   | icaA        | 01702    |

|    | ID2                         | plot_tax   | seqname                 | start   | Query_label | ProkkaNO |
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| 1  | Lyne_18-Q3-R50-59_MAXAC.318 | p:Proteobacteria,o:Oceanospirillales,g:Halomonas             | tig00001263-10-14707330 | 1252244 | icaA        | 01255    |
| 2  | Mari_18-Q3-R65-66_BATAC.295 | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_764          | tig00001489-10-6947240  | 196451  | icaA        | 00907    |
| 3  | OdNE_18-Q3-R46-58_BAT3C.305 | p:Proteobacteria,o:Betaproteobacteriales,g:Dechloromonas     | tig00228995-10-1949640  | 6815    | icaA        | 03486    |
| 4  | OdNE_18-Q3-R46-58_BAT3C.415 | p:Proteobacteria,o:Betaproteobacteriales,g:Ca_Accumulibacter | tig00005627-10-3059890  | 249443  | icaA        | 00721    |
| 5  | OdNE_18-Q3-R46-58_BATAC.187 | p:Proteobacteria,o:Betaproteobacteriales,g:Nitrotoga         | tig00229050-10-2453050  | 233790  | icaA        | 02900    |
| 6  | OdNE_18-Q3-R46-58_BATAC.493 | p:Elusimicrobia,o:MVP-88,g:midas_g_945                       | tig00013005-10-906310   | 49525   | icaA        | 01612    |
| 7  | OdNE_18-Q3-R46-58_MAXAC.025 | p:Bacteroidetes,o:Chitinophagales,g:midas_g_108              | tig00228609-10-1969470  | 61171   | icaA        | 02888    |
| 8  | OdNW_18-Q3-R42-56_BAT3C.137 | p:Bacteroidetes,o:Flavobacteriales,g:midas_g_385             | tig00000293-10-12102910 | 722621  | icaA        | 01697    |
| 9  | OdNW_18-Q3-R42-56_BAT3C.388 | p:Ca_Fermentibacterota,o:midas_o_753,g:midas_g_753           | tig00896689-10-23573170 | 387448  | icaA        | 02182    |
| 10 | OdNW_18-Q3-R42-56_BATAC.352 | p:Bacteroidetes,o:Bacteroidales,g:midas_g_9344               | tig00008329-10-1404640  | 22570   | icaA        | 02896    |
| 11 | OdNW_18-Q3-R42-56_MAXAC.037 | p:Chloroflexi,o:Anaerolineales,g:Ca_Villigracilis            | tig00004658-10-1584090  | 132509  | icaA        | 01946    |
| 12 | Rand_18-Q3-R56-63_BAT3C.236 | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_992          | tig00055196-10-154240   | 9846    | icaA        | 03192    |
| 13 | Rand_18-Q3-R56-63_BATAC.171 | p:Proteobacteria,o:Betaproteobacteriales,g:midas_g_454       | tig00005882-10-1386170  | 67499   | icaA        | 02975    |
| 14 | Rand_18-Q3-R56-63_BATAC.479 | p:Bacteroidetes,o:Chitinophagales,g:midas_g_108              | tig00811677-10-815530   | 24392   | icaA        | 03236    |
| 15 | Rand_18-Q3-R56-63_MAXAC.050 | p:Bacteroidetes,o:Sphingobacteriales,g:midas_g_1247          | tig00004609-10-1185470  | 45802   | icaA        | 01603    |
| 16 | Rand_18-Q3-R56-63_MAXAC.104 | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_395          | tig00004841-10-1679030  | 40422   | icaA        | 02259    |
| 17 | Rand_18-Q3-R56-63_MAXAC.181 | p:Acidobacteria,o:11-24,g:midas_g_1424                       | tig00004216-10-1861320  | 53894   | icaA        | 02528    |
| 18 | Ribe_18-Q3-R11-54_BAT3C.183 | p:Chloroflexi,o:Chloroflexales,g:midas_g_2775                | tig00277703-10-3669230  | 194414  | icaA        | 05800    |
| 19 | Ribe_18-Q3-R11-54_BAT3C.208 | NA,NA,NA   | tig00038560-10-604220   | 60252   | CB          | 01189    |
| 20 | Ribe_18-Q3-R11-54_BAT3C.3   | p:Bacteroidetes,o:Sphingobacteriales,g:midas_g_487           | tig00003264-10-2990120  | 44664   | icaA        | 00826    |
| 21 | Ribe_18-Q3-R11-54_BAT3C.373 | p:Bacteroidetes,o:Chitinophagales,g:midas_g_65               | tig00000645-10-20549120 | 531006  | icaA        | 00518    |
| 22 | Skiv_18-Q3-R9-52_BAT3C.167  | p:Gemmatimonadetes,o:Gemmatimonadales,g:midas_g_764          | tig00001347-10-10183340 | 506937  | icaA        | 01293    |
| 23 | Skiv_18-Q3-R9-52_BAT3C.378  | p:Bacteroidetes,o:Sphingobacteriales,g:midas_g_487           | tig00287935-10-5051020  | 404295  | icaA        | 04162    |
| 24 | Skiv_18-Q3-R9-52_BATAC.176  | p:Proteobacteria,o:Betaproteobacteriales,g:Nitrotoga         | tig00010298-10-2105180  | 173991  | icaA        | 00570    |
| 25 | Skiv_18-Q3-R9-52_BATAC.251  | p:Bacteroidetes,o:Sphingobacteriales,g:midas_g_300           | tig00000743-10-7448990  | 623483  | icaA        | 00926    |

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| 1  | Skiv_18-Q3-R9-52_BATAC.52   | p:Proteobacteria,o:Betaproteobacteriales,g:Piscinibacter        | tig00007198-10-2887380 | 67317  | icaA        | 01559    |
| 2  | Skiv_18-Q3-R9-52_MAXAC.022  | NA,NA,NA  | tig00014800-10-1360260 | -238   | CB          | 01846    |
| 3  | Skiv_18-Q3-R9-52_MAXAC.035  | p:Chloroflexi,o:Anaerolineales,g:Ca_Villigracilis               | tig00288374-10-1689890 | 25493  | icaA        | 04391    |
| 4  | Skiv_18-Q3-R9-52_MAXAC.110  | p:Ca_Fermentibacterota,o:midas_o_753,g:midas_g_753              | tig00003286-10-5785960 | 401806 | icaA        | 02352    |
| 5  | Skiv_18-Q3-R9-52_MAXAC.287  | p:Bacteroidetes,o:Sphingobacteriales,g:midas_g_283              | tig00017952-10-763490  | 50436  | icaA        | 03915    |
| 6  | Skiv_18-Q3-R9-52_MAXAC.329  | p:Bacteroidetes,o:Chitinophagales,g:midas_g_32                  | tig00003970-10-4942990 | 392725 | icaA        | 03508    |
| 7  | Vibo_18-Q3-R45-57_BAT3C.142 | p:Proteobacteria,o:Pseudomonadales,g:Agitococcus_lubricus_group | tig00727947-10-3630760 | 309903 | icaA        | 03133    |
| 8  | Vibo_18-Q3-R45-57_BAT3C.148 | p:Bacteroidetes,o:Chitinophagales,g:midas_g_1851                | tig00006219-10-1553890 | 57709  | icaA        | 02870    |
| 9  | Vibo_18-Q3-R45-57_BATAC.19  | p:Proteobacteria,o:Betaproteobacteriales,g:Propionivibrio       | tig00013999-10-313260  | 21425  | icaA        | 02876    |
| 10 | Vibo_18-Q3-R45-57_BATAC.199 | p:Proteobacteria,o:Betaproteobacteriales,g:Propionivibrio       | tig00006229-10-1467280 | 30763  | icaA        | 01086    |
| 11 | Vibo_18-Q3-R45-57_BATAC.411 | p:Bacteroidetes,o:Chitinophagales,g:midas_g_32                  | tig00007178-10-1135940 | 64340  | icaA        | 03046    |
| 12 | Vibo_18-Q3-R45-57_MAXAC.073 | p:Bacteroidetes,o:Chitinophagales,g:midas_g_65                  | tig00177953-10-5481240 | 281286 | icaA        | 04156    |