**Дополнительные материалы**

**ЭКСПЕРИМЕНТАЛЬНЫЕ СТАТЬИ**

**ХИТИНАЗЫ, КОДИРУЕМЫЕ В ГЕНОМАХ АЦИДОБАКТЕРИЙ: ПРОИСХОЖДЕНИЕ И ЭВОЛЮЦИЯ**

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Таблица S1. **Метагеномные последовательности из базы данных Integrated Microbial Genomes and Microbiomes (https://img.jgi.doe.gov), использованные в работе**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Обозначение  ENV\_01 | Номер ОРС  Ga0181539\_10417302 | Длина  350aa | Ссылка на базу данных  [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014151&gene\_oid=Ga0181539\_10417302](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014151&amp;gene_oid=Ga0181539_10417302) | Место отбора образца  Peatland microbial communities from Houghton, MN, USA | Кластер  Cluster V | Примечание |
| ENV\_02 | Ga0181533\_100298511 | 350aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=330001415 2&gene\_oid=Ga0181533\_100298511](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014152&amp;gene_oid=Ga0181533_100298511) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_01 |
| ENV\_03 | Ga0181527\_10009256 | 350aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014153&gene\_oid=Ga0181527\_1000925 6](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014153&amp;gene_oid=Ga0181527_10009256) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_01 |
| ENV\_04 | Ga0181524\_100015387 | 350aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014155&gene\_oid=Ga0181524\_100015387](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014155&amp;gene_oid=Ga0181524_100015387) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_01 |
| ENV\_05 | Ga0181519\_100132134 | 350aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembl ed&taxon\_oid=3300014658&gene\_oid=Ga0181519\_100132134](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014658&amp;gene_oid=Ga0181519_100132134) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_06 | Ga0181528\_100706222 | 366aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014167&gene\_oid=Ga0181528\_1007062 22](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014167&amp;gene_oid=Ga0181528_100706222) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_07 | Ga0181519\_101394571 | 366aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014658&gene\_oid=Ga0181519\_1013945 71](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014658&amp;gene_oid=Ga0181519_101394571) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_08 | Ga0181524\_100065543 | 341aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014155&gene\_oid=Ga0181524\_100065543](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014155&amp;gene_oid=Ga0181524_100065543) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_09 | Ga0181518\_1000100913 | 341aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014156&gene\_oid=Ga0181518\_1000100 913](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014156&amp;gene_oid=Ga0181518_1000100913) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_08 |
| ENV\_10 | Ga0181527\_10385573 | 342aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014153&gene\_oid=Ga0181527\_1038557 3](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014153&amp;gene_oid=Ga0181527_10385573) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_11 | Ga0187876\_10054482 | 341aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018003&gene\_oid=Ga0187876\_10054482](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018003&amp;gene_oid=Ga0187876_10054482) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V |  |
| ENV\_12 | Ga0187866\_10316752 | 341aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=330 0018015&gene\_oid=Ga0187866\_10316752](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018015&amp;gene_oid=Ga0187866_10316752) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V | идентичен ENV\_11 |
| ENV\_13 | Ga0181539\_10184282 | 342aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014151&gene\_oid =Ga0181539\_10184282](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014151&amp;gene_oid=Ga0181539_10184282) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_11 |
| ENV\_14 | Ga0181533\_10542572 | 342aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014152&gene\_oid=Ga0181533\_10542572](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014152&amp;gene_oid=Ga0181533_10542572) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_11 |
| ENV\_15 | Ga0187854\_100228843 | 341aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled& taxon\_oid=3300017938&gene\_oid=Ga0187854\_100228843](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300017938&amp;gene_oid=Ga0187854_100228843) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V | идентичен ENV\_11 |
| ENV\_16 | Ga0187888\_10255982 | 341aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018008&gene\_oid=Ga0187888\_10255982](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018008&amp;gene_oid=Ga0187888_10255982) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V | идентичен ENV\_11 |
| ENV\_17 | Ga0187884\_100290572 | 341aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018009&gene\_oid=Ga0187884\_100290572](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018009&amp;gene_oid=Ga0187884_100290572) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V | идентичен ENV\_11 |
| ENV\_18 | Ga0187873\_10061502 | 341aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018013&gene\_oid=Ga0187873\_10061502](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018013&amp;gene_oid=Ga0187873_10061502) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V | идентичен ENV\_11 |
| ENV\_19 | Ga0187872\_1000433311 | 341aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018017&gene\_oid=Ga0187872\_1000433311](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018017&amp;gene_oid=Ga0187872_1000433311) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V | идентичен ENV\_11 |
| ENV\_20 | Ga0187852\_10240463 | 341aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300019082&gene\_oid=Ga0187852\_10240463](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300019082&amp;gene_oid=Ga0187852_10240463) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V | идентичен ENV\_11 |
| ENV\_21 | Ga0187857\_100167003 | 341aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018026&gene\_oid=Ga0187857\_100167003](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018026&amp;gene_oid=Ga0187857_100167003) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V | идентичен ENV\_11 |
| ENV\_22 | Ga0181524\_100468452 | 342aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014155&gene\_oid=Ga0181524\_100468452](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014155&amp;gene_oid=Ga0181524_100468452) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_11 |
| ENV\_23 | Ga0187858\_100129792 | 341aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembl ed&taxon\_oid=3300018057&gene\_oid=Ga0187858\_100129792](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018057&amp;gene_oid=Ga0187858_100129792) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V | идентичен ENV\_11 |
| ENV\_24 | Ga0181536\_100121942 | 342aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014638&gene\_oid=Ga0181536\_100121942](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014638&amp;gene_oid=Ga0181536_100121942) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_11 |
| ENV\_25 | Ga0181528\_100263312 | 350aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembl ed&taxon\_oid=3300014167&gene\_oid=Ga0181528\_100263312](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014167&amp;gene_oid=Ga0181528_100263312) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_26 | Ga0187858\_100396234 | 341aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018057&gene\_oid=Ga0187858\_1003962 34](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018057&amp;gene_oid=Ga0187858_100396234) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V |  |
| ENV\_27 | Ga0187858\_100102037 | 359aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018057&gene\_oid=Ga0187858\_1001020 37](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018057&amp;gene_oid=Ga0187858_100102037) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V |  |
| ENV\_28 | Ga0181519\_100396233 | 342aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014658&gene\_oid=Ga0181519\_1003962 33](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014658&amp;gene_oid=Ga0181519_100396233) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_29 | Ga0181539\_10165603 | 342aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaG eneDetail&data\_type=assembled&taxon\_oid=3300014151&gene\_oid=Ga0181539\_10165603](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014151&amp;gene_oid=Ga0181539_10165603) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_30 | Ga0181527\_10403643 | 342aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014153&gene\_oid=Ga0181527\_1040364 3](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014153&amp;gene_oid=Ga0181527_10403643) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_29 |
| ENV\_31 | Ga0181518\_100056293 | 342aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014156&gene\_oid=Ga0181518\_1000562 93](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014156&amp;gene_oid=Ga0181518_100056293) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_29 |
| ENV\_32 | Ga0181528\_101346301 | 340aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014167&gene\_oid=Ga0181528\_101346301](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014167&amp;gene_oid=Ga0181528_101346301) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_33 | Ga0187872\_100077167 | 341aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MtaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018017&gene\_o id=Ga0187872\_100077167](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MtaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018017&amp;gene_oid=Ga0187872_100077167) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V |  |
| ENV\_34 | Ga0181533\_100566711 | 342aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014152&gene\_oid=Ga0181533\_1005667 11](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014152&amp;gene_oid=Ga0181533_100566711) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_35 | Ga0187888\_100012410 | 341aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018008&gene\_oid=Ga0187888\_1000124 10](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018008&amp;gene_oid=Ga0187888_100012410) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V | идентичен ENV\_34 |
| ENV\_36 | Ga0187872\_1000152510 | 341aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018017&gene\_oid=Ga0187872\_1000152510](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018017&amp;gene_oid=Ga0187872_1000152510) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V | идентичен ENV\_34 |
| ENV\_37 | Ga0181524\_100018709 | 342aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014155&gene\_oid=Ga0181524\_100018709](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014155&amp;gene_oid=Ga0181524_100018709) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_34 |
| ENV\_38 | Ga0181536\_1000317110 | 342aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon \_oid=3300014638&gene\_oid=Ga0181536\_1000317110](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014638&amp;gene_oid=Ga0181536_1000317110) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_34 |
| ENV\_39 | Ga0187858\_101355492 | 341aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018057&gene\_oid=Ga0187858\_101355492](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018057&amp;gene_oid=Ga0187858_101355492) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V | идентичен ENV\_34 |
| ENV\_40 | Ga0187890\_100306473 | 354aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018044&gene\_oid=Ga0187890\_100306473](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018044&amp;gene_oid=Ga0187890_100306473) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V |  |
| ENV\_41 | Ga0187858\_101376381 | 348aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaG eneDetail&data\_type=assembled&taxon\_oid=3300018057&gene\_oid=Ga0187858\_101376381](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018057&amp;gene_oid=Ga0187858_101376381) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V | идентичен ENV\_40 |
| ENV\_42 | Ga0187858\_100302261 | 352aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018057&gene\_oid=Ga0187858\_100302261](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018057&amp;gene_oid=Ga0187858_100302261) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V |  |
| ENV\_43 | Ga0181519\_100455102 | 350aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014658&gene\_oid=Ga0181519\_100455102](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014658&amp;gene_oid=Ga0181519_100455102) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_44 | Ga0187852\_10796642 | 352aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300019082&gene\_oid=Ga0187852\_1079 6642](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300019082&amp;gene_oid=Ga0187852_10796642) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V |  |
| ENV\_45 | Ga0209446\_10097421 | 336aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300027698&gene\_oid=Ga0209446\_1009742 1](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300027698&amp;gene_oid=Ga0209446_10097421) | Bog forest soil microbial communities from Calvert Island, British Columbia, Canada | Cluster V |  |
| ENV\_46 | Ga0187888\_10164762 | 352aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018008&gene\_oid=Ga0187888\_1016476 2](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018008&amp;gene_oid=Ga0187888_10164762) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V |  |

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| --- | --- | --- | --- | --- | --- | --- |
| ENV\_47 | Ga0187890\_100092632 | 350aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018044&gene\_oid=Ga0187890\_1000926 32](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018044&amp;gene_oid=Ga0187890_100092632) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V |  |
| ENV\_48 | Ga0181528\_100036054 | 349aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014167&gene\_oid=Ga0181528\_100036054](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014167&amp;gene_oid=Ga0181528_100036054) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_49 | Ga0181519\_1000043911 | 353aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014658 &gene\_oid=Ga0181519\_1000043911](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014658&amp;gene_oid=Ga0181519_1000043911) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_50 | Ga0187852\_10058666 | 350aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300019082&gene\_oid=Ga0187852\_1005866 6](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300019082&amp;gene_oid=Ga0187852_10058666) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V |  |
| ENV\_51 | Ga0187873\_10146262 | 353aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018013&gene\_oid=Ga0187873\_1014626 2](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018013&amp;gene_oid=Ga0187873_10146262) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V |  |
| ENV\_52 | Ga0181519\_100124023 | 353aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014658&gene\_oid=Ga0181519\_1001240 23](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014658&amp;gene_oid=Ga0181519_100124023) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_53 | Ga0181519\_100077346 | 350aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembl ed&taxon\_oid=3300014658&gene\_oid=Ga0181519\_100077346](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014658&amp;gene_oid=Ga0181519_100077346) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_54 | Ga0181519\_100059306 | 373aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014658&gene\_oid=Ga0181519\_1000593 06](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014658&amp;gene_oid=Ga0181519_100059306) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_55 | Ga0181539\_10063785 | 353aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014151&gene\_oid=Ga0181539\_1006378 5](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014151&amp;gene_oid=Ga0181539_10063785) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_56 | Ga0181533\_10089483 | 353aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&t axon\_oid=3300014152&gene\_oid=Ga0181533\_10089483](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014152&amp;gene_oid=Ga0181533_10089483) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_55 |
| ENV\_57 | Ga0181527\_10368702 | 353aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014153&gene\_oid=Ga0181527\_10368702](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014153&amp;gene_oid=Ga0181527_10368702) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_55 |
| ENV\_58 | Ga0181524\_100080411 | 362aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled& taxon\_oid=3300014155&gene\_oid=Ga0181524\_100080411](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014155&amp;gene_oid=Ga0181524_100080411) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_55 |
| ENV\_59 | Ga0181536\_100047522 | 353aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014638&gene\_oid=Ga0181536\_100047522](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014638&amp;gene_oid=Ga0181536_100047522) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_55 |
| ENV\_60 | Ga0181528\_100053466 | 329aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembl ed&taxon\_oid=3300014167&gene\_oid=Ga0181528\_100053466](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014167&amp;gene_oid=Ga0181528_100053466) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_61 | Ga0209039\_101339071 | 346aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300027825&gene\_oid=Ga0209039\_1013390 71](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300027825&amp;gene_oid=Ga0209039_101339071) | Bog forest soil microbial communities from Calvert Island, British Columbia, Canada | Cluster V |  |
| ENV\_62 | Ga0187870\_11294091 | 314aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300017998&gene\_oid=Ga0187870\_1129409 1](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300017998&amp;gene_oid=Ga0187870_11294091) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V |  |
| ENV\_63 | Ga0181518\_1000058623 | 326aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014156&gene\_oid=Ga0181518\_1000058 623](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014156&amp;gene_oid=Ga0181518_1000058623) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_64 | Ga0181527\_10124172 | 353aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembl ed&taxon\_oid=3300014153&gene\_oid=Ga0181527\_10124172](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014153&amp;gene_oid=Ga0181527_10124172) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_65 | Ga0187852\_10391252 | 349aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300019082&gene\_oid=Ga0187852\_1039125 2](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300019082&amp;gene_oid=Ga0187852_10391252) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V |  |
| ENV\_66 | Ga0187858\_100877912 | 349aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018057&gene\_oid=Ga0187858\_1008779 12](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018057&amp;gene_oid=Ga0187858_100877912) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V | идентичен ENV\_65 |
| ENV\_67 | Ga0187876\_11056091 | 320aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018003&gene\_oid=Ga0187876\_1105609 1](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018003&amp;gene_oid=Ga0187876_11056091) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V |  |
| ENV\_68 | Ga0209446\_100003735 | 324aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300027698&gene\_oid=Ga0209446\_1000037 35](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300027698&amp;gene_oid=Ga0209446_100003735) | Bog forest soil microbial communities from Calvert Island, British Columbia, Canada | Cluster V |  |
| ENV\_69 | Ga0181528\_100103824 | 332aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014167&gene\_oid=Ga0181528\_100103824](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014167&amp;gene_oid=Ga0181528_100103824) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_40 |
| ENV\_70 | Ga0181533\_10428181 | 342aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014152&gene\_oid= Ga0181533\_10428181](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014152&amp;gene_oid=Ga0181533_10428181) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_71 | Ga0209483\_10473052 | 314aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300025862&gene\_oid=Ga0209483\_1047305 2](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300025862&amp;gene_oid=Ga0209483_10473052) | Arctic peat soil microbial communities from the Barrow Environmental Observatory site, Barrow, Alaska, USA | Cluster V |  |
| ENV\_72 | Ga0208357\_10224161 | 348aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300025703&gene\_oid=Ga0208357\_1022416 1](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300025703&amp;gene_oid=Ga0208357_10224161) | Arctic peat soil microbial communities from the Barrow Environmental Observatory site, Barrow, Alaska, USA | Cluster V |  |
| ENV\_73 | Ga0208849\_10095132 | 336aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300025664&gene\_oid=Ga0208849\_10095132](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300025664&amp;gene_oid=Ga0208849_10095132) | Arctic peat soil microbial communities from the Barrow Environmental Observatory site, Barrow, Alaska, USA | Cluster V |  |
| ENV\_74 | Ga0208357\_100018414 | 336aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300025703&gene\_oid=Ga0208357\_100018414](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300025703&amp;gene_oid=Ga0208357_100018414) | Arctic peat soil microbial communities from the Barrow Environmental Observatory site, Barrow, Alaska, USA | Cluster V |  |
| ENV\_75 | Ga0209483\_10500732 | 359aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300025862&gene\_oid=Ga0209483\_10500732](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300025862&amp;gene_oid=Ga0209483_10500732) | Arctic peat soil microbial communities from the Barrow Environmental Observatory site, Barrow, Alaska, USA | Cluster V |  |
| ENV\_76 | Ga0209538\_10272672 | 356aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300025846&gene\_oid=Ga02 09538\_10272672](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300025846&amp;gene_oid=Ga0209538_10272672) | Arctic peat soil microbial communities from the Barrow Environmental Observatory site, Barrow, Alaska, USA | Cluster I |  |
| ENV\_77 | Ga0120167\_10030913 | 363aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300012001&gene\_oid=Ga0120167\_1003091 3](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300012001&amp;gene_oid=Ga0120167_10030913) | Permafrost microbial communities from Nunavut, Canada | Cluster I |  |
| ENV\_78 | Ga0120158\_100049552 | 363aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300013772&gene\_oid=Ga0120158\_1000495 52](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300013772&amp;gene_oid=Ga0120158_100049552) | Permafrost microbial communities from Nunavut, Canada | Cluster I | идентичен ENV\_77 |
| ENV\_79 | Ga0208357\_100172610 | 361aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300025703&gene\_oid=Ga0208357\_100172610](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300025703&amp;gene_oid=Ga0208357_100172610) | Arctic peat soil microbial communities from the Barrow Environmental Observatory site, Barrow, Alaska, USA | Cluster I |  |
| ENV\_80 | Ga0120158\_100181614 | 357aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300013772&gene\_oid=Ga0120158\_100181614](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300013772&amp;gene_oid=Ga0120158_100181614) | Permafrost microbial communities from Nunavut, Canada | Cluster I |  |
| ENV\_81 | Ga0209483\_10467891 | 347aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300025862&gene\_oid=Ga0209483\_1046789 1](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300025862&amp;gene_oid=Ga0209483_10467891) | Arctic peat soil microbial communities from the Barrow Environmental Observatory site, Barrow, Alaska, USA | Cluster I |  |
| ENV\_82 | Ga0209483\_10898951 | 359aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300025862&gene\_oid=Ga0209483\_1089895 1](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300025862&amp;gene_oid=Ga0209483_10898951) | Arctic peat soil microbial communities from the Barrow Environmental Observatory site, Barrow, Alaska, USA | Cluster I |  |
| ENV\_83 | Ga0208079\_10017088 | 347aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300025481&gene\_oid=Ga0208079\_1001708 8](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300025481&amp;gene_oid=Ga0208079_10017088) | Arctic peat soil microbial communities from the Barrow Environmental Observatory site, Barrow, Alaska, USA | Cluster I |  |
| ENV\_84 | Ga0209638\_10133593 | 347aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300025725&gene\_oid=Ga0209638\_1013359 3](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300025725&amp;gene_oid=Ga0209638_10133593) | Arctic peat soil microbial communities from the Barrow Environmental Observatory site, Barrow, Alaska, USA | Cluster I |  |
| ENV\_85 | Ga0209014\_100017525 | 347aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300025857&gene\_oid=Ga0209014\_100017525](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300025857&amp;gene_oid=Ga0209014_100017525) | Arctic peat soil microbial communities from the Barrow Environmental Observatory site, Barrow, Alaska, USA | Cluster I | идентичен ENV\_84 |
| ENV\_86 | Ga0208080\_10278292 | 347aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300025553&gene\_oid=Ga0208080\_10278292](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300025553&amp;gene_oid=Ga0208080_10278292) | Arctic peat soil microbial communities from the Barrow Environmental Observatory site, Barrow, Alaska, USA | Cluster I |  |
| ENV\_87 | Ga0209540\_100065322 | 367aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300025888&gene\_oid=Ga0209540\_100065322](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300025888&amp;gene_oid=Ga0209540_100065322) | Arctic peat soil microbial communities from the Barrow Environmental Observatory site, Barrow, Alaska, USA | Cluster I |  |
| ENV\_88 | Ga0120167\_10051132 | 548aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembl ed&taxon\_oid=3300012001&gene\_oid=Ga0120167\_10051132](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300012001&amp;gene_oid=Ga0120167_10051132) | Permafrost microbial communities from Nunavut, Canada | Cluster IV |  |
| ENV\_89 | Ga0208355\_10017145 | 396aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300025581&gene\_oid=Ga0208355\_1001714 5](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300025581&amp;gene_oid=Ga0208355_10017145) | Arctic peat soil microbial communities from the Barrow Environmental Observatory site, Barrow, Alaska, USA | нет |  |
| ENV\_90 | Ga0120158\_1000108424 | 547aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300013772&gene\_oid=Ga0120158\_1000108 424](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300013772&amp;gene_oid=Ga0120158_1000108424) | Permafrost microbial communities from Nunavut, Canada | Cluster IV |  |
| ENV\_91 | Ga0120161\_10656091 | 320aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300012005&gene\_oid=Ga0120161\_10656091](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300012005&amp;gene_oid=Ga0120161_10656091) | Permafrost microbial communities from Nunavut, Canada | Cluster I |  |
| ENV\_92 | Ga0208850\_10144101 | 318aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300025457&gene\_oid=Ga020885 0\_10144101](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300025457&amp;gene_oid=Ga0208850_10144101) | Arctic peat soil microbial communities from the Barrow Environmental Observatory site, Barrow, Alaska, USA | нет |  |
| ENV\_93 | Ga0120161\_10611301 | 334aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300012005&gene\_oid=Ga0120161\_1061130 1](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300012005&amp;gene_oid=Ga0120161_10611301) | Permafrost microbial communities from Nunavut, Canada | нет |  |
| ENV\_94 | Ga0120158\_100335094 | 535aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300013772&gene\_oid=Ga0120158\_100335094](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300013772&amp;gene_oid=Ga0120158_100335094) | Permafrost microbial communities from Nunavut, Canada | нет |  |
| ENV\_95 | Ga0120158\_1000102217 | 310aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300013772&gene\_oid =Ga0120158\_1000102217](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300013772&amp;gene_oid=Ga0120158_1000102217) | Permafrost microbial communities from Nunavut, Canada | Cluster I | делеция в активном центре |

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| --- | --- | --- | --- | --- | --- | --- |
| ENV\_96 | Ga0120158\_100000556 | 310aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300013772&gene\_oid=Ga0120158\_1000005 56](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300013772&amp;gene_oid=Ga0120158_100000556) | Permafrost microbial communities from Nunavut, Canada | Cluster I | идентичен ENV\_95 |
| ENV\_97 | Ga0181524\_100062423 | 342aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_typ e=assembled&taxon\_oid=3300014155&gene\_oid=Ga0181524\_100062423](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014155&amp;gene_oid=Ga0181524_100062423) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_70 |
| ENV\_98 | Ga0181518\_100592871 | 342aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014156&gene\_oid=Ga0181518\_100592871](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014156&amp;gene_oid=Ga0181518_100592871) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_70 |
| ENV\_99 | Ga0181536\_100033475 | 342aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembl ed&taxon\_oid=3300014638&gene\_oid=Ga0181536\_100033475](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014638&amp;gene_oid=Ga0181536_100033475) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_70 |
| ENV\_100 | Ga0181519\_100534382 | 363aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014658&gene\_oid=Ga0181519\_100534382](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014658&amp;gene_oid=Ga0181519_100534382) | Peatland microbial communities from Houghton, MN, USA | Cluster VI |  |
| ENV\_101 | Ga0187890\_100185291 | 327aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018044&gene\_oid=Ga0187890\_100185291](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018044&amp;gene_oid=Ga0187890_100185291) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V |  |
| ENV\_102 | Ga0181528\_100345923 | 305aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014167&gene\_oid=Ga018152 8\_100345923](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014167&amp;gene_oid=Ga0181528_100345923) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_103 | Ga0181519\_100085051 | 330aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014658&gene\_oid=Ga0181519\_1000850 51](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014658&amp;gene_oid=Ga0181519_100085051) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_104 | Ga0181533\_10005461 | 330aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014152&gene\_oid=Ga0181533\_10005461](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014152&amp;gene_oid=Ga0181533_10005461) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_105 | Ga0187890\_101504121 | 314aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018044&gene\_oid=Ga01878 90\_101504121](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018044&amp;gene_oid=Ga0187890_101504121) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster V |  |
| ENV\_106 | Ga0181536\_1000008766 | 310aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014638&gene\_oid=Ga0181536\_1000008 766](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014638&amp;gene_oid=Ga0181536_1000008766) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_107 | Ga0181518\_101226941 | 308aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014156&gene\_oid=Ga0181518\_1012269 41](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014156&amp;gene_oid=Ga0181518_101226941) | Peatland microbial communities from Houghton, MN, USA | Cluster V | идентичен ENV\_106 |
| ENV\_108 | Ga0181528\_101709752 | 334aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014167&gene\_oid=Ga0181528\_101709752](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014167&amp;gene_oid=Ga0181528_101709752) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_109 | Ga0181528\_100888572 | 303aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300014167&gene\_oid=Ga0181528\_1 00888572](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300014167&amp;gene_oid=Ga0181528_100888572) | Peatland microbial communities from Houghton, MN, USA | Cluster V |  |
| ENV\_110 | Ga0187866\_100278813 | 366aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018015&gene\_oid=Ga0187866\_1002788 13](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018015&amp;gene_oid=Ga0187866_100278813) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster I |  |
| ENV\_111 | Ga0187870\_10186363 | 366aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300017998&gene\_oid=Ga0187870\_1018636 3](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300017998&amp;gene_oid=Ga0187870_10186363) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster I |  |
| ENV\_112 | Ga0187870\_10158822 | 354aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300017998&gene\_oid=Ga0187870\_10158822](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300017998&amp;gene_oid=Ga0187870_10158822) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster I |  |
| ENV\_113 | Ga0187866\_10016482 | 354aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018015&gene\_oid=Ga0187866\_10016482](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018015&amp;gene_oid=Ga0187866_10016482) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster I | идентичен ENV\_112 |
| ENV\_114 | Ga0187886\_10196342 | 354aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018018&gene\_oid=Ga0187886\_10196342](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018018&amp;gene_oid=Ga0187886_10196342) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster I | идентичен ENV\_112 |
| ENV\_115 | Ga0187870\_10047791 | 359aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300017998&gene\_oid=Ga0187870\_10047791](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300017998&amp;gene_oid=Ga0187870_10047791) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster I |  |
| ENV\_116 | Ga0187866\_100164815 | 359aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300018015&gene\_oid=Ga0187866\_100164815](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018015&amp;gene_oid=Ga0187866_100164815) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster I | идентичен ENV\_115 |
| ENV\_117 | Ga0187886\_10048219 | 359aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaG eneDetail&data\_type=assembled&taxon\_oid=3300018018&gene\_oid=Ga0187886\_10048219](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018018&amp;gene_oid=Ga0187886_10048219) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster I | идентичен ENV\_115 |
| ENV\_118 | Ga0187870\_10011824 | 348aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=3300017998&gene\_oid=Ga0187870\_10011824](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300017998&amp;gene_oid=Ga0187870_10011824) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster I |  |
| ENV\_119 | Ga0187866\_10012534 | 348aa | [https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&page=metaGeneDetail&data\_type=assembled&taxon\_oid=33000 18015&gene\_oid=Ga0187866\_10012534](https://img.jgi.doe.gov/cgi-bin/m/main.cgi?section=MetaGeneDetail&amp;page=metaGeneDetail&amp;data_type=assembled&amp;taxon_oid=3300018015&amp;gene_oid=Ga0187866_10012534) | Peatland microbial communities from SPRUCE experiment site at the Marcell Experimental Forest, Minnesota, USA | Cluster I | идентичен ENV\_118 |