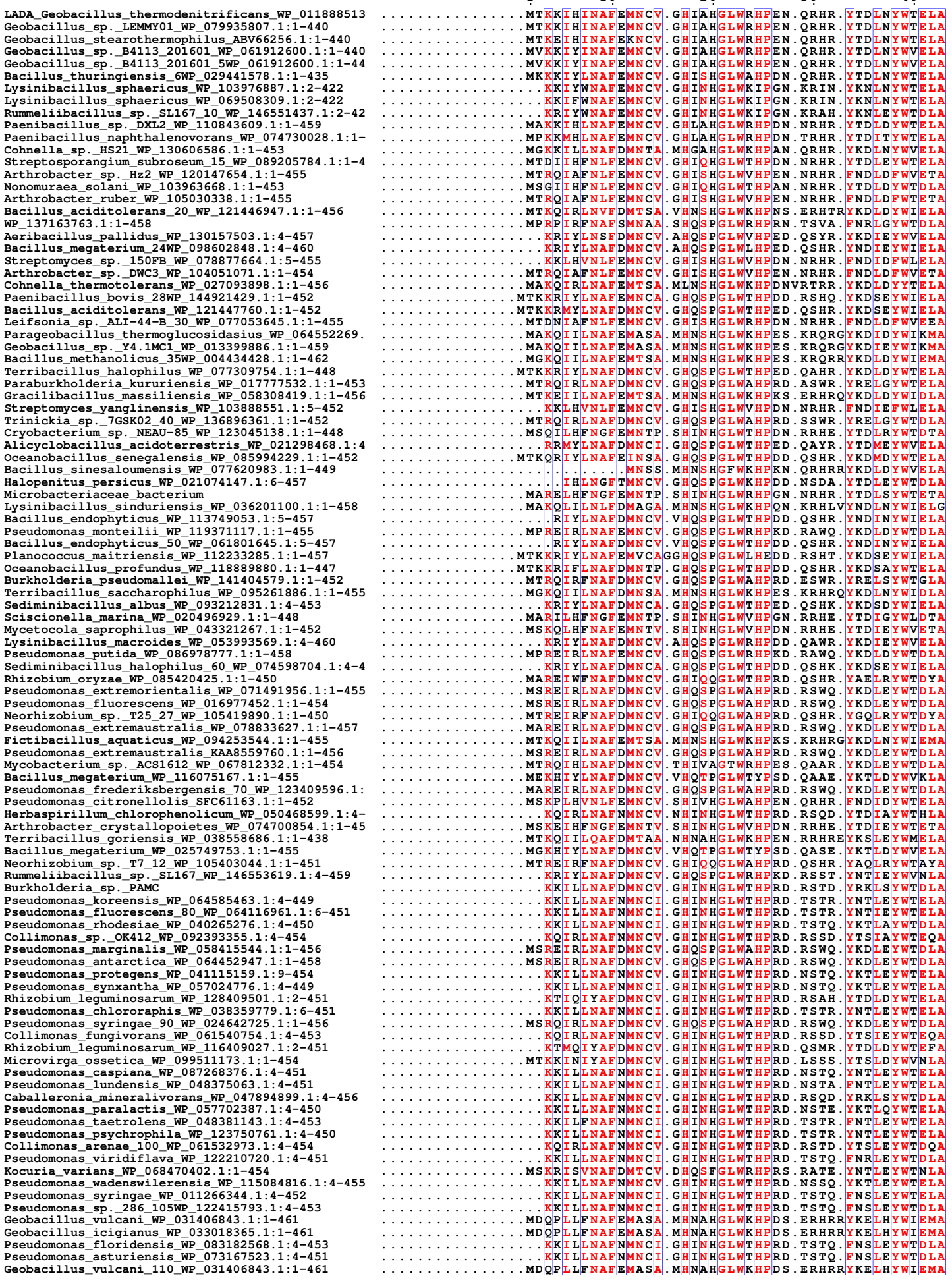
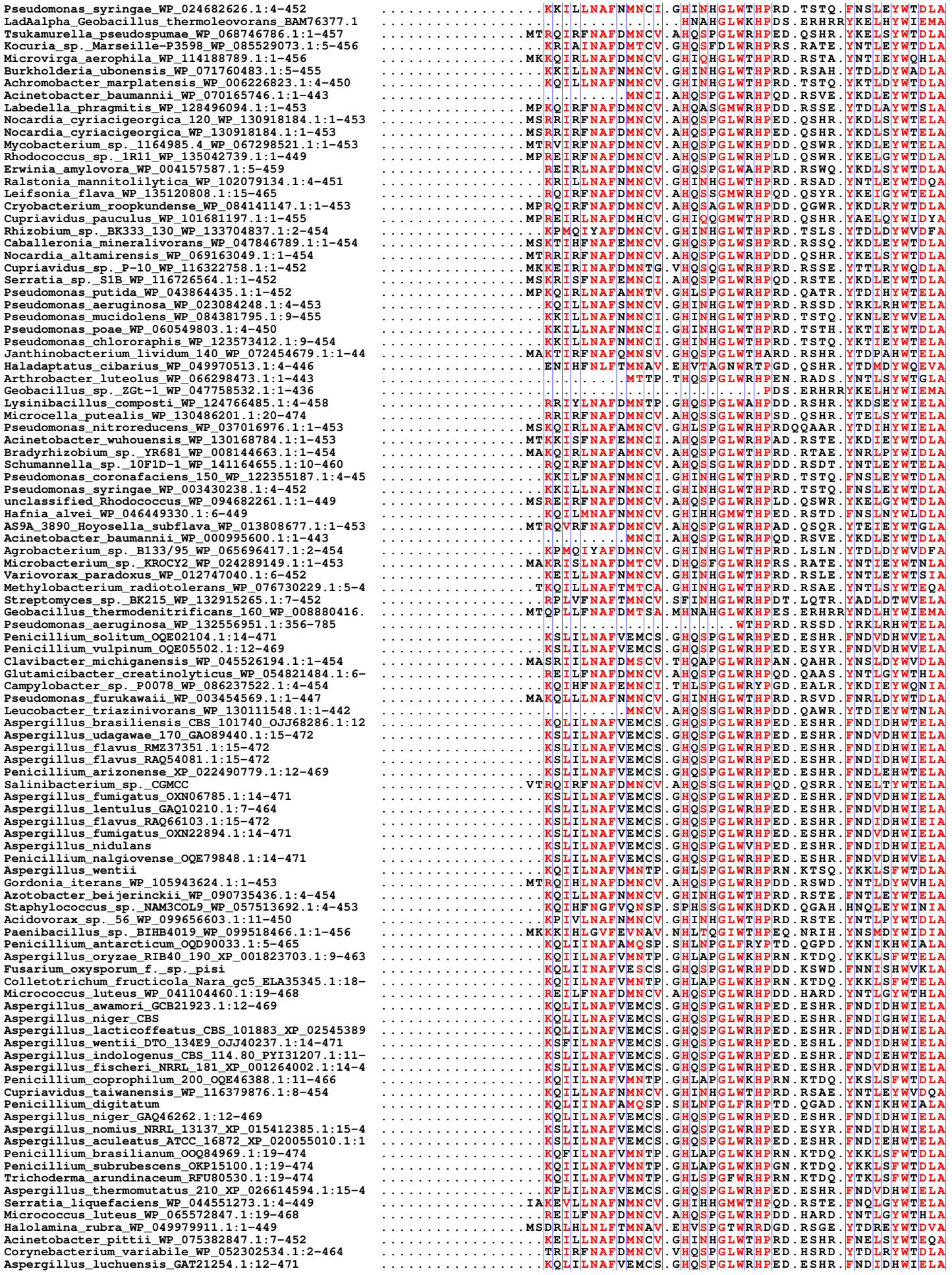
Supplementary Figure 1. Two hundred and sixty amino acid sequences with percentage identities ranging from 99% to 20% at E-scores <10−10 and bit score >50 carrying bacterial luciferase family domain (PF00296) aligned by MUSCLE.

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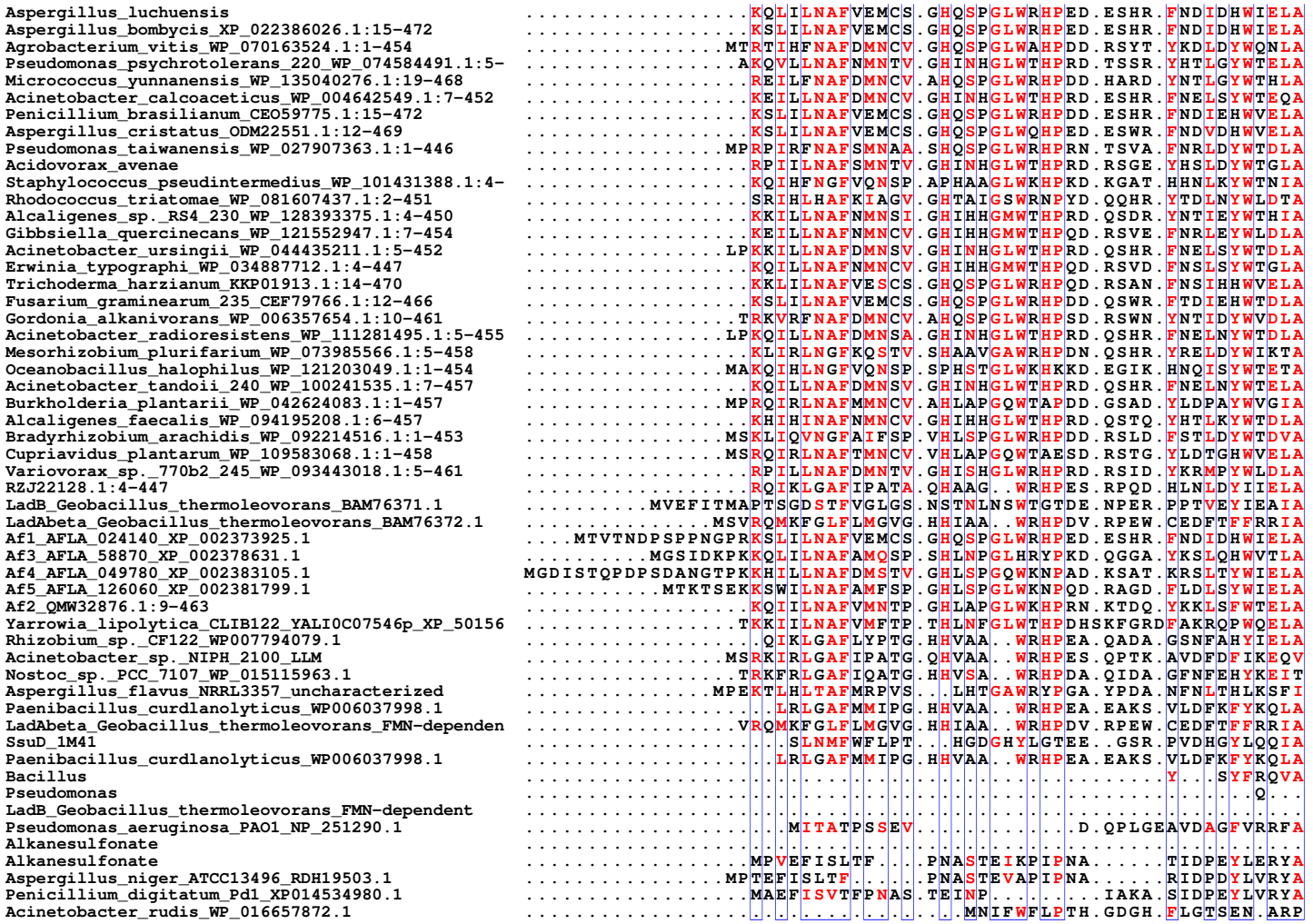
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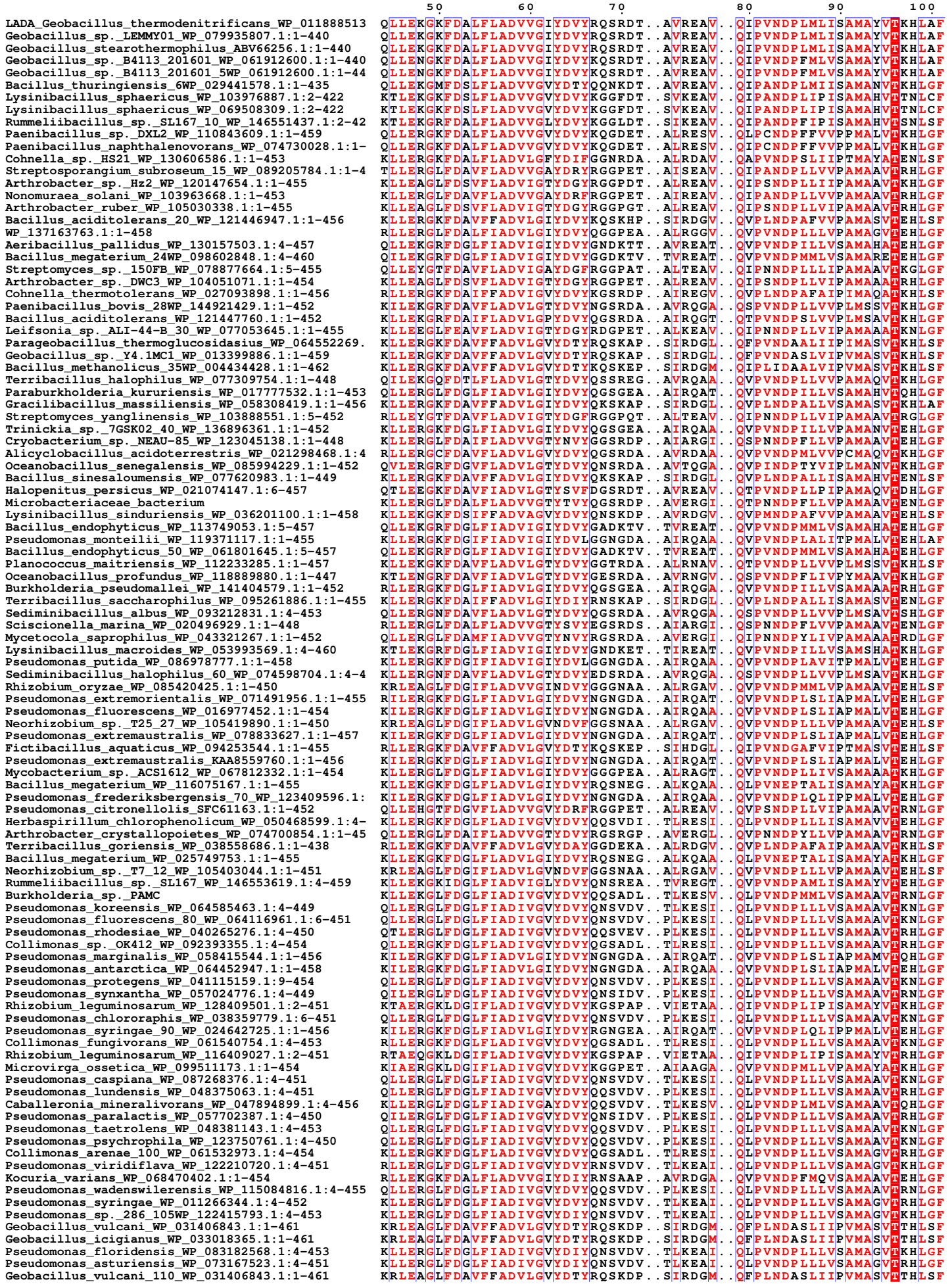
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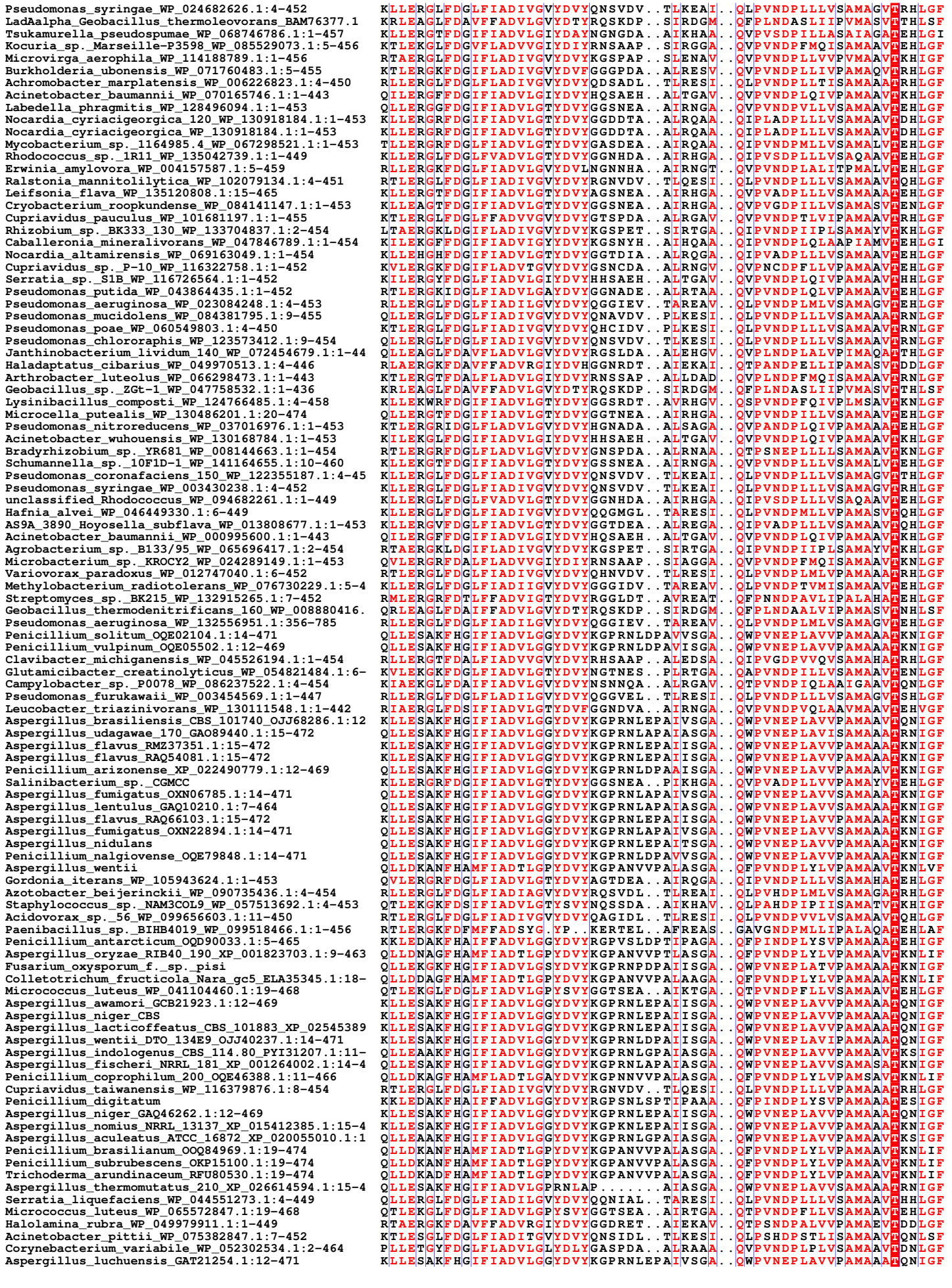

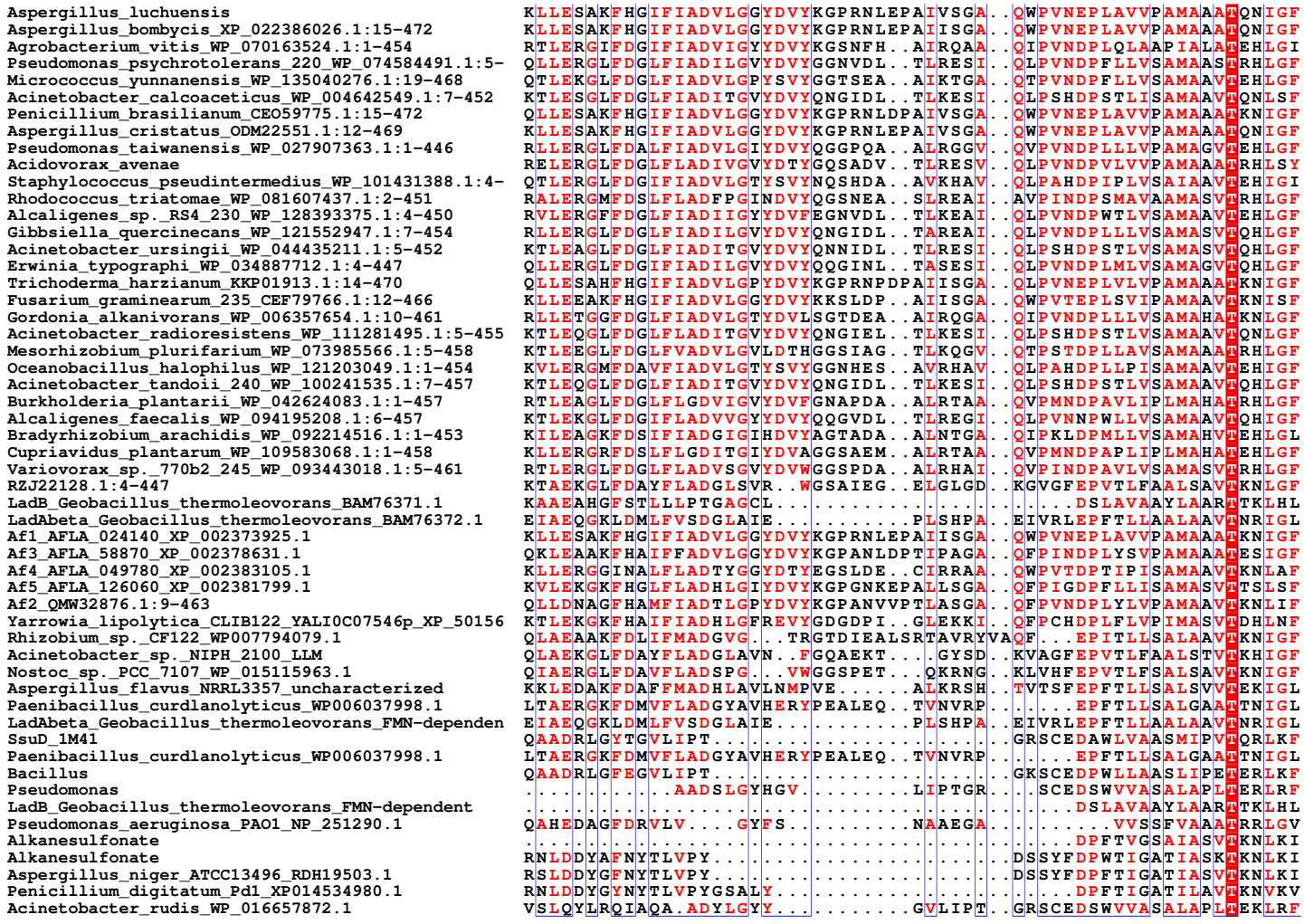
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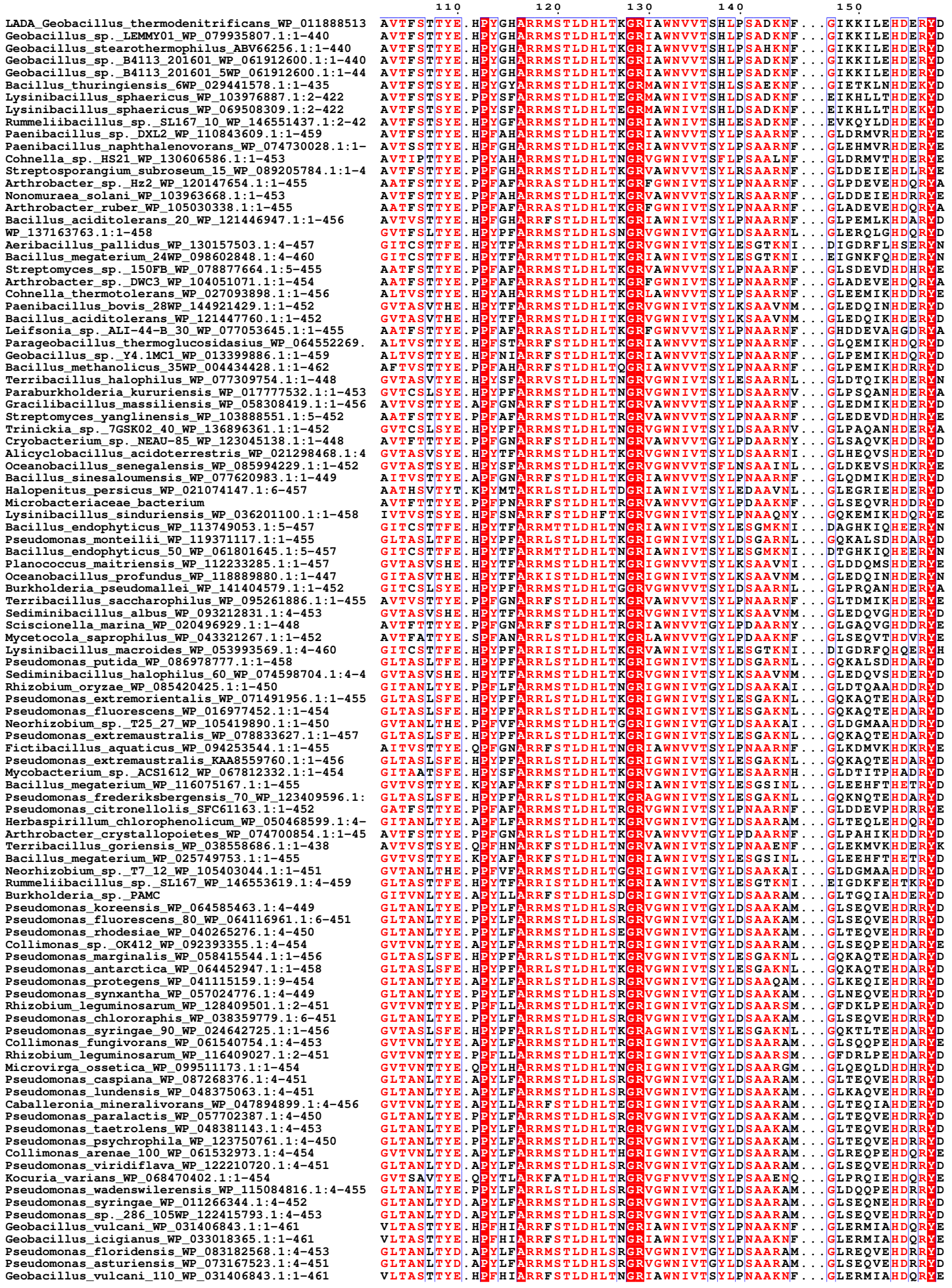
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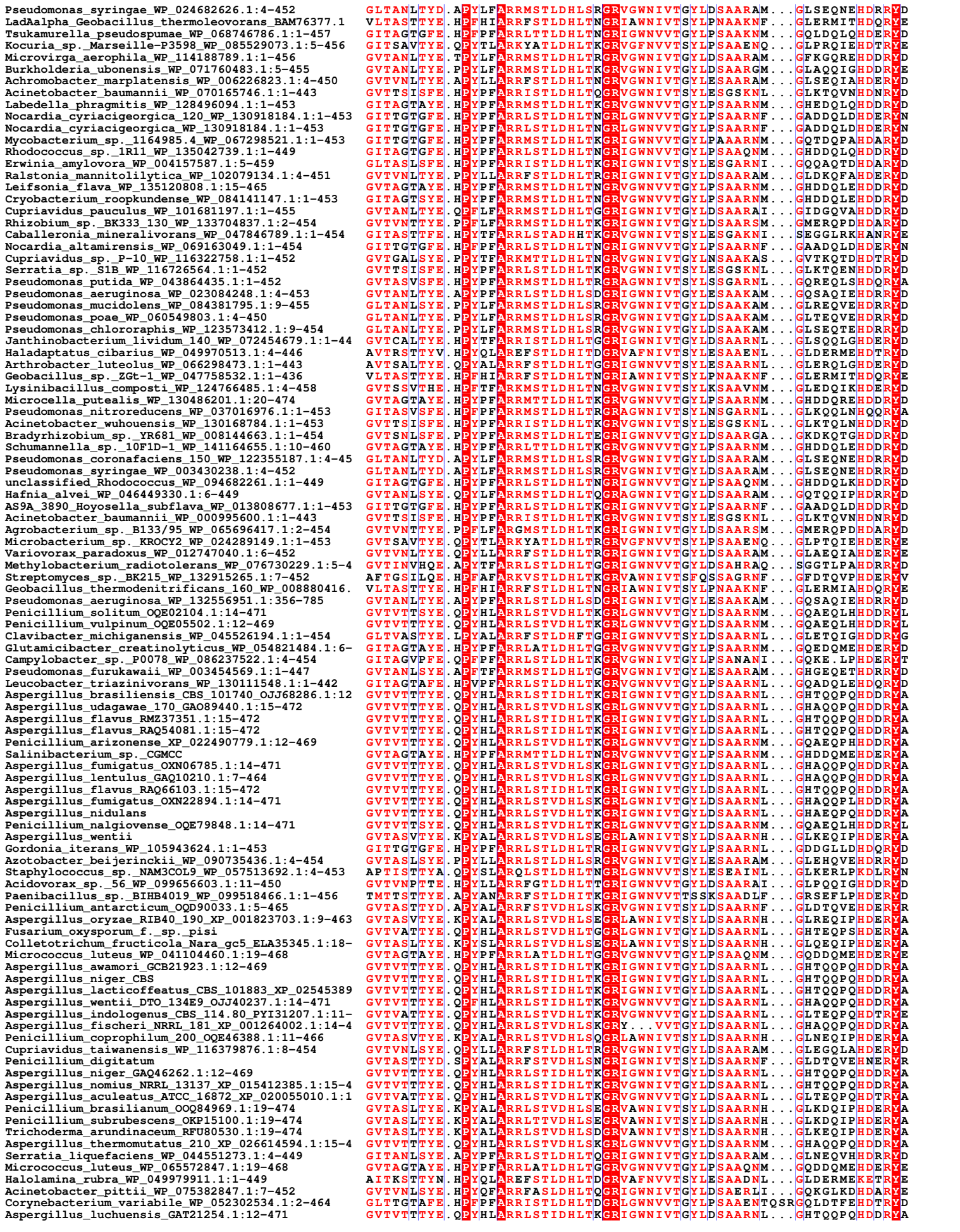
Lysinibacillus_sphaericus_WP_069508309.1:2-422 AVTFSTSYE.PPYSFARRMSTLDHLTEGRMAWNIVTSHLDSADKNF...EIKHLLTHDEKYD
Rummeliibacillus_sp._SL167_10_WP_146551437.1:2-42 AVTFSTSYE.HPYGFARRMSTLDHLTNGRIAWNIVTSHLESADKNF...EVKQYLDHDEKYD
Paenibacillus_sp._DXL2_WP_110843609.1:1-459 AVTFSTTYE.HPFAHARRMSTLDHLTKGRIAWNVVTSYLPSAARNF...GLDRMVRHDERYE
Paenibacillus_naphthalenovorans_WP_074730028.1:1- AVTSSTTYE.HPFGHARRMSTLDHLTKGRIAWNVVTSYLPSAARNF...GLEHMVRHDERYE
Cohnella_sp._HS21_WP_130606586.1:1-453 AVTIPTTYE.PPYAHARRMSTLDHLTNGRVGWNIVTSFLPSAALNF...GLDRMVTHDERYE
Streptosporangium_subroseum_15_WP_089205784.1:1-4 AVTFSTTYE.PPFGHARRMSTLDHLTKGRVAWNVVTSYLRSAARNF...GLDDEIEHDLRYE
Arthrobacter_sp._Hz2_WP_120147654.1:1-455 AATFSTTYE.PPFAFARRASTLDHLTKGRFGWNIVTSYLPNAARNF...GLPDEVEHDQRYA
Nonomuraea_solani_WP_103963668.1:1-453 AVTFSTTYE.PPFAHARRMSTLDHLTKGRVAWNVVTSYLRSAARNF...GLDDEIEHDRRYE
Arthrobacter_ruber_WP_105030338.1:1-455 AATFSTTYE.PPFAFARRASTLDHLTKGRFGWNIVTSYLPNAARNF...GLADEVEHDQRYA
Bacillus_aciditolerans_20_WP_121446947.1:1-456 AVTVSTTYE.HPFGHARRFSTLDHLTKGRIAWNIVTSYLPNAARNF...GLPEMLKHDARYD
WP_137163763.1:1-458 GVTFSLTYE.HPYPFARRMSTLDHLSNGRVGWNIVTGYLDSAARNL...GLERQLGHDQRYD
Aeribacillus_pallidus_WP_130157503.1:4-457 GITCSTTFE.HPYTFARRMSTLDHLTKGRVGWNIVTSYLESGTKNI...DIGDRFLHSERYN
Bacillus_megaterium_24WP_098602848.1:4-460 GITCSTTFE.HPYTFARRMTTLDHLTKGRIAWNIVTSYLESGTKNI...EIGNKFQHDERYN
Streptomyces_sp._150FB_WP_078877664.1:5-455 AATFSTTYE.PPFAFARRMSTLDHLTKGRVAWNVVTSYLPNAARNF...GLSDEVDHDHRYE
Arthrobacter_sp._DWC3_WP_104051071.1:1-454 AATFSTTYE.PPFAFARRASTLDHLTKGRFGWNIVTSYLPNAARNF...GLADEVEHDQRYA
Cohnella_thermotolerans_WP_027093898.1:1-456 ALTVSTTYE.HPYAHARRMSTLDHLTKGRLAWNVVTSYLPSAARNF...GLEEMIKHDDRYE
Paenibacillus_bovis_28WP_144921429.1:1-452 GVTASVTHE.HPYTFARRMSTLDHLTKGRVGWNIVTSYLKSAAVNM...GLEDQINHDERYD
Bacillus_aciditolerans_WP_121447760.1:1-452 GVTASVTHE.HPYTFARRMSTLDHLTKGRVGWNIVTSYLKSAAVNM...GLEDQIKHDERYD
Leifsonia_sp._ALI-44-B_30_WP_077053645.1:1-455 AATFSTTYE.PPFAFARRASTLDHLTKGRFGWNVVTSYLPNAARNF...GHDDEVAHGDRYA
Parageobacillus_thermoglucosidasius_WP_064552269. ALTVSTTYE.HPFSTARRFSTLDHLTKGRIAWNVVTSYLPNAARNF...GLQEMIKHDQRYD
Geobacillus_sp._Y4.1MC1_WP_013399886.1:1-459 ALTVSTTYE.HPFNIARRFSTLDHLTKGRIAWNVVTSYLPNAARNF...GLPEMIKHDQRYD
Bacillus_methanolicus_35WP_004434428.1:1-462 AFTVSTTYE.PPFAHARRFSTLDHLTQGRIAWNVVTSYLPNAARNF...GLPEMIKHDRRYD
Terribacillus_halophilus_WP_077309754.1:1-448 GVTASVTYE.HPYSFARRVSTLDHLTNGRVGWNIVTSYLESAARNL...GLDTQIKHDERYN
Paraburkholderia_kururiensis_WP_017777532.1:1-453 GVTCSLSYE.HPYPFARRMSTLDHLTNGRVGWNIVTSYLDSAARNV...GLPSQANHDERYA
Gracilibacillus_massiliensis_WP_058308419.1:1-456 AVTVSTTYE.APFGNARRFSTLDHLTKGRVAWNVVTSYLPNAARNF...GLEDMIKHDERYD
Streptomyces_yanglinensis_WP_103888551.1:5-452 AATFSTTYE.PPFAFARRMSTLDHLTRGRVAWNVVTSYLPNAARNF...GLEDEVDHDHRYE
Trinickia_sp._7GSK02_40_WP_136896361.1:1-452 GVTCSLSYE.HPYPFARRMSTLDHLTNGRVGWNIVTSYLDSAARNV...GLPAQANHDERYA
Cryobacterium_sp._NEAU-85_WP_123045138.1:1-448 AVTFTTTYE.PPFGNARRFSTLDHLTNGRVAWNVVTGYLPDAARNY...GLSAQVKHDDRYD
Alicyclobacillus_acidoterrestris_WP_021298468.1:4 GVTASVSYE.HPYTFARRMSTLDHLTKGRVGWNIVTSYLDSAARNI...GLHEQVSHDERYD
Oceanobacillus_senegalensis_WP_085994229.1:1-452 GVTASTSYE.HPYSFARRMSTLDHLTKGRVGWNVVTSFLNSAAINL...GLDKEVSHDKRYE
Bacillus_sinesaloumensis_WP_077620983.1:1-449 AITVSTTYE.APFGNARRFSTLDHLTKGRIAWNVVTSYLPNAARNF...GLQDMIKHDERYD
Halopenitus_persicus_WP_021074147.1:6-457 AATHSVTYT.KPYMTAKRLSTLDHLTDGRIAWNIVTSYLEDAAVNL...GLEGRIEHDERYE
Microbacteriaceae_bacterium AVTFTTTYE.PPFPNARRFSTLDHLTRGRVAWNVVTGYLPDAAKNF...GLSEQVRHDDRYD
Lysinibacillus_sinduriensis_WP_036201100.1:1-458 IVTVSTSYE.HPFSNARRFSTLDHFTKGRVGWNIVTSYLPNAAQNY...GQKEMIKHDQRYE
Bacillus_endophyticus_WP_113749053.1:5-457 GITCSTTFE.HPYTFARRMTTLDHLTNGRIAWNIVTSYLESGMKNI...DAGHKIQHEERYN
Pseudomonas_monteilii_WP_119371117.1:1-455 GLTASLTFE.HPYPFARRLSTLDHLTKGRIAWNIVTSYLDSGARNL...GQKALSDHDARYD
Bacillus_endophyticus_50_WP_061801645.1:5-457 GITCSTTFE.HPYTFARRMTTLDHLTNGRIAWNIVTSYLESGMKNI...DTGHKIQHEERYN
Planococcus_maitriensis_WP_112233285.1:1-457 GVTASVSHE.HPYTFARRMSTLDHLTKGRIGWNVVTSYLKSAAVNI...GLDDQMSHDERYE
Oceanobacillus_profundus_WP_118889880.1:1-447 GITASVTHE.HPYTFARKISTLDHLTNGRIGWNIVTSYLKSAAVNM...GLEDQINHDERYN
Burkholderia_pseudomallei_WP_141404579.1:1-452 GITCSLSYE.HPYPFARRMSTLDHLTGGRVGWNVVTSYLDSAARNL...GLPRQANHDERYA
Terribacillus_saccharophilus_WP_095261886.1:1-455 AVTVSTTYE.PPFGNARRFSTLDHLTKGRVAWNVVTSYLPNAARNF...GLTDMIKHDERYE
Sediminibacillus_albus_WP_093212831.1:4-453 GVTASVSHE.HPYTFARRMSTLDHLTKGRVGWNIVTSYLKSAAVNM...GLEDQVGHDERYD
Sciscionella_marina_WP_020496929.1:1-448 AVTFTTTYE.PPFGNARRFSTLDHLTRGRIAWNVVTGYLPDAARNY...GLGAQVGHDDRYE
Mycetocola_saprophilus_WP_043321267.1:1-452 AVTFATTYE.SPFANARRLSTLDHLTKGRLAWNVVTGYLPDAAKNF...GLSEQVTHDVRYE
Lysinibacillus_macroides_WP_053993569.1:4-460 GITCSTTFE.HPYPFARRISTLDHLTKGRVAWNIVTSYLESGTKNI...DIGDRFQHQERYH
Pseudomonas_putida_WP_086978777.1:1-458 GLTASLTFE.HPYPFARRLSTLDHLTKGRIGWNIVTSYLDSGARNL...GQKALSDHDARYD
Sediminibacillus_halophilus_60_WP_074598704.1:4-4 GVTASVSHE.HPYTFARRMSTLDHLTKGRVGWNIVTSYLKSAAVNM...GLEDQVSHDERYD
Rhizobium_oryzae_WP_085420425.1:1-450 GITANLTYE.PPFLFARRMSTLDHLTNGRIGWNIVTGYLDSAAKAI...GLDTQAAHDDRYD
Pseudomonas_extremorientalis_WP_071491956.1:1-455 GLTASLSFE.HPYPFARRLSTLDHLTKGRIGWNIVTSYLESGAKNL...GQKAQTEHDARYD
Pseudomonas_fluorescens_WP_016977452.1:1-454 GLTASLSFE.HPYPFARRLSTLDHLTKGRIGWNIVTSYLESGAKNL...GQKAQTEHDARYD
Neorhizobium_sp._T25_27_WP_105419890.1:1-450 GVTANLTHE.PPFVFARRMSTLDHLTGGRIGWNIVTGYLDSAAKAI...GLDGMAAHDDRYD
Pseudomonas_extremaustralis_WP_078833627.1:1-457 GLTASLSFE.HPYPFARRLSTLDHLTKGRIGWNIVTSYLESGAKNL...GQKAQTEHDARYD
Fictibacillus_aquaticus_WP_094253544.1:1-455 AITVSTTYE.QPFGNARRFSTLDHLTNGRIAWNVVTSYLPNAARNF...GLKDMVKHDKRYE
Pseudomonas_extremaustralis_KAA8559760.1:1-456 GLTASLSFE.HPYPFARRLSTLDHLTKGRIGWNIVTSYLESGAKNL...GQKAQTEHDARYD
Mycobacterium_sp._ACS1612_WP_067812332.1:1-454 GITAATSFE.HPYSFARRMSTLDHLTKGRVGWNIVTGYLESAARNH...GLDTITPHADRYD
Bacillus_megaterium_WP_116075167.1:1-455 GVTVSTTYE.KPYAFARKFSTLDHLTNGRIAWNIVTSYLESGSINL...GLEEHFTHETRYD
Pseudomonas_frederiksbergensis_70_WP_123409596.1: GLTASLSFE.HPYPFARRLSTLDHLTKGRAGWNIVTSYLESGAKNL...GQKNQTEHDARYD
Pseudomonas_citronellolis_SFC61163.1:1-452 GATFSTTYE.PPFAFARRMSTLDHLTRGRVGWNIVTSYLPNAARNF...GLDDEVPHDRRYE
Herbaspirillum_chlorophenolicum_WP_050468599.1:4- GITANLTYE.APFLFARRMSTLDHLTKGRVGWNIVTGYLDSAARAM...GLTEQLEHDQRYD
Arthrobacter_crystallopoietes_WP_074700854.1:1-45 AVTFSTTYE.PPFGNARRLSTLDHLTKGRVAWNVVTGYLPDAARNF...GLPAHIKHDDRYD
Terribacillus_goriensis_WP_038558686.1:1-438 AVTVSTSYE.QPFHNARKFSTLDHLTNGRVAWNIVTSYLPNAAENF...GLEKMVKHDERYK
Bacillus_megaterium_WP_025749753.1:1-455 GVTVSTTYE.KPYAFARKFSTLDHLTNGRIAWNIVTSYLESGSINL...GLEEHFTHETRYD
Neorhizobium_sp._T7_12_WP_105403044.1:1-451 GVTANLTHE.PPFVFARRMSTLDHLTGGRIGWNIVTGYLDSAAKAI...GLDGMAAHDDRYD
Rummeliibacillus_sp._SL167_WP_146553619.1:4-459 GLTASTTFE.HPYTFARRISTLDHLTKGRIAWNIVTSYLESGTKNI...EIGDKFEHTKRYD
Burkholderia_sp._PAMC GITVNLTYE.APYLLARRFSTLDHLSDGRIGWNIVTGYLDSAARAM...GLTGQIAHDERYD
Pseudomonas_koreensis_WP_064585463.1:4-449 GLTANLTYE.PPYLFARRMSTLDHLSRGRVGWNIVTGYLDSAAKAM...GLSEQVEHDRRYD
Pseudomonas_fluorescens_80_WP_064116961.1:6-451 GLTANLTYE.PPYLFARRMSTLDHLSRGRVGWNIVTGYLDSAAKAM...GLSEQVEHDRRYD
Pseudomonas_rhodesiae_WP_040265276.1:4-450 GLTANLTYE.PPYLFARRMSTLDHLSEGRVGWNIVTGYLDSAAKAM...GLTEQVEHDRRYD
Collimonas_sp._OK412_WP_092393355.1:4-454 GVTVNLTYE.APYLFARRMSTLDHLTRGRIGWNIVTGYLDSAARAM...GLSEQPEHDARYE
Pseudomonas_marginalis_WP_058415544.1:1-456 GLTASLSFE.HPYPFARRLSTLDHLTKGRVGWNIVTSYLESGAKNL...GQKAQTEHDARYD
Pseudomonas_antarctica_WP_064452947.1:1-458 GLTASLSFE.HPYPFARRLSTLDHLTKGRVGWNIVTSYLESGAKNL...GQKAQTEHDARYD
Pseudomonas_protegens_WP_041115159.1:9-454 GLTANLTYE.APYLFARRLSTLDHLSRGRVGWNIVTGYLDSAAQAM...GLKEQIEHDRRYD
Pseudomonas_synxantha_WP_057024776.1:4-449 GLTANLTYE.PPYLFARRMSTLDHLSRGRVGWNIVTGYLDSAAKAM...GLNEQVEHDRRYD
Rhizobium_leguminosarum_WP_128409501.1:2-451 GVTVNTTYE.PPFLLARRMSTLDHLTKGRIGWNIVTGYLDSAARSM...GFDKLPEHDARYD
Pseudomonas_chlororaphis_WP_038359779.1:6-451 GLTANLTYE.PPYLFARRMSTLDHLSRGRVGWNIVTGYLDSAAKAM...GLSEQVEHDRRYD
Pseudomonas_syringae_90_WP_024642725.1:1-456 GVTASLSFE.HPYPFARRLSTLDHLTKGRAGWNIVTSYLESGAKNL...GQKTLTEHDARYD
Collimonas_fungivorans_WP_061540754.1:4-453 GVTVNLTYE.APYLFARRMSTLDHLTRGRIGWNIVTGYLDSAARAM...GLSQQPEHDARYE
Rhizobium_leguminosarum_WP_116409027.1:2-451 GVTVNTTYE.PPFLLARRMSTLDHLTKGRIGWNIVTGYLDSAARSM...GFDRLPEHDARYD
Microvirga_ossetica_WP_099511173.1:1-454 GVTVNTTYE.QPYLHARRMSTLDHLTNGRIGWNIVTGYLDSAARGM...GLQEQLDHDHRYD
Pseudomonas_caspiana_WP_087268376.1:4-451 GLTANLTYE.APYLFARRMSTLDHLSRGRVGWNIVTGYLDSAARAM...GLTEQVEHDRRYD
Pseudomonas_lundensis_WP_048375063.1:4-451 GLTANLTYE.APYLFARRMSTLDHLSRGRVGWNIVTGYLDSAAKAM...GLKAQVEHDRRYD
Caballeronia_mineralivorans_WP_047894899.1:4-456 GVTVNLTYE.APYLLARRFSTLDHLTEGRIGWNIVTGYLDSAARAM...GLTEQIAHDERYD
Pseudomonas_paralactis_WP_057702387.1:4-450 GLTANLTYE.PPYLFARRMSTLDHLSRGRVGWNIVTGYLDSAAKAM...GLTEQVEHDRRYD
Pseudomonas_taetrolens_WP_048381143.1:4-453 GLTANLTYE.PPYLFARRMSTLDHLSRGRVGWNIVTGYLDSAAKAM...GLTEQVEHDRRYD
Pseudomonas_psychrophila_WP_123750761.1:4-450 GLTANLTYE.PPYLFARRMSTLDHLTRGRVGWNIVTGYLDSAAKAM...GLTEQVEHDRRYD
Collimonas_arenae_100_WP_061532973.1:4-454 GVTVNLTYE.APYLFARRMSTLDHLHGRIGWNIVTGYLDSAARAM...GLREQPEHDQRYE
Pseudomonas_viridiflava_WP_122210720.1:4-451 GLTANLTYD.APYLFARRMSTLDHLSRGRVGWNIVTGYLDSAARAM...GLSEQVEHDRRYD
Kocuria_varians_WP_068470402.1:1-454 GVTSAVTYE.QPYTLARKFATLDHLTRGRVGFNVVTSYLPSAAENQ...GLPRQIEHDQRYE
Pseudomonas_wadenswilerensis_WP_115084816.1:4-455 GLTANLTYE.PPYLFARRLSTLDHLSRGRVGWNIVTGYLDSAAKAM...GLDQQPEHDRRYD
Pseudomonas_syringae_WP_011266344.1:4-452 GLTANLTYD.APYLFARRMSTLDHLSRGRVGWNIVTGYLDSAAKAM...GLSEQNEHDRRYD
Pseudomonas_sp._286_105WP_122415793.1:4-453 GLTANLTYD.APYLFARRMSTLDHLSRGRVGWNIVTGYLDSAARAM...GLSEQVEHDRRYD
Geobacillus_vulcani_WP_031406843.1:1-461 VLTASTTYE.HPFHIARRFSTLDHLTNGRIAWNIVTSYLPNAAKNF...GLERMIAHDQRYE
Geobacillus_icigianus_WP_033018365.1:1-461 VLTASTTYE.HPFHIARRFSTLDHLTNGRIAWNIVTSYLPNAAKNF...GLERMIAHDQRYE
Pseudomonas_floridensis_WP_083182568.1:4-453 GLTANLTYD.APYLFARRMSTLDHLSRGRVGWNIVTGYLDSAARAM...GLREQVEHDRRYD
Pseudomonas_asturiensis_WP_073167523.1:4-451 GLTANLTYD.APYLFARRMSTLDHLSRGRVGWNIVTGYLDSAARAM...GLSEQVEHDRRYD
Geobacillus_vulcani_110_WP_031406843.1:1-461 VLTASTTYE.HPFHIARRFSTLDHLTNGRIAWNIVTSYLPNAAKNF...GLERMIAHDQRYE


Pseudomonas_syringae_WP_024682626.1:4-452 GLTANLTYD.APYLFARRMSTLDHLSRGRVGWNIVTGYLDSAARAM...GLSEQNEHDRRYD
LadAalpha_Geobacillus_thermoleovorans_BAM76377.1 VLTASTTYE.HPFHIARRFSTLDHLTNGRIAWNIVTSYLPNAAKNF...GLERMITHDQRYE
Tsukamurella_pseudospumae_WP_068746786.1:1-457 GITAGTGFE.HPFPFARRLTTLDHLTNGRIGWNVVTGYLPSAAKNM...GQLDQLQHDERYD
Kocuria_sp._Marseille-P3598_WP_085529073.1:5-456 GITSAVTYE.QPYTLARKYATLDHLTKGRVGFNVVTSYLPSAAENQ...GLPRQIEHDTRYE
Microvirga_aerophila_WP_114188789.1:1-456 GVTANLTYE.TPYLFARRMSTLDHLTRGRVGWNIVTGYLDSAARAM...GFKGQREHDDRYD
Burkholderia_ubonensis_WP_071760483.1:5-455 GVTANLTYE.PPYLFARRMSTLDHLTKGRVGWNIVTGYLDSAARGM...GLAQQIGHDDRYE
Achromobacter_marplatensis_WP_006226823.1:4-450 GVTVNLTYE.APYLLARRFSTLDHLTNGRVGWNIVTGYLESAARAM...GLSEQIAHDERYD
Acinetobacter_baumannii_WP_070165746.1:1-443 GVTTSISFE.HPYPFARRISTLDHLTQGRVGWNVTSYLESGSKNL...GLKTQVNHDNRYD
Labedella_phragmitis_WP_128496094.1:1-453 GITAGTAYE.HPYPFARRMSTLDHLTKGRVGWNVVTGYLPSAARNM...GHEDQLQHDDRYD
Nocardia_cyriacigeorgica_120_WP_130918184.1:1-453 GITTGTGFE.HPYPFARRLSTLDHLTNGRLGWNVVTGYLPSAARNF...GADDQLDHDERYN
Nocardia_cyriacigeorgica_WP_130918184.1:1-453 GITTGTGFE.HPYPFARRLSTLDHLTNGRLGWNVVTGYLPSAARNF...GADDQLDHDERYN
Mycobacterium_sp._1164985.4_WP_067298521.1:1-453 GITTGTGFE.HPYPFARRMSTLDHLTKGRIGWNVVTGYLPAAARNM...GQTDQPAHDARYD
Rhodococcus_sp._1R11_WP_135042739.1:1-449 GITAGTGFE.HPYPFARRLSTLDHLTNGRIGWNVVTGYLPSAAQNM...GHDDQLQHDDRYD
Erwinia_amylovora_WP_004157587.1:5-459 GLTASLSFE.HPYPFARRISTLDHLTKGRIGWNIVTSYLESGARNI...GQQAQTDHDARYD
Ralstonia_mannitolilytica_WP_102079134.1:4-451 GVTVNLTYE.PPYLLARRFSTLDHLTRGRIGWNIVTGYLDSAARAM...GLDKQFAHDERYD
Leifsonia_flava_WP_135120808.1:15-465 GVTAGTAYE.HPYPFARRMSTLDHLTNGRVGWNVVTGYLPSAARNM...GHDDQLEHDDRYD
Cryobacterium_roopkundense_WP_084141147.1:1-453 GITAGTSYE.HPYPFARRMSTLDHLTNGRVGWNVVTGYLPSAARNM...GHDDQLEHDDRYD
Cupriavidus_pauculus_WP_101681197.1:1-455 GVTANLTYE.QPFLFARRMSTLDHLTGGRIGWNIVTGYLDSAARAI...GIDGQVAHDDRYD
Rhizobium_sp._BK333_130_WP_133704837.1:2-454 GVTVNTTYE.PPFLFARRMSTLDHLTKGRIGWNIVTGYLDSAARSM...GMERQPDHDARYD
Caballeronia_mineralivorans_WP_047846789.1:1-454 GITASTTFE.HPYTFARRLSTADHHTKGRVGWNIVTSYLESGAKNI...SEGGLRKHANRYE
Nocardia_altamirensis_WP_069163049.1:1-454 GITTGTGFE.HPFPFARRLSTLDHLTNGRVGWNVVTGYLPSAARNF...GAADQLDHDERYN
Cupriavidus_sp._P-10_WP_116322758.1:1-452 GVTGALSYE.PPYTFARKMTTLDHLTNGRVGWNVVTGYLNSAAKAS...GVTKQTDHDTRYD
Serratia_sp._S1B_WP_116726564.1:1-452 GVTTSISFE.HPYPFARRLSTLDHLTKGRVGWNIVTSYLESGSKNL...GLKTQENHDDRYD
Pseudomonas_putida_WP_043864435.1:1-452 GVTASVSFE.HPYPFARRMSTLDHLTRGRAGWNIVTSYLSSGARNL...GQREQLSHDQRYA
Pseudomonas_aeruginosa_WP_023084248.1:4-453 GVTANLTYE.APYPFARRLSTLDHLTGGRIGWNIVTGYLESAAKAM...GQSAQIEHDRRYD
Pseudomonas_mucidolens_WP_084381795.1:9-455 GLTANLSYE.PPYLFARRMSTLDHLSRGRVGWNIVTGYLDSAAKAM...GLREQVEHDRRYD
Pseudomonas_poae_WP_060549803.1:4-450 GLTANLTYE.PPYLFARRMSTLDHLSRGRVGWNIVTGYLDSAAKAM...GLTEQVEHDRRYD
Pseudomonas_chlororaphis_WP_123573412.1:9-454 GLTANLTYE.PPYLFARRMSTLDHLSRGRVGWNIVTGYLDSAAKAM...GLSEQTEHDRRYD
Janthinobacterium_lividum_140_WP_072454679.1:1-44 GVTCALTYE.HPYTFARRISTLDHLTGGRIGWNIVTGYLDSAARNL...GLSQQLGHDERYD
Haladaptatus_cibarius_WP_049970513.1:4-446 AVTRSTTYV.HPYQLAREFSTLDHITDGRVAFNIVTSYLESAAENL...GLDERMEHDTRYD
Arthrobacter_luteolus_WP_066298473.1:1-443 AVTSALTYE.QPYALARRFSTLDHLTGGRIGWNVVTSYLESAANNL...GLERQLGHDERYD
Geobacillus_sp._ZGt-1_WP_047758532.1:1-436 VLTASTTYE.HPFHIARRFSTLDHLTNGRIAWNIVTSYLPNAAKNF...GLERMITHDQRYE
Lysinibacillus_composti_WP_124766485.1:4-458 GVTSSVTHE.HPFTFARKMSTLDHLTNGRVGWNIVTSYLKSAAVNM...GLEDQIKHDERYD
Microcella_putealis_WP_130486201.1:20-474 GVTAGTAYE.HPYPFARMTTLDHLTKGRVGWNVVTGYLPSAARNM...GHDDQREHDDRYD
Pseudomonas_nitroreducens_WP_037016976.1:1-453 GITASVSFE.HPFPFARRMSTLDHLTRGRAGWNIVTSYLNSGARNL...GLKQQLNHQQRYA
Acinetobacter_wuhouensis_WP_130168784.1:1-453 GVTTSISFE.HPYPFARRISTLDHLTKGRVGWNIVTSYLESGSKNL...GLKTQLNHDDRYD
Bradyrhizobium_sp._YR681_WP_008144663.1:1-454 GVTSNLSFE.PPYPFARRMSTLDHLTEGRIGWNVVTGYLDSAARGA...GKDKQTGHDDRYD
Schumannella_sp._10F1D-1_WP_141164655.1:10-460 GVTAGTAYE.HPYPFARRLTTLDHLTKGRVGWNVVTGYLPSAARNM...GHDDQLEHDDRYD
Pseudomonas_coronafaciens_150_WP_122355187.1:4-45 GLTANLTYD.APYLFARRMSTLDHLSRGRVGWNIVTGYLDSAARAM...GLSEQNEHDRRYD
Pseudomonas_syringae_WP_003430238.1:4-452 GLTANLTYD.APYLFARRMSTLDHLSRGRVGWNIVTGYLDSAARAM...GLSEQNEHDRRYD
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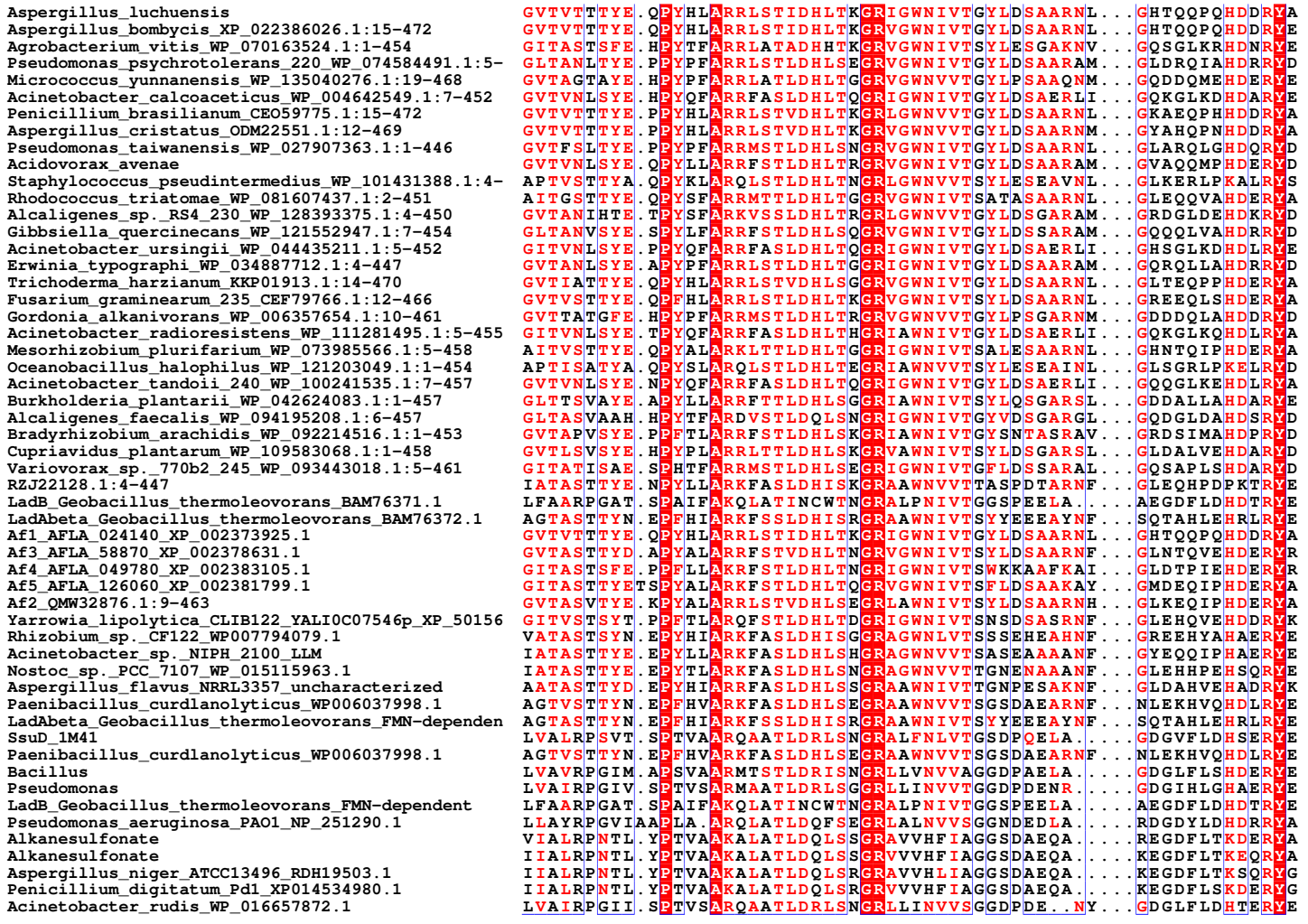
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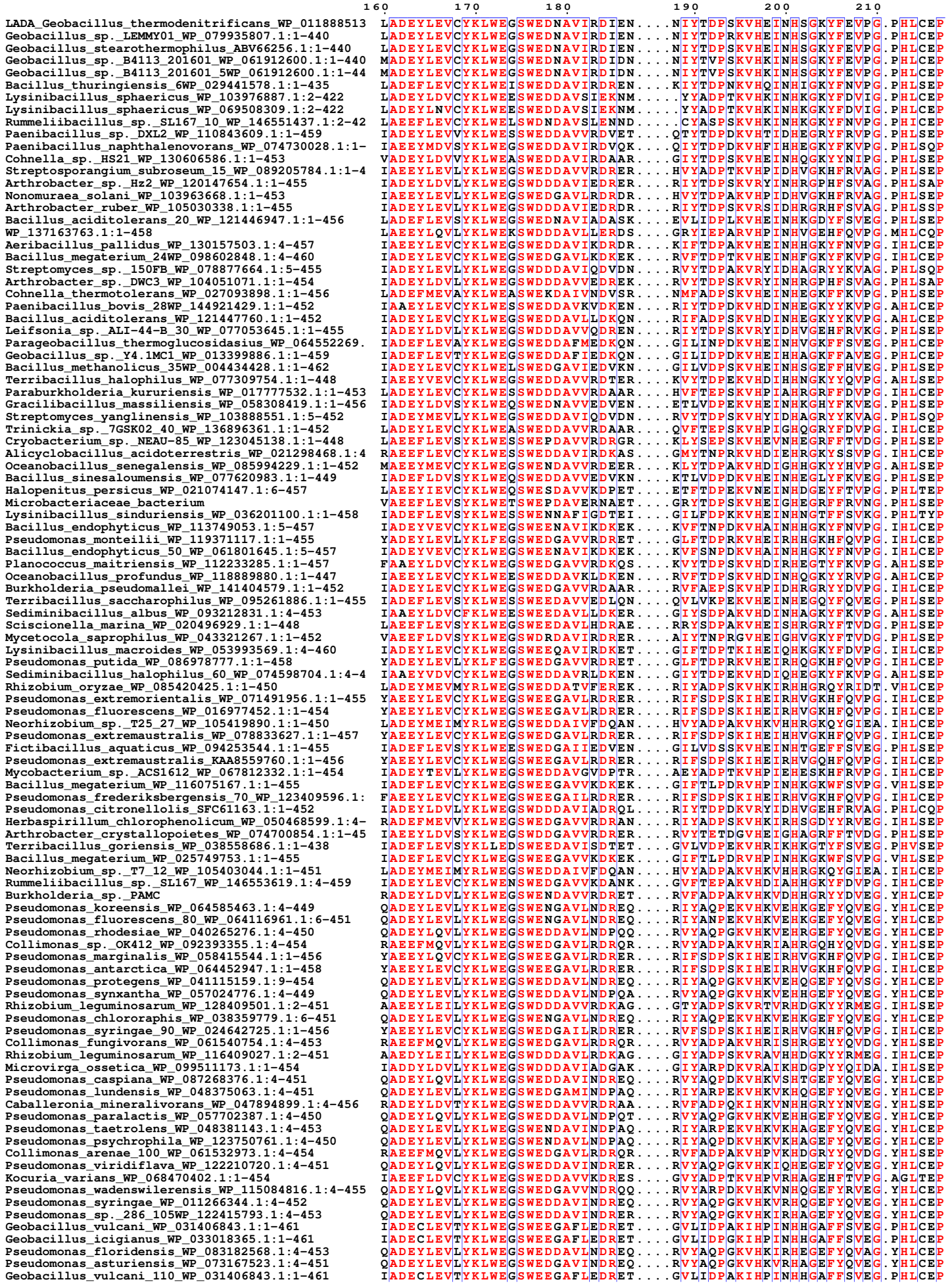
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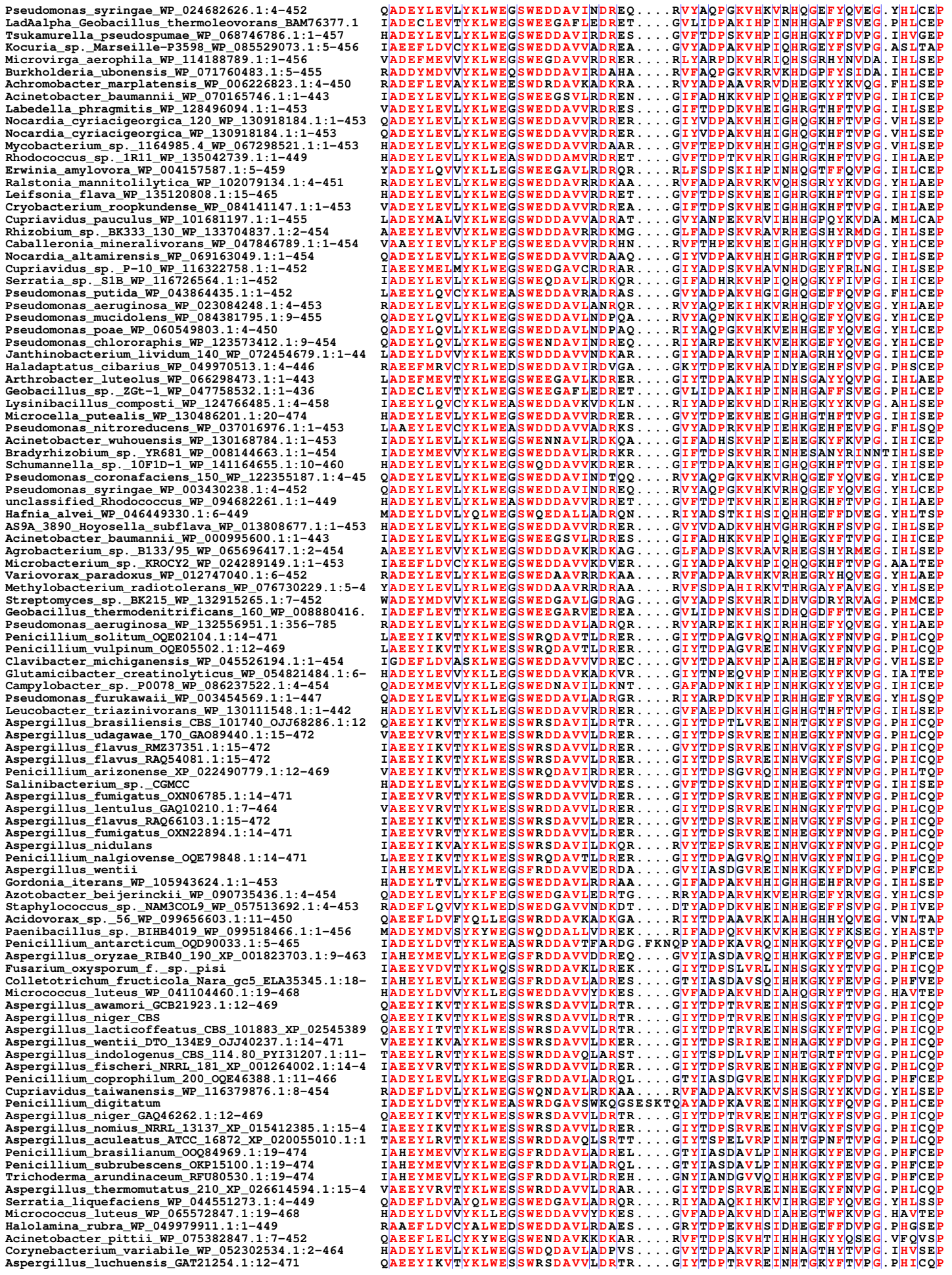
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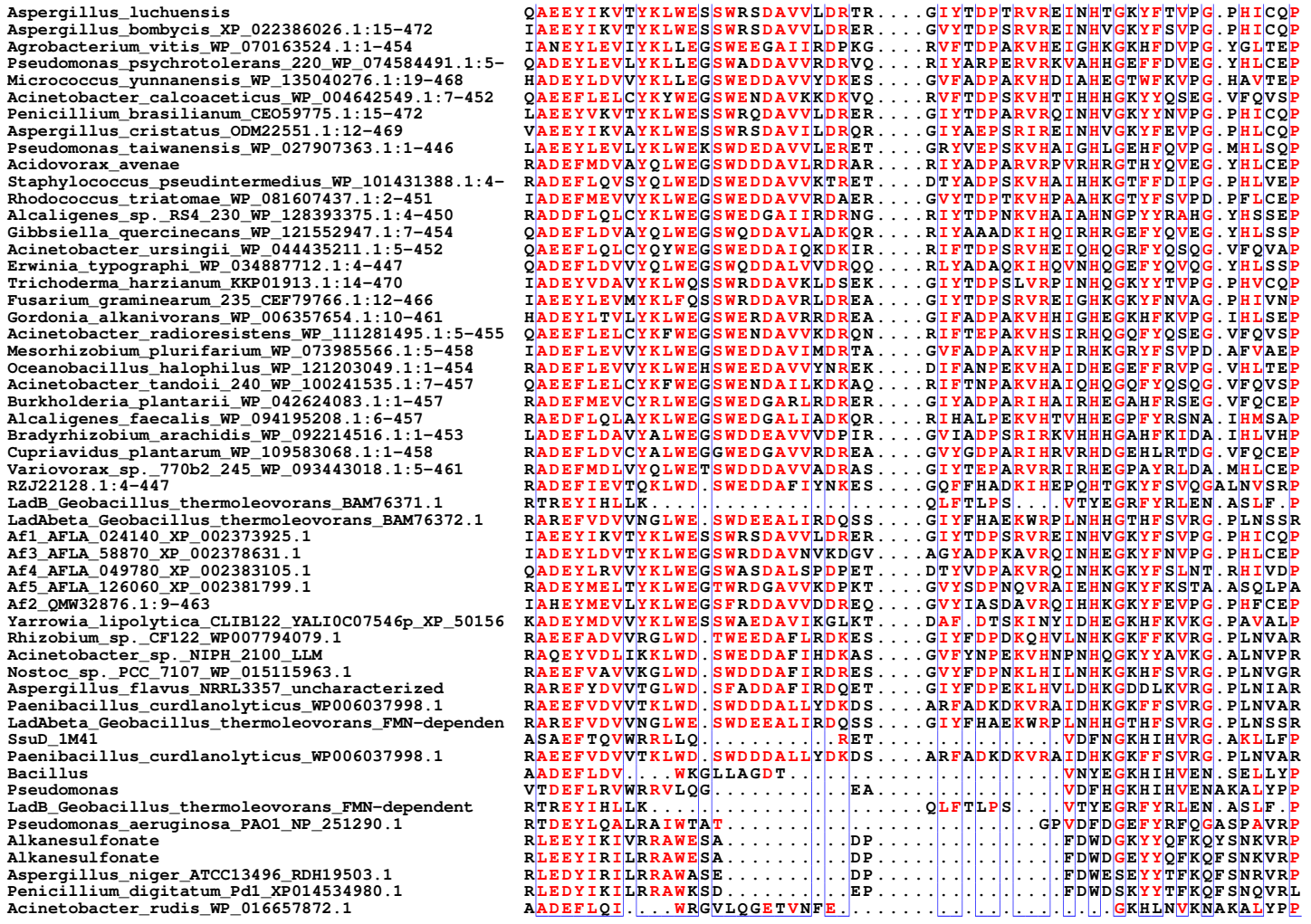
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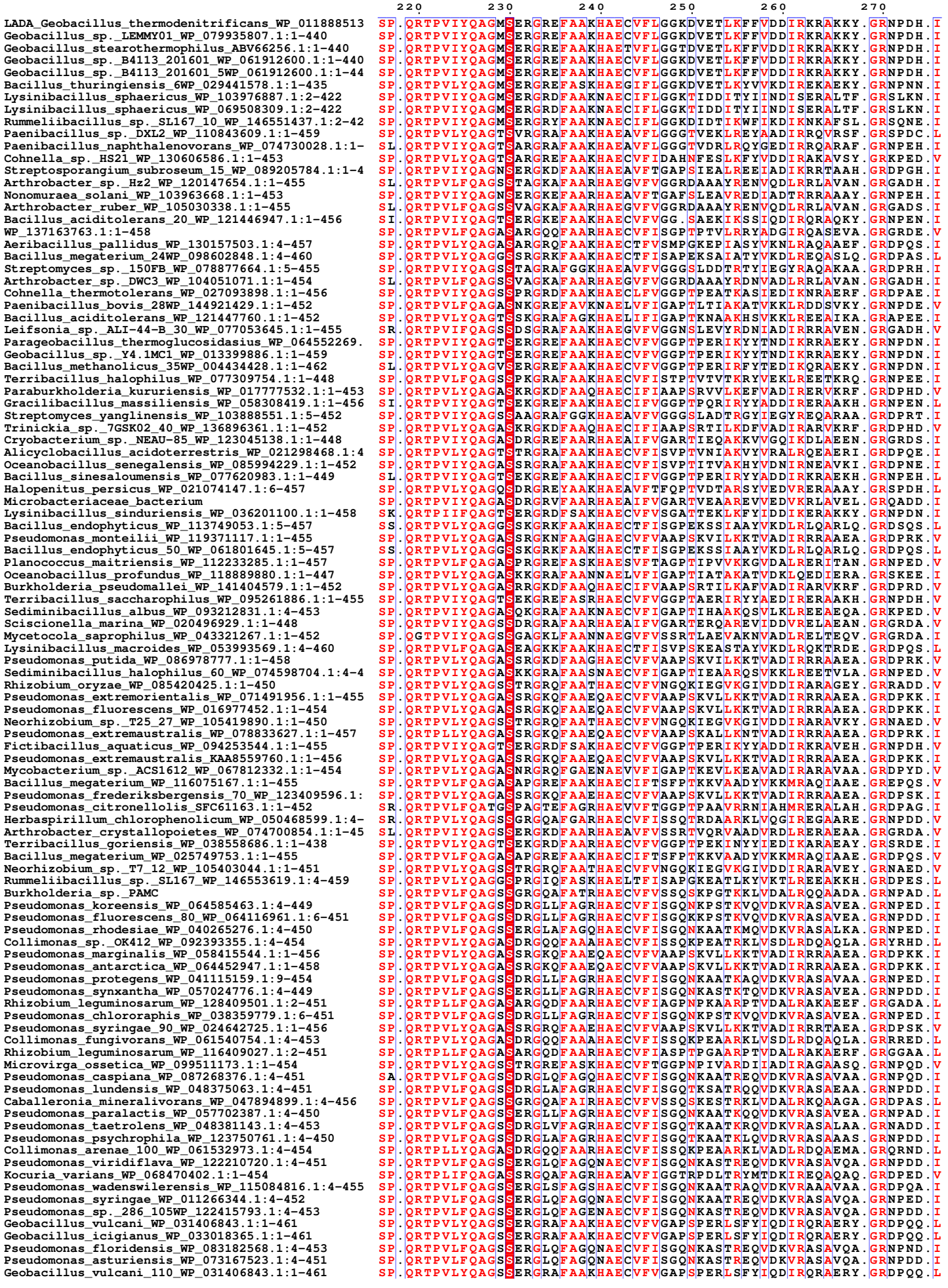
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Burkholderia_sp._PAMC
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Pseudomonas_syringae_90_WP_024642725.1:1-456
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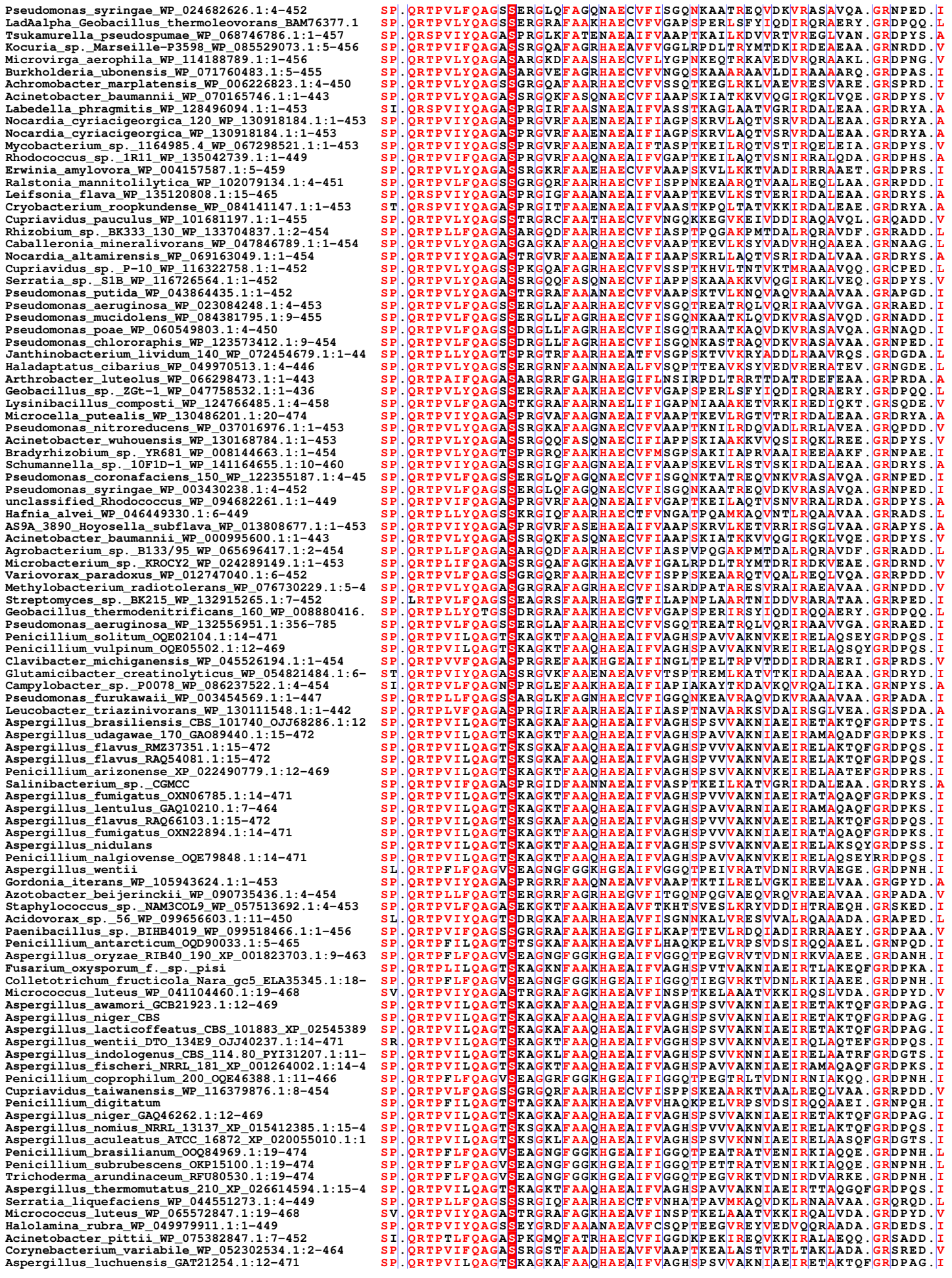
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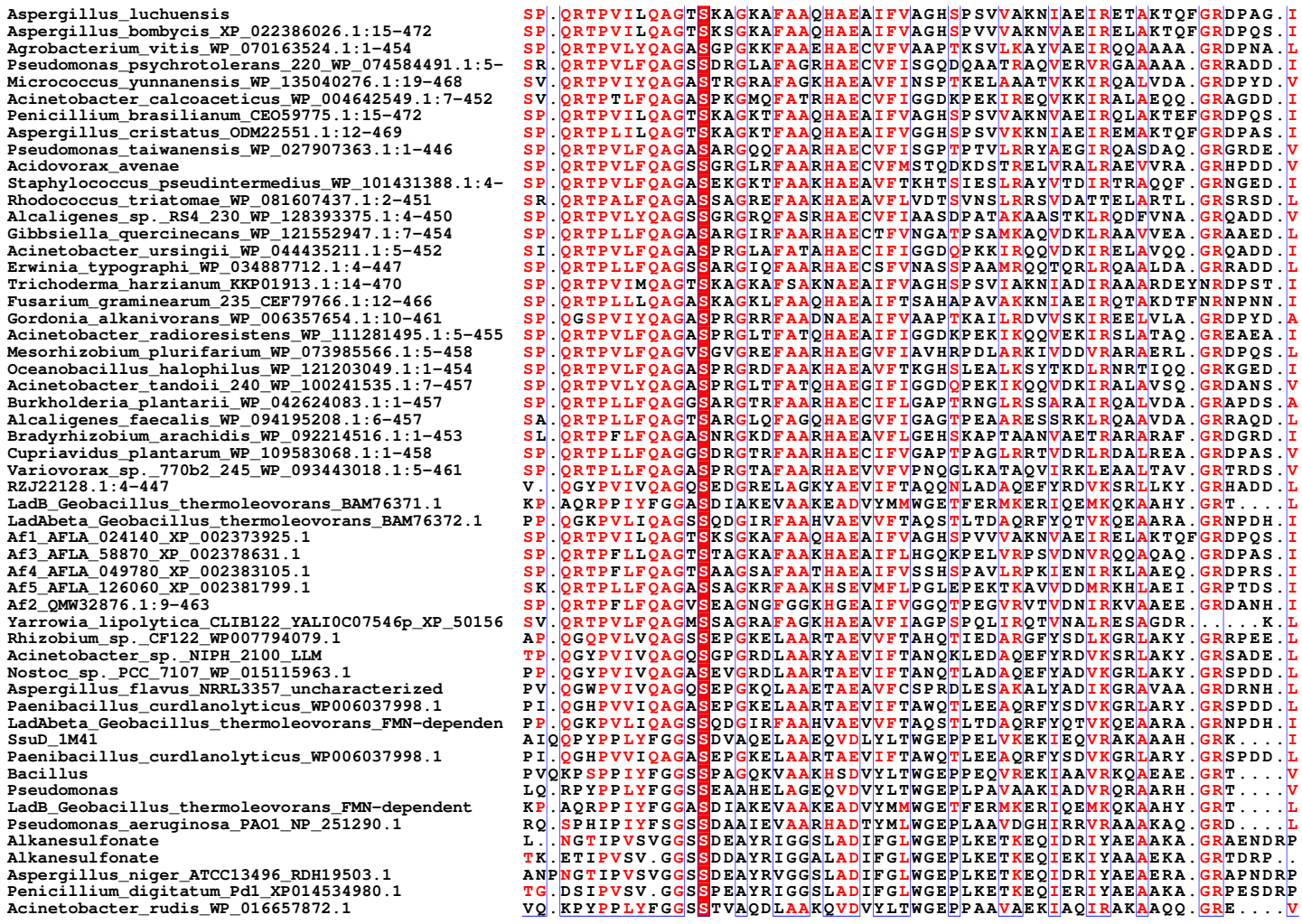
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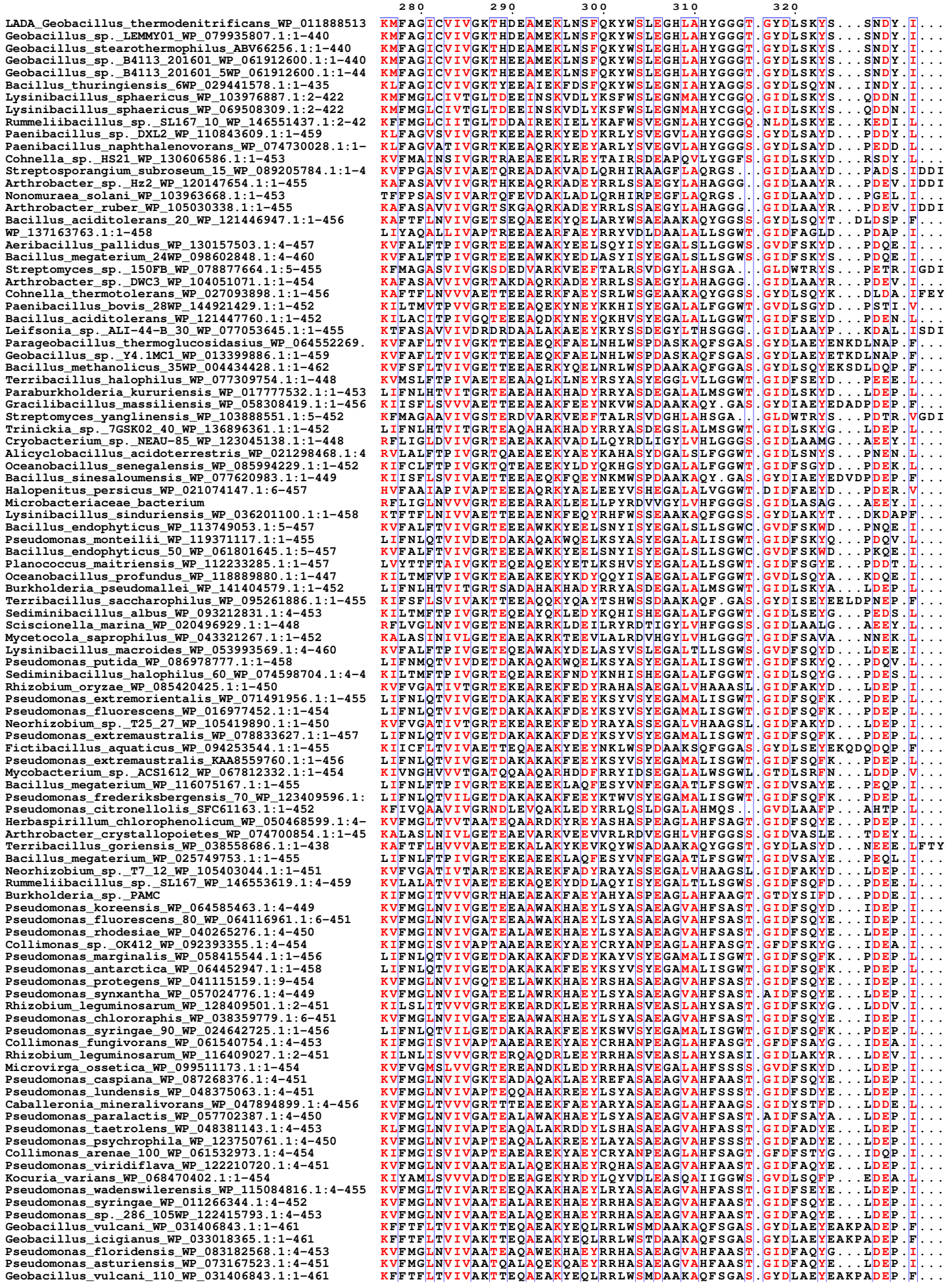
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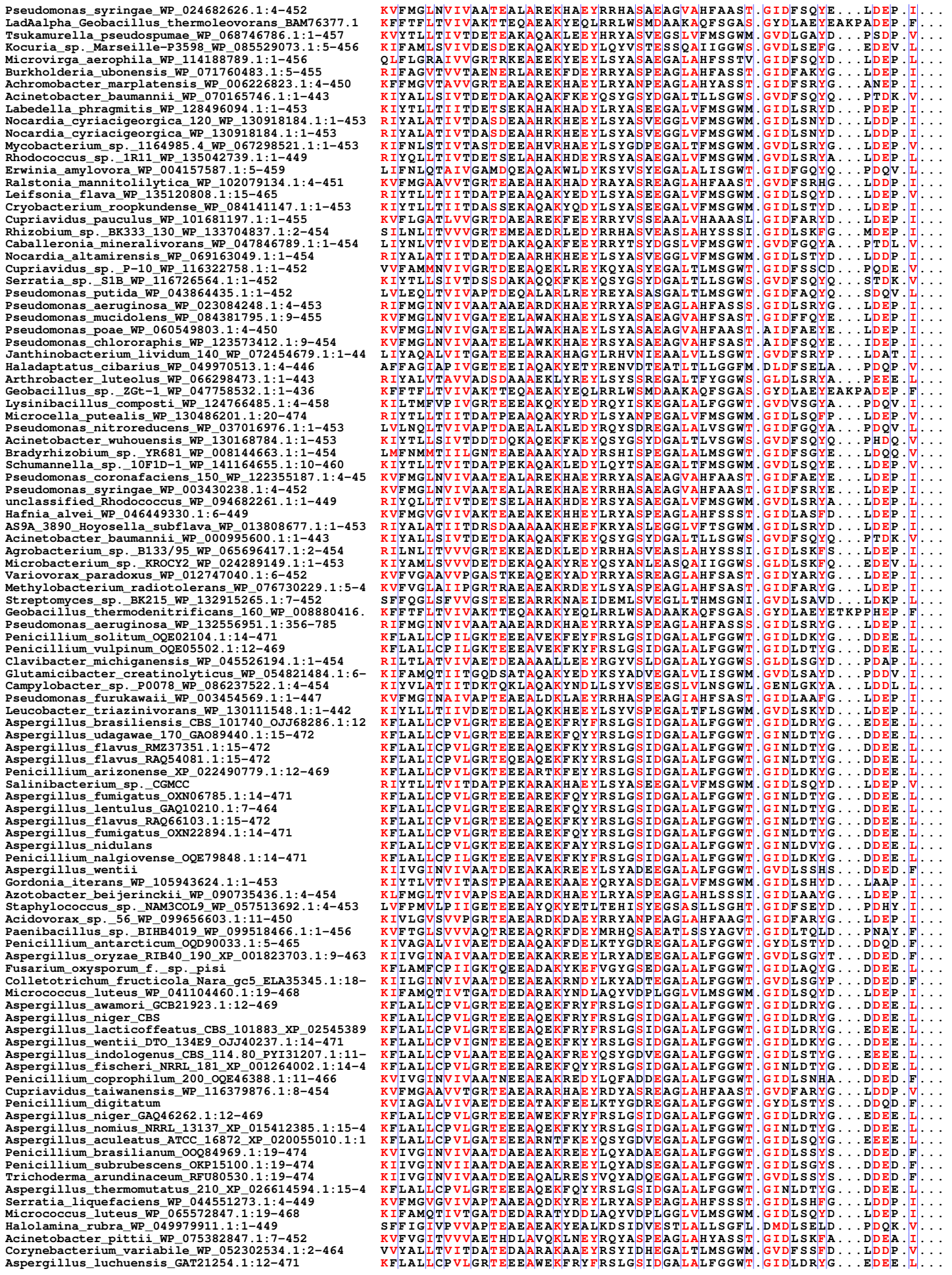
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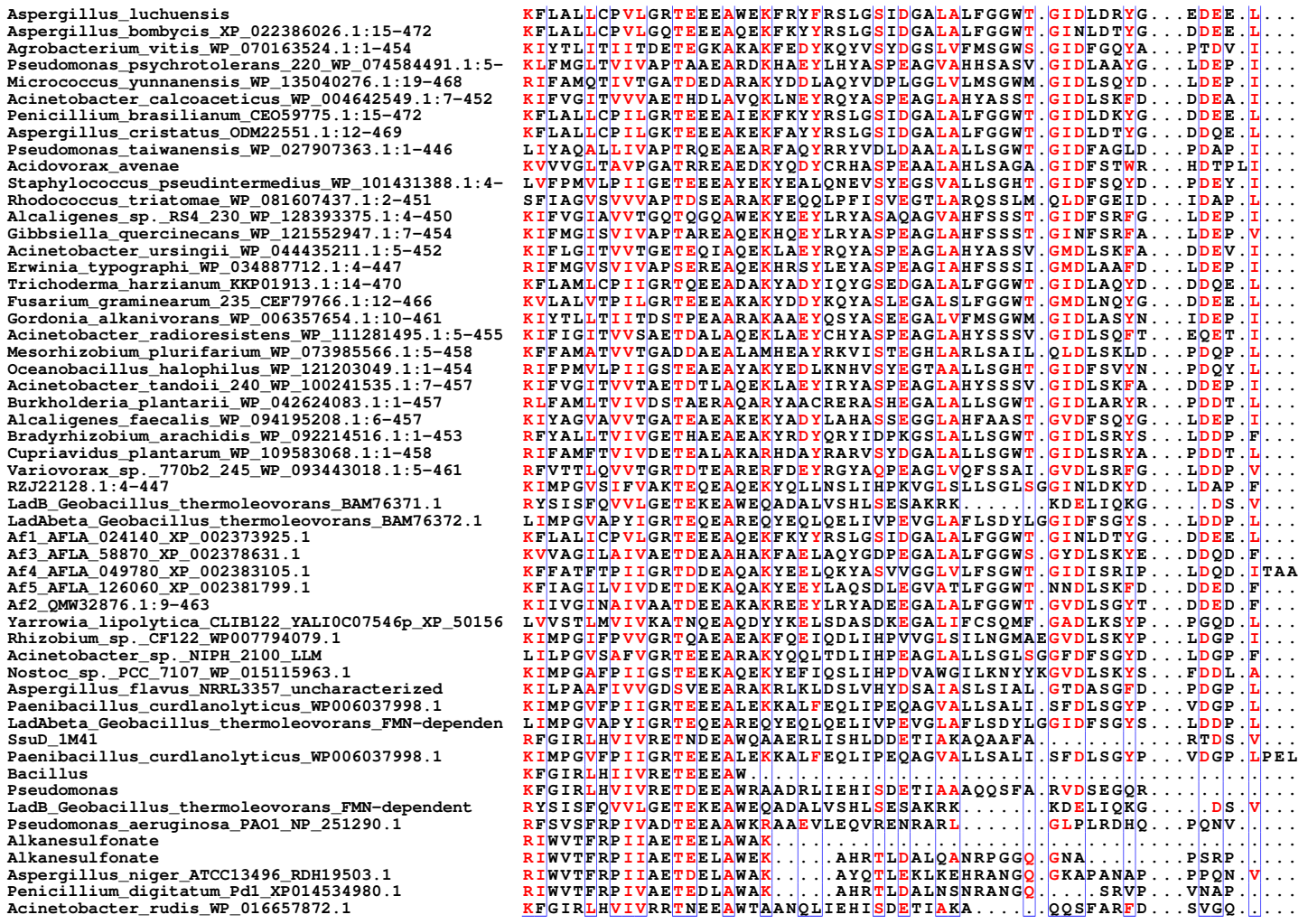
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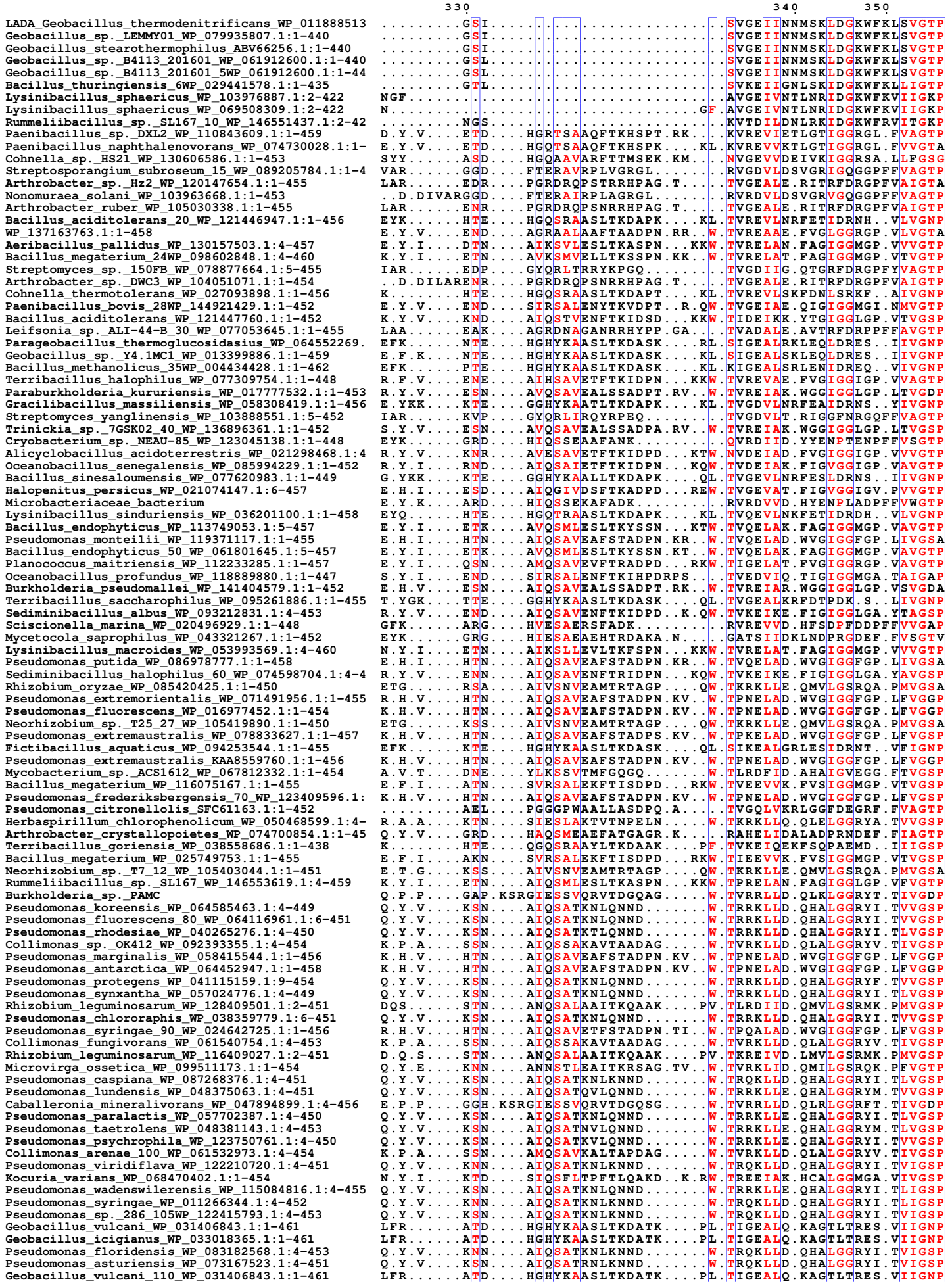
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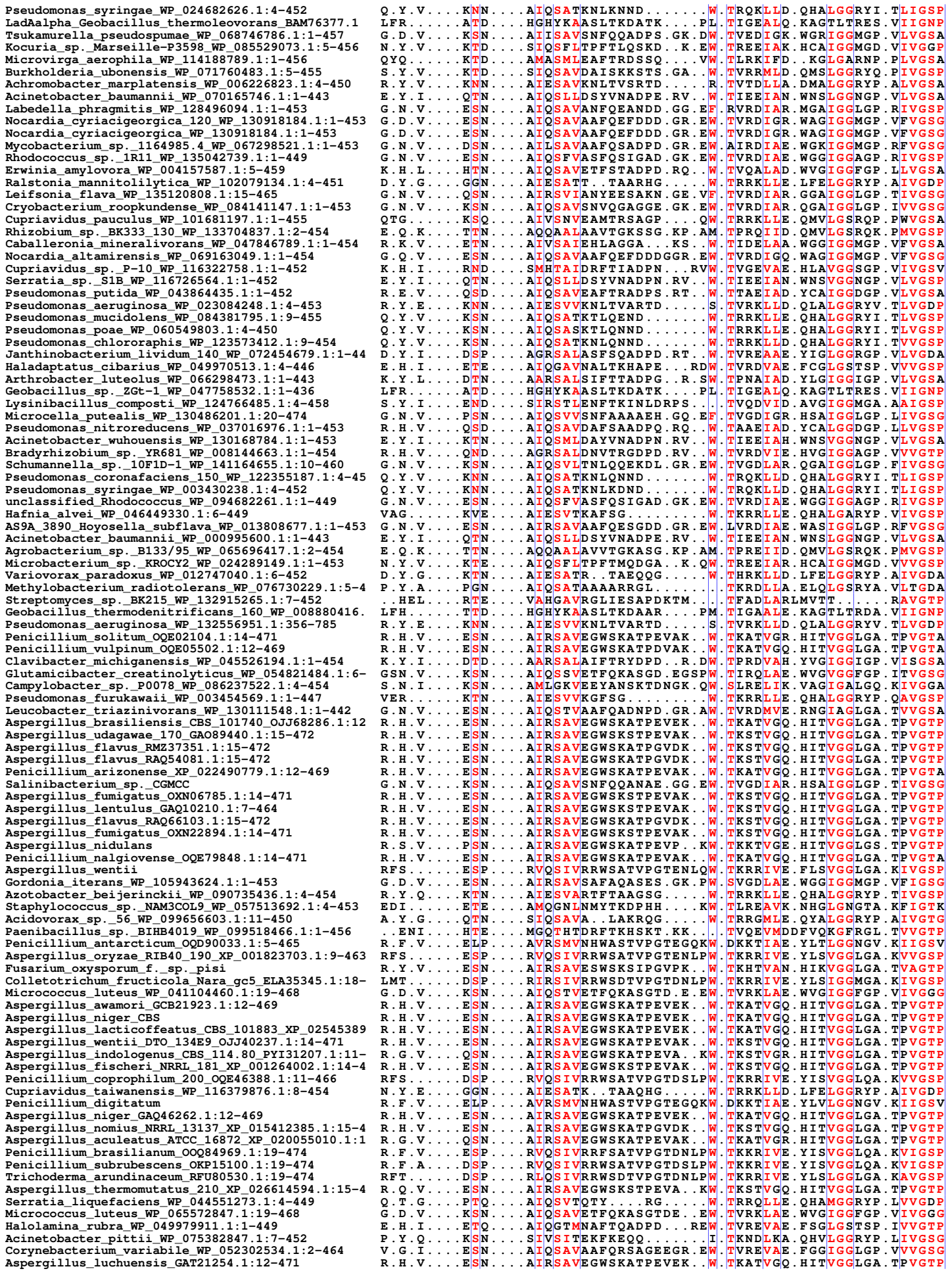

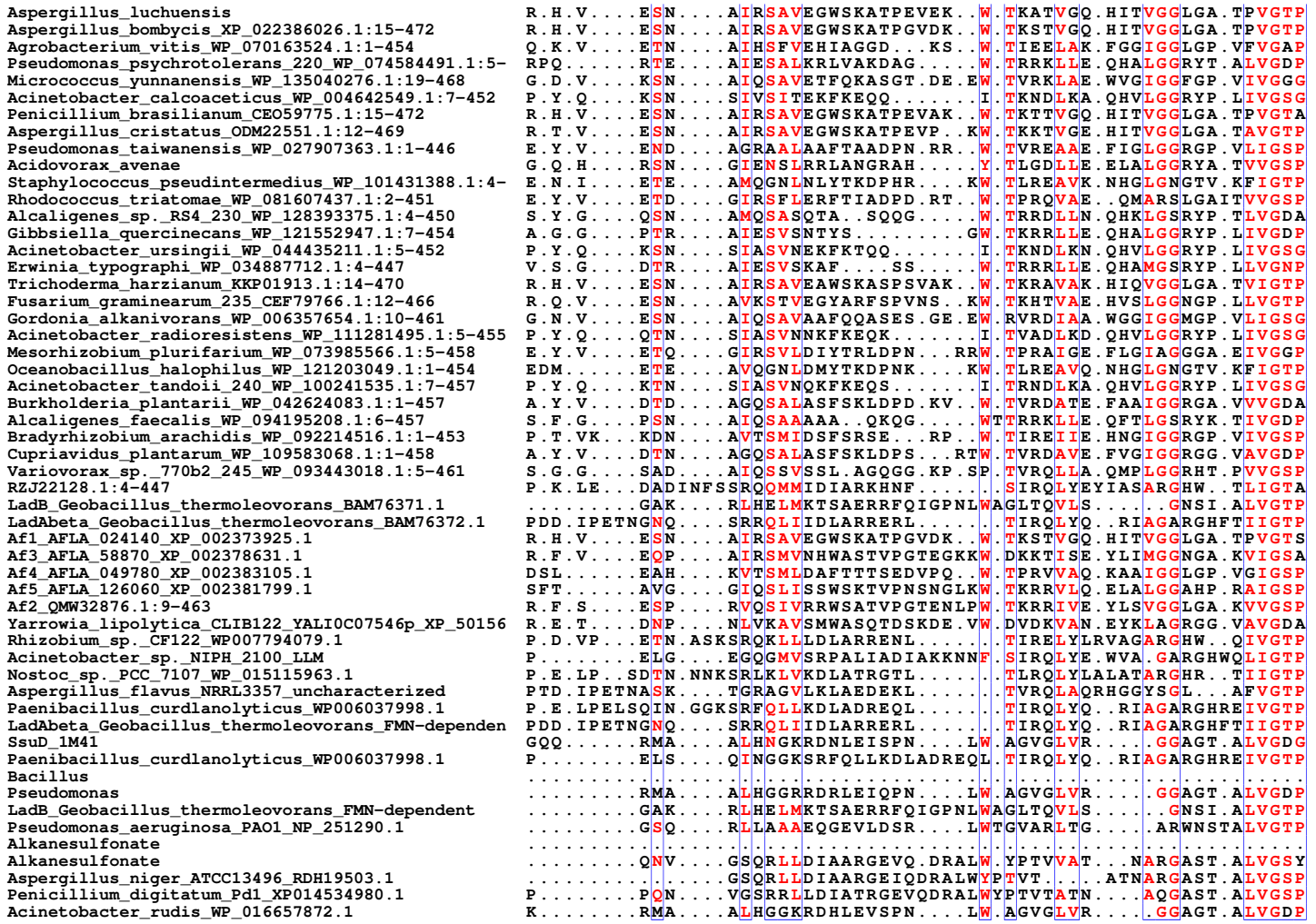
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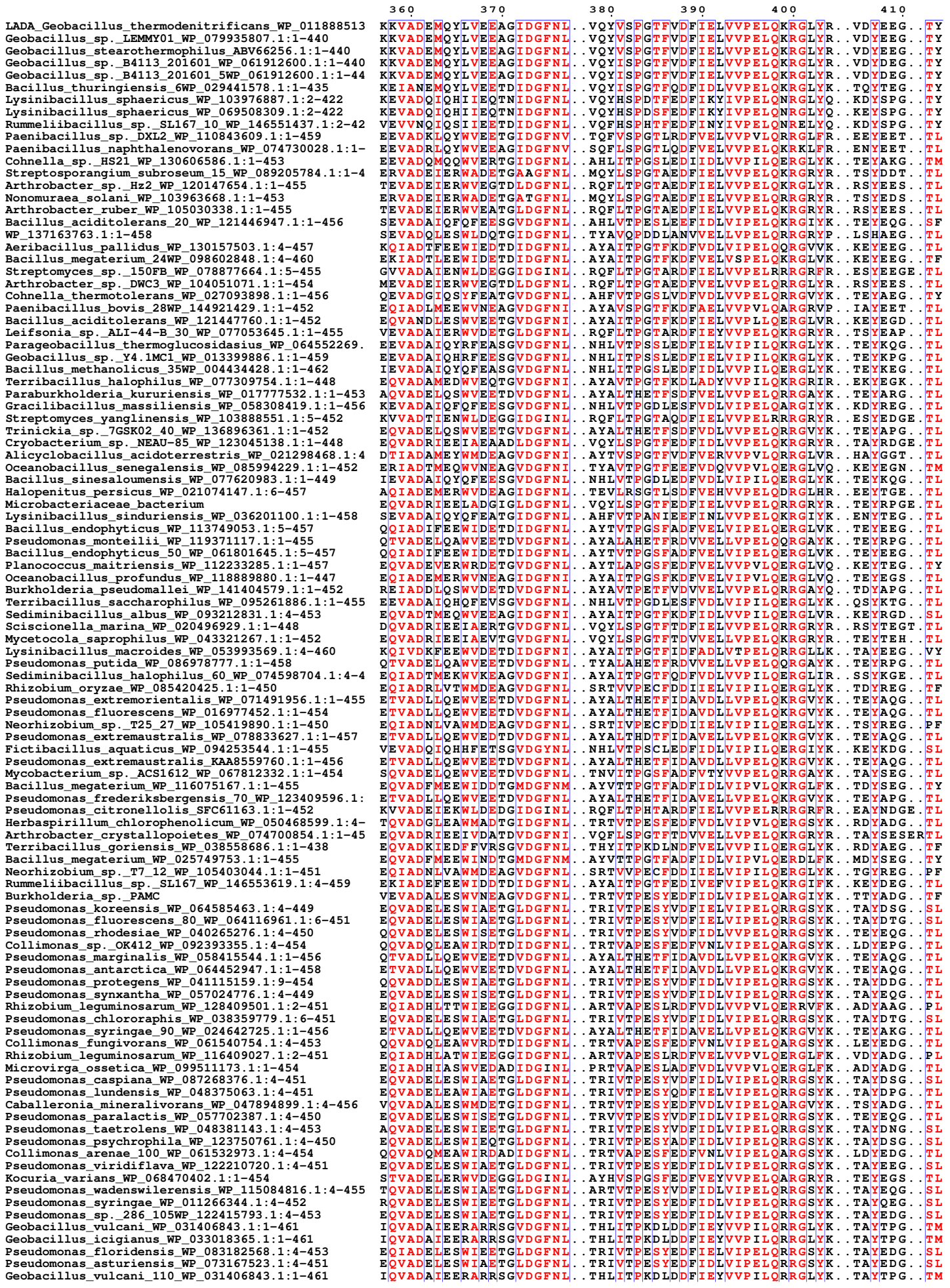
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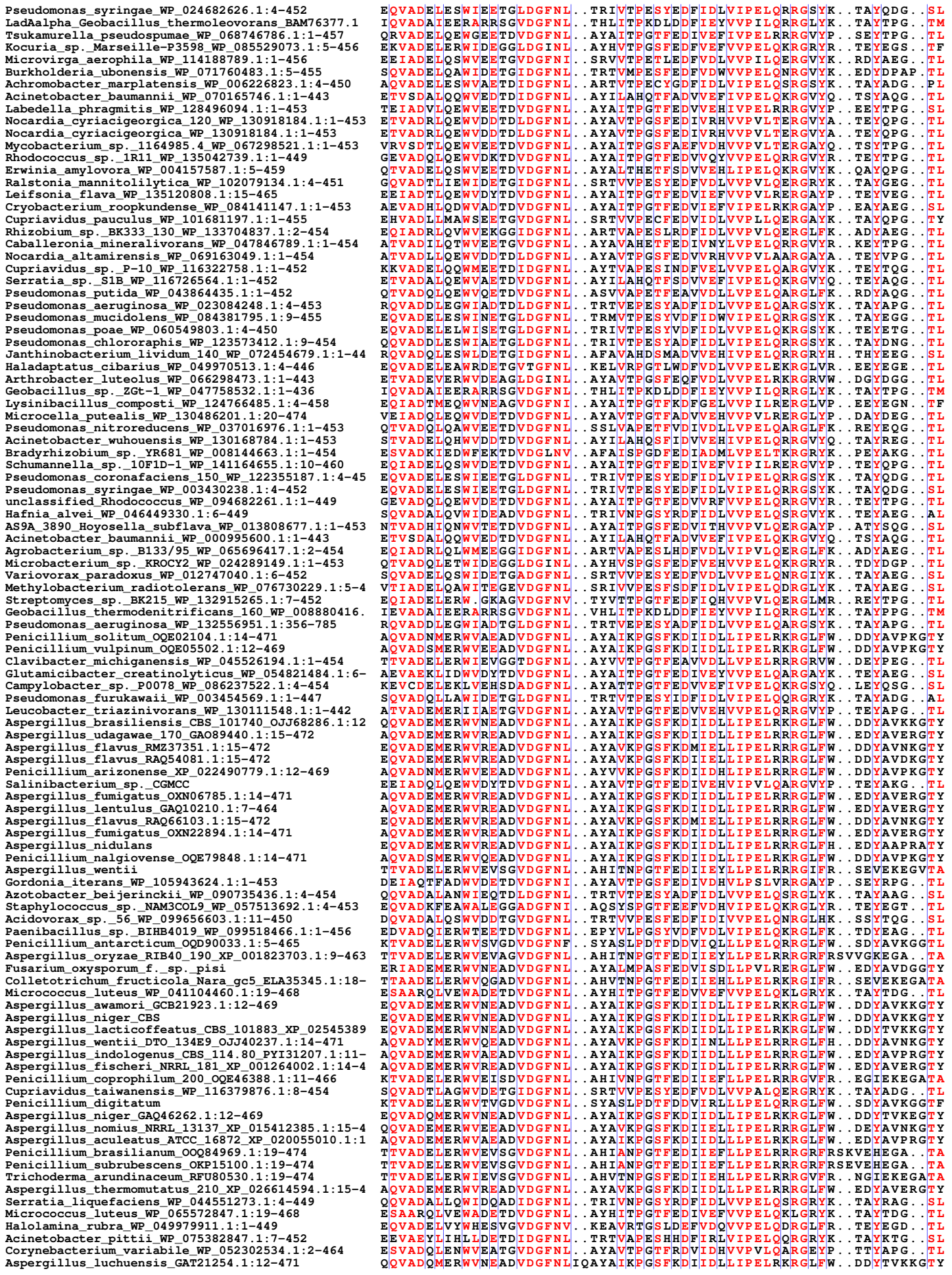
Pseudomonas_monteilii_WP_119371117.1:1-455 QTVADELQAWVEETDVDGFNL..AYALAHETFRDVVELLVPELQQRGAYK..TEYRPG..TL
Bacillus_endophyticus_50_WP_061801645.1:5-457 QQIADIFEEWIDETDIDGFNL..AYTVTPGSFADFVELVIPELQERGLVK..TEYEEG..TL
Planococcus_maitriensis_WP_112233285.1:1-457 EQVADEVERWRDETGVDGFNL..AYTLAPGSFEDFVELVVPELQERGLVQ..KEYTEG..TY
Oceanobacillus_profundus_WP_118889880.1:1-447 EQIADEMERWVNEAGIDGFNI..AYAITPGSFKDFVELVIPVLQERGLVQ..TEYEGS..TL
Burkholderia_pseudomallei_WP_141404579.1:1-452 REIADDLQSWVDETDVDGFNL..AYAVTPETFVDVVELVVPELQRRGAYQ..TDYAPG..TL
Terribacillus_saccharophilus_WP_095261886.1:1-455 EEVADAIQHQFEVSGVDGFNL..NHLVTPGDLESFVDLVIPILQERGLYK..QSYKTG..TL
Sediminibacillus_albus_WP_093212831.1:4-453 EQVADTMEQWVEEAGIDGFNI..AYAITPGTFKDFIDLVVPILQERGLVR..KEYRGD..SL
Sciscionella_marina_WP_020496929.1:1-448 DQVADRIEEIAERTGVDGFNL..VQYLSPGTFTDFIELVVPELQRRGRYR..RSYTEGT.TL
Mycetocola_saprophilus_WP_043321267.1:1-452 EQVADRIEEIAEVTGVDGFNL..VQYLSPGTFTDVVELLVPELQKRGRYR..TEYTEH..TL
Lysinibacillus_macroides_WP_053993569.1:4-460 KQIVDKFEEWVDETDIDGFNI..AYAITPGTFIDFADLVTPELQRRGLLK..TAYEEG..VY
Pseudomonas_putida_WP_086978777.1:1-458 QTVADELQAWVEETDVDGFNL..TYALAHETFRDVVELLVPELQQRGAYK..TEYRPG..TL
Sediminibacillus_halophilus_60_WP_074598704.1:4-4 EQIADTMEKWVKEAGVDGFNI..AYAITPGTFQDFVDLVVPILQERGLIR..SSYKGE..TL
Rhizobium_oryzae_WP_085420425.1:1-450 EQIADRLVTWMDEAGVDGFNL..SRTVVPECFDDIIELVIPILQERGLYK..TDYREG..TF
Pseudomonas_extremorientalis_WP_071491956.1:1-455 ETVADLLQEWVEETDVDGFNL..AYALTHETFIDAVDLLVPELQKRGVYK..TEYAQG..TL
Pseudomonas_fluorescens_WP_016977452.1:1-454 ETVADLLQEWVEETDVDGFNL..AYALTHETFIDAVDLLVPELQKRGVYK..TEYAQG..TL
Neorhizobium_sp._T25_27_WP_105419890.1:1-450 EQIADNLVAWMDEAGVDGFNL..SRTIVPECFDDIIELVIPILQERGLYK..TSYREG..PF
Pseudomonas_extremaustralis_WP_078833627.1:1-457 ETVADLLQEWVEDTDVDGFNL..AYALTHDTFIDAVELLVPELQKRGVYK..TEYAQG..TL
Fictibacillus_aquaticus_WP_094253544.1:1-455 VEVADQIQHHFETSGVDGYNL..NHLVTPSCLEDFIDLVIPILQERGIYK..KEYKDG..SL
Pseudomonas_extremaustralis_KAA8559760.1:1-456 ETVADLLQEWVEETDVDGFNL..AYALTHETFIDAVDLLVPELQKRGVYK..TEYAQG..TL
Mycobacterium_sp._ACS1612_WP_067812332.1:1-454 SQVADELQEWVEETDVDGFNL..TNVITPGSFADFVTYVVPELQRRGAYK..TAYSEG..TL
Bacillus_megaterium_WP_116075167.1:1-455 EQVADFMEEWIDDTGMDGFNM..AYVTTPGTFADFIDLVIPVLQKRGLFK..TDYSEG..TY
Pseudomonas_frederiksbergensis_70_WP_123409596.1: ETVADLLQEWVEETDVDGFNL..AYALTHETFIDAVELLVPELQKRGVYK..TEYAPG..TL
Pseudomonas_citronellolis_SFC61163.1:1-452 KVVADEIEKWLDEDGIDGINL..RQFLTPHTARDFIELVVPELRRRGRFR..EAYNDGE.TL
Herbaspirillum_chlorophenolicum_WP_050468599.1:4- TQVADGLEAWMADTGIDGFNL..TRTVTPESFEDFVDLVIPVLQERGSYK..RDYADG..TL
Arthrobacter_crystallopoietes_WP_074700854.1:1-45 EQVADRIEEIVDATDVDGFNI..VQFLSPGTFTDVVELLVPELQKRGRYR..TAYSESERTL
Terribacillus_goriensis_WP_038558686.1:1-438 EQVADKIEDFFVRSGVDGFNL..THYITPKDLNDFVELVVPILQERGLYK..RDYAEG..TF
Bacillus_megaterium_WP_025749753.1:1-455 EQVADFMEEWINDTGMDGFNM..AYVTTPGTFADFIDLVIPVLQERDLFK..MDYSEG..TY
Neorhizobium_sp._T7_12_WP_105403044.1:1-451 EQIADNLVAWMDEAGVDGFNL..SRTVVPECFDDIIELVIPILQERGLYK..TGYREG..PF
Rummeliibacillus_sp._SL167_WP_146553619.1:4-459 EKIADEFEEWIDDTDIDGFNL..AYAITPGTFEDIVEFVIPELQKRGIFK..KEYDEG..TL
Burkholderia_sp._PAMC VEVADALESWVNEAGVDGFNL..TRTVTPESYEDFIDLVIPELQARGIYK..TTYADG..TF
Pseudomonas_koreensis_WP_064585463.1:4-449 EQVADELESWIAETGLDGFNL..TRIVTPESYVDFIELVIPELQRRGSYK..TAYDSG..SL
Pseudomonas_fluorescens_80_WP_064116961.1:6-451 EQVADELESWIAETGLDGFNL..TRIVTPESYVDFIELVIPELQRRGSYK..TAYDTG..SL
Pseudomonas_rhodesiae_WP_040265276.1:4-450 QQVADELESWISETGLDGFNL..TRIVTPESYVDFIDLVVPELQRRGSYK..TEYEQG..TL
Collimonas_sp._OK412_WP_092393355.1:4-454 QQVADQLEAWIRDTDIDGFNL..TRTVAPESFEDFVNLVIPELQARGSYK..LDYEPG..TL
Pseudomonas_marginalis_WP_058415544.1:1-456 QTVADLLQEWVEETDVDGFNL..AYALTHETFIDAVDLLVPELQKRGVYK..TEYAQG..TL
Pseudomonas_antarctica_WP_064452947.1:1-458 ETVADLLQEWVEETDVDGFNL..AYALTHETFIDAVDLLVPELQKRGVYK..TEYAQG..TL
Pseudomonas_protegens_WP_041115159.1:9-454 QQVADDLESWIAETGLDGFNL..TRIVTPESYVDFIDLVIPELQRRGSYK..TAYDDG..TL
Pseudomonas_synxantha_WP_057024776.1:4-449 EQVADELESWISETGLDGFNL..TRIVTPESYVDFIDLVIPELQRRGSYK..TAYEQG..TL
Rhizobium_leguminosarum_WP_128409501.1:2-451 EQIADHLTTWIEEGGIDGFNL..ARTVAPESLRDFVDLVVPVLQERRVFK..ADYAAG..PL
Pseudomonas_chlororaphis_WP_038359779.1:6-451 EQVADELESWIAETGLDGFNL..TRIVTPESYVDFIDLVIPELQRRGSYK..TAYDTG..SL
Pseudomonas_syringae_90_WP_024642725.1:1-456 ETVADLLQEWVEETDVDGFNL..AYALTHETFIDAVELLVPELQKRGVYK..TEYAKG..TL
Collimonas_fungivorans_WP_061540754.1:4-453 QQVADQLEAWVRDTDIDGFNL..TRTVAPESFEDFVNLVIPELQARGSYK..LEYEDG..TL
Rhizobium_leguminosarum_WP_116409027.1:2-451 EQIADHLATWIEEGGIDGFNL..ARTVAPESLRDFVDLVVPVLQERGLFK..VDYADG..PL
Microvirga_ossetica_WP_099511173.1:1-454 EQIADHIASWVEDADIDGINL..PRTVAPESLADFVDLVVPVLQERGLFK..ADYADG..TL
Pseudomonas_caspiana_WP_087268376.1:4-451 EQVADELESWIAETGLDGFNL..TRIVTPESYVDFIDLVIPELQRRGSYK..TAYDSG..SL
Pseudomonas_lundensis_WP_048375063.1:4-451 EQVADELEAWIAETGLDGFNL..TRIVTPESYQDFIELVIPELQRRGSYK..TAYDPG..TL
Caballeronia_mineralivorans_WP_047894899.1:4-456 VQVADALESWMDETGIDGFNL..TRTVTPESYEDFVDLVIPELQARGVYK..TSYADG..TL
Pseudomonas_paralactis_WP_057702387.1:4-450 EQVADELESWISETGLDGFNL..TRVVTPESYVDFIDLVIPELQRRGSYK..TEYEQG..TL
Pseudomonas_taetrolens_WP_048381143.1:4-453 AQVADELESWIEETGLDGFNL..TRIVTPESYVDFIDLVIPELQRRGSYK..TAYDNG..SL
Pseudomonas_psychrophila_WP_123750761.1:4-450 EQVADELESWIEQTGLDGFNL..TRIVTPESYADFIDLVIPELQRRGSYK..TAYDSG..SL
Collimonas_arenae_100_WP_061532973.1:4-454 QQVADQMEAWIRDADIDGFNL..TRTVAPESFEDFVNLVIPELQARGSYK..LDYEDG..TL
Pseudomonas_viridiflava_WP_122210720.1:4-451 EQVADELESWIAETGLDGFNL..TRIVTPESYEDFIDLVIPELQRRGSYK..TAYEEG..SL
Kocuria_varians_WP_068470402.1:1-454 STVADELERWVDEGGLDGINL..AYHVSPGSFEDFVEYVVPELQARGRYR..TEYEGS..TL
Pseudomonas_wadenswilerensis_WP_115084816.1:4-455 TQVADELESWIAETGLDGFNL..ARTVTPESYVDFIDLVIPELQRRGSYK..TAYEQG..SL
Pseudomonas_syringae_WP_011266344.1:4-452 RQVADELESWIEETGLDGFNL..TRIVTPESYEDFIDLVIPELQRRGSYK..TAYQEG..SL
Pseudomonas_sp._286_105WP_122415793.1:4-453 EQVADELESWIAETGLDGFNL..TRIVTPESYEDFIDLVIPELQRRGSYK..TAYEDG..SL
Geobacillus_vulcani_WP_031406843.1:1-461 IQVADAIEERARRSGVDGFNL..THLITPKDLDDFIEYVVPILQRRGLYK..TAYTPG..TM
Geobacillus_icigianus_WP_033018365.1:1-461 IQVADAIEERARRSGVDGFNL..THLITPKDLDDFIEYVVPILQRRGLYK..TAYTPG..TM
Pseudomonas_floridensis_WP_083182568.1:4-453 EQIADELESWIEETGLDGFNL..TRIVTPESYEDFIELVIPELQRRGSYK..TAYEDG..SL
Pseudomonas_asturiensis_WP_073167523.1:4-451 EQVADELESWIAETGLDGFNL..TRIVTPESYEDFIDLVIPELQRRGSYK..TAYEDG..SL
Geobacillus_vulcani_110_WP_031406843.1:1-461 IQVADAIEERARRSGVDGFNL..THLITPKDLDDFIEYVVPILQRRGLYK..TAYTPG..TM


Pseudomonas_syringae_WP_024682626.1:4-452 EQVADELESWIEETGLDGFNL..TRIVTPESYEDFIDLVIPELQRRGSYK..TAYQDG..SL
LadAalpha_Geobacillus_thermoleovorans_BAM76377.1 IQVADAIEERARRSGVDGFNL..THLITPKDLDDFIEYVVPILQRRGLYK..TAYTPG..TM
Tsukamurella_pseudospumae_WP_068746786.1:1-457 QRVADELQEWGEETDVDGFNL..AYAITPGTFEDIVEFIVPELRRRGVYP..SEYTPG..TL
Kocuria_sp._Marseille-P3598_WP_085529073.1:5-456 EKVADELERWIDEGGLDGINL..AYHVTPGSFEDFVEFVVPELQKRGRYR..TEYEGS..TF
Microvirga_aerophila_WP_114188789.1:1-456 EEIADELQSWVEETGVDGFNI..SRVVTPETLEDFVDLVVPILQERGVYK..RDYAEG..TL
Burkholderia_ubonensis_WP_071760483.1:5-455 SQVADELQAWIDETGIDGFNL..TRTVMPESFEDFVDWVVPELQNRGVYK..EDYDPAP..TL
Achromobacter_marplatensis_WP_006226823.1:4-450 AQVADELESWVAETDIDGFNL..ARTVTPECYGDFIDLVIPELQSRGSYK..TAYADG..PL
Acinetobacter_baumannii_WP_070165746.1:1-443 ETVSDALQQWVEDTDIDGFNL..AYILAHQTFADVVEFIVPELQKRGVYQ..TSYAQG..TL
Labedella_phragmitis_WP_128496094.1:1-453 TEIADVLQEWVEETDVDGFNL..AYAITPGTFEDVVEHIVPELRRRGVYP..EEYTPG..SL
Nocardia_cyriacigeorgica_120_WP_130918184.1:1-453 ETVADRLQEWVDDTDLDGFNL..AYAVTPGSFEDIVRHVVPVLTERGVYA..TEYQPG..TL
Nocardia_cyriacigeorgica_WP_130918184.1:1-453 ETVADRLQEWVDDTDLDGFNL..AYAVTPGSFEDIVRHVVPVLTERGVYA..TEYQPG..TL
Mycobacterium_sp._1164985.4_WP_067298521.1:1-453 VRVSDTLQEWVEETDVDGFNL..AYAITPGSFAEFVDHVVPVLTERGAYQ..TSYTPG..TL
Rhodococcus_sp._1R11_WP_135042739.1:1-449 GEVADQLQEWVDKTDVDGFNL..AYAITPGTFEDVVQYVVPELQRRGVYR..TEYTPG..TL
Erwinia_amylovora_WP_004157587.1:5-459 QTVADELQSWVEETDVDGFNL..AYALTHETFSDVVEHLIPELQKRGVYK..QAYQPG..TL
Ralstonia_mannitolilytica_WP_102079134.1:4-451 GQVADTLIEWIDETGIDGFNL..SRTVVPESYEDFVDLVVPVLQERGRYK..TAYGEG..TL
Leifsonia_flava_WP_135120808.1:15-465 EEIADTLQEWVDYTDVDGFNL..AYAITPGTFEDVIEFVVPVLRERGAYP..TEYVEG..TL
Cryobacterium_roopkundense_WP_084141147.1:1-453 AEVADHLQDWVADTDVDGFNL..AYAITPGTFEDVIEFVIPELRKRGAYP..EAYAEG..SL
Cupriavidus_pauculus_WP_101681197.1:1-455 EHVADLLMAWSEETGVDGFNL..SRTVVPECFEDVIDLVVPLLQERGAYK..TAYQPG..TY
Rhizobium_sp._BK333_130_WP_133704837.1:2-454 EQIADRLQVWVEKGGIDGFNL..ARTVAPESLRDFIDLVVPVLQERGLFK..ADYAEG..TL
Caballeronia_mineralivorans_WP_047846789.1:1-454 ATVADILQTWVEETGVDGFNL..AYAVAHETFEDIVNYLVPELQRRGVYR..KEYTPG..TL
Nocardia_altamirensis_WP_069163049.1:1-454 ATVADLLQEWVDDTDLDGFNL..AYAVTPGSFEDVVRHVVPVLAARGAYA..TEYVPG..TL
Cupriavidus_sp._P-10_WP_116322758.1:1-452 KKVADELQQWMEETDIDGFNL..AYTVAPESINDFVELVVPELQARGVYK..TEYTQG..TL
Serratia_sp._S1B_WP_116726564.1:1-452 ETVADALQEWVAETDVDGFNL..AYILAHQTFSDVVEFIVPELQKRGVYQ..TEYAQG..TL
Pseudomonas_putida_WP_043864435.1:1-452 QTVADQLQEWVQETDVDGFNL..ASVVAPETFEAVVDLLVPELQARGLFK..RDYAQG..TL
Pseudomonas_aeruginosa_WP_023084248.1:4-453 RQVADDLEGWIADTDLDGFNL..TRTVEPESYADFIDLVVPELQARGSYK..TAYAPG..TL
Pseudomonas_mucidolens_WP_084381795.1:9-455 EQVADELESWINETGLDGFNL..TRMVTPESYVDFIDWVIPELQRRGSYK..TAYEGG..TL
Pseudomonas_poae_WP_060549803.1:4-450 EQVADELELWISETGLDGFNL..TRIVTPESYVDFIDLVVPELQKRGSYK..TEYETG..TL
Pseudomonas_chlororaphis_WP_123573412.1:9-454 QQVADDLESWIAETGLDGFNL..TRIVTPESYADFIDLVIPELQRRGSYK..TAYDNG..TL
Janthinobacterium_lividum_140_WP_072454679.1:1-44 RQVADQLESWLDETGIDGFNL..AFAVAHDSMADVVEHIVPELQRRGRYH..THYEEG..SL
Haladaptatus_cibarius_WP_049970513.1:4-446 EQVADELEAWRDETGVTGFNL..KELVRPGTLWDFVDLVVPELEKRGLVR..EEYEGE..TL
Arthrobacter_luteolus_WP_066298473.1:1-443 ETVADEVERWVDEAGLDGINL..AYAVTPGSFEQFVDLVVPELKKRGRVW..DGYDGG..TL
Geobacillus_sp._ZGt-1_WP_047758532.1:1-436 IQVADAIEERARRSGVDGFNL..THLITPKDLDDFIEYVVPILQRRGLYK..TAYTPG..TM
Lysinibacillus_composti_WP_124766485.1:4-458 EQIADTMEQWVNEAGVDGFNI..AYAITPGTFKDFGELVVPILRERGLVP..EEYEGN..TF
Microcella_putealis_WP_130486201.1:20-474 VEIADQLEQWVDETDVDGFNL..AYAVTPGTFADVVEHVVPVLRERGLYP..DAYDEG..TL
Pseudomonas_nitroreducens_WP_037016976.1:1-453 QTVADQLQAWVEETDVDGFNL..SSLVAPETFVDIVDLLVPELQARGLFK..REYEQG..TL
Acinetobacter_wuhouensis_WP_130168784.1:1-453 STVADELQHWVDDTDVDGFNL..AYILAHQSFIDVVEHIVPELQRRGVYQ..TAYREG..TL
Bradyrhizobium_sp._YR681_WP_008144663.1:1-454 ESVADKIEDWFEKTDVDGLNV..AFAISPGDFEDIADMLVPELTKRGRYK..PEYAKG..TL
Schumannella_sp._10F1D-1_WP_141164655.1:10-460 EQIADELQSWVDETDVDGFNL..AYAITPGTFEDIVEFVIPILRERGVYP..TEYQPG..TL
Pseudomonas_coronafaciens_150_WP_122355187.1:4-45 EQVADELESWIEETGLDGFNL..TRIVTPESYEDFIDLVIPELQRRGSYK..TAYQDG..TL
Pseudomonas_syringae_WP_003430238.1:4-452 EQVADELESWIEETGLDGFNL..TRIVTPESYEDFIDLVIPELQRRGSYK..TAYQDG..SL
unclassified_Rhodococcus_WP_094682261.1:1-449 GEVADQLQEWVDETDVDGFNL..AYAITPGTFEDVVRFVVPELQRRGVYR..TEYTPG..TL
Hafnia_alvei_WP_046449330.1:6-449 SQVADALQVWIDEADVDGFNL..TRIVNPGSYRDFIDLVVPELQSRGVYK..TEYAEG..AL
AS9A_3890_Hoyosella_subflava_WP_013808677.1:1-453 NTVADHIQNWVTETDVDGFNL..AYAITPGSFEDVITHVVPVLQERGAYP..ATYSQG..SL
Acinetobacter_baumannii_WP_000995600.1:1-443 ETVSDALQQWVEDTDVDGFNL..AYILAHQTFADVVEFIVPELQKRGVYQ..TSYAQG..TL
Agrobacterium_sp._B133/95_WP_065696417.1:2-454 EQIADRLQLWMEEGGIDGFNL..ARTVAPESLHDFVDLVVPVLQERGLFK..ADYAEG..TL
Microbacterium_sp._KROCY2_WP_024289149.1:1-453 QTVADQLETWIDEGGLDGINL..AYHVSPGSFEDFVEHVVPELQKRGRYR..TDYDGP..TL
Variovorax_paradoxus_WP_012747040.1:6-452 SQVADELQSWIDETGADGFNL..SRTVVPESYEDFVDLVVPELQNRGIYK..TAYAEG..SL
Methylobacterium_radiotolerans_WP_076730229.1:5-4 VTIADELQAWITEGEVDGFNL..SRIVVPESFSDFIDLVVPELQDRGLYK..TAYAEG..SL
Streptomyces_sp._BK215_WP_132915265.1:7-452 EQIADELERW.GKAGVDGFNV..TYVTTPGTFEDFIQHVVPVLQERGLMR..REYTPG..TL
Geobacillus_thermodenitrificans_160_WP_008880416. IEVADAIEERARRSGVDGFNL..VHLITPKDLDDFIEYVVPILQRRGLYK..TAYPPG..TM
Pseudomonas_aeruginosa_WP_132556951.1:356-785 RQVADDLEGWIADTDLDGFNL..TRTVEPESYADFIDLVVPELQARGSYK..TAYAPG..TL
Penicillium_solitum_OQE02104.1:14-471 AQVADNMERWVAEADVDGFNL..AYAIKPGSFKDIIDLLIPELRKRGLFW..DDYAVPKGTY
Penicillium_vulpinum_OQE05502.1:12-469 AQVADSMERWVEEADVDGFNL..AYAIKPGSFKDIIDLLIPELRKRGLFW..DDYAVPKGTY
Clavibacter_michiganensis_WP_045526194.1:1-454 TTVADELERWIEVGGTDGFNL..AYVVTPGTFEAVVDLLVPELRRRGRVW..DEYPEG..TL
Glutamicibacter_creatinolyticus_WP_054821484.1:6- AEVAEKLIDWVDYTDVDGFNL..AYAITPGTFEDIVEYVVPELQARGAYK..TEYAEG..SL
Campylobacter_sp._P0078_WP_086237522.1:4-454 KEVCDELEKLVEHSDADGFNL..AYATTPGTFEDVVEFIVPELQKRGSYQ..LEYQSG..SL
Pseudomonas_furukawaii_WP_003454569.1:1-447 SQVADQLLAWIDETGLDGFNL..TRTVTPESYIDFIDLVIPELQQRGRYK..TAYADG..AL
Leucobacter_triazinivorans_WP_130111548.1:1-442 ATVADEMERIIAETGVDGFNV..AYAVTPGTFEDVVEHVVPELQRRGVYP..TEYAPG..TL
Aspergillus_brasiliensis_CBS_101740_OJJ68286.1:12 QQVADEMERWVNEADVDGFNL..AYAIKPGSFKDIIDLLIPELRKRGLFW..DDYAVKKGTY
Aspergillus_udagawae_170_GAO89440.1:15-472 AQVADEMERWVREADVDGFNL..AYAIKPGSFKDIIDLLIPELRRRGLFW..EDYAVERGTY
Aspergillus_flavus_RMZ37351.1:15-472 EQVADEMERWVREADVDGFNL..AYAVKPGSFKDMIELLIPELRRRGLFW..DDYAVNKGTY
Aspergillus_flavus_RAQ54081.1:15-472 EQVADEMERWVREADVDGFNL..AYAVKPGSFKDIIELLIPELRRRGLFW..DDYAVDKGTY
Penicillium_arizonense_XP_022490779.1:12-469 AQVADNMERWVEEADVDGFNL..AYVVKPGSFKDIIDHLIPELRRRGLFW..DDYAVPKGTY
Salinibacterium_sp._CGMCC EEIADQLQEWVDYTDVDGFNL..AYAVTPGTFEDIVEHVIPVLQARGVYP..TEYAKG..TL
Aspergillus_fumigatus_OXN06785.1:14-471 AQVADEMERWVREADVDGFNL..AYAIKPGSFKDIIDLLIPELRRRGLFW..EDYAVERGTY
Aspergillus_lentulus_GAQ10210.1:7-464 AQVADEMERWVREADVDGFNL..AYAIKPGSFKDIIDLLIPELRRRGLFW..EDYAVERGTY
Aspergillus_flavus_RAQ66103.1:15-472 EQVADEMERWVREADVDGFNL..AYAVKPGSFKDMIELLIPELRRRGLFW..DDYAVNKGTY
Aspergillus_fumigatus_OXN22894.1:14-471 AQVADEMERWVREADVDGFNL..AYAIKPGSFKDIIDLLIPELRRRGLFW..EDYAVERGTY
Aspergillus_nidulans EQVADEMERWVREADVDGFNL..AYAIKPGSFKDIIDLLIPELRRRGLFH..EDYAAPRATY
Penicillium_nalgiovense_OQE79848.1:14-471 AQVADSMERWVQEADVDGFNL..AYAIKPGSFKDIIDLLIPELRKRGLFW..DDYAVPKGTY
Aspergillus_wentii TTVADELERWVEVSGVDGFNL..AHITNPGTFEDIIEYLLPELRRRGIFR..SEVEKEGVTA
Gordonia_iterans_WP_105943624.1:1-453 DEIAQTFADWVDETDVDGFNI..AYAVTPGSFEDIVDHVLPSLVRRGAYP..SEYRPG..TL
Azotobacter_beijerinckii_WP_090735436.1:4-454 QQVADALANWIEQTDLDGFNL..TRTVTPESYADFIDLVVPELQSRGLYK..TAYAAG..SL
Staphylococcus_sp._NAM3COL9_WP_057513692.1:4-453 EQVADKFEAWALEGGADGFNI..AQSYSPGTFEEFVDHVIPELQKRGLYR..TEYEGT..TL
Acidovorax_sp._56_WP_099656603.1:11-450 DQVADALQSWVDDTGVDGFNL..TRTVVPESFEDFIDIVVPELQNRGLHK..SSYTQG..SL
Paenibacillus_sp._BIHB4019_WP_099518466.1:1-456 EDVADQIERWTEETDVDGFNL..EPYVLPGSYVDFVDLVIPELQKRGLFK..TDYEAG..TL
Penicillium_antarcticum_OQD90033.1:5-465 KTVADELERWVSVGDVDGFNF..SYASLPDTFDDVIQLLLPELQRRGLFW..SDYAVKGGTL
Aspergillus_oryzae_RIB40_190_XP_001823703.1:9-463 TTVADELERWVEVAGVDGFNL..AHITNPGTFEDIIEYLLPELRRRGRFRSVVGKEGA..TA
Fusarium_oxysporum_f._sp._pisi ERIADEMERWVNEADVDGFNL..AYALMPASFEDVISDLLPVLRERGLFW..EDYAVDGGTY
Colletotrichum_fructicola_Nara_gc5_ELA35345.1:18- TTAADELERWVQGADVDGFNL..AHVTNPGTFEDIIEHLLPELRKRGIFR..SEVEKEGATA
Micrococcus_luteus_WP_041104460.1:19-468 ESAARQLVEWADETDVDGFNL..AYHITPGTFEDVVEFVVPELQKLGRYK..TAYTDG..TL
Aspergillus_awamori_GCB21923.1:12-469 EQVADEMERWVNEADVDGFNL..AYAIKPGSFKDIIDLLIPELRKRGLFW..DDYAVKKGTY
Aspergillus_niger_CBS EQVADEMERWVNEADVDGFNL..AYAIKPGSFKDIIDLLIPELRKRGLFW..DDYAVKKGTY
Aspergillus_lacticoffeatus_CBS_101883_XP_02545389 EQVADEMERWVNEADVDGFNL..AYAIKPGSFKDIIDLLIPELRKRGLFW..DDYTVKKGTY
Aspergillus_wentii_DTO_134E9_OJJ40237.1:14-471 AQVADYMERWVQEADVDGFNL..AYAVKPGSFKDIINLLPELRKRGLFH..DDYAVNKGTY
Aspergillus_indologenus_CBS_114.80_PYI31207.1:11- AQVADEMERWVAEADVDGFNL..AYAIKPGSFKDIIDLLLPELRRRGLFW..EDYAVPRGTY
Aspergillus_fischeri_NRRL_181_XP_001264002.1:14-4 AQVADEMERWVREADVDGFNL..AYAIKPGSFKDIIDLLIPELRRRGLFW..EDYAVERGTY
Penicillium_coprophilum_200_OQE46388.1:11-466 KTVADELERWVEISDVDGFNL..AHIVNPGTFEDIIEFLLPELRRRGVFR..EGIEKEGATA
Cupriavidus_taiwanensis_WP_116379876.1:8-454 SQVADTLAGWVDETGIDGFNL..SRTVVPESYEDFVDLVVPALQERGRYK..TAYADG..TL
Penicillium_digitatum KTVADELERWVTVGDVDGFNL..SYASLPDTFDDVIRLLLPELQRRGLFW..SDYAVKGGTF
Aspergillus_niger_GAQ46262.1:12-469 EQVADQMERWVNEADVDGFNL..AYAIKPGSFKDIIDLLIPELRKRGLFW..DDYTVKEGTY
Aspergillus_nomius_NRRL_13137_XP_015412385.1:15-4 QQVADEMERWVEEADVDGFNL..AYAVKPGSFKDIIELLIPELRRRGLFW..DEYAVNKGTY
Aspergillus_aculeatus_ATCC_16872_XP_020055010.1:1 AQVADEMERWVAEADVDGFNL..AYAIKPGSFKDIIDLLLPELRKRGLFW..EDYAVPRGTY
Penicillium_brasilianum_OOQ84969.1:19-474 TTVADELERWVEVSGVDGFNL..AHIANPGTFEDIIEFLLPELRRRGRFRSKVEHEGA..TA
Penicillium_subrubescens_OKP15100.1:19-474 TTVADELERWVEVSGVDGFNL..AHIANPGTFEDIIEFLLPELRRRGRFRSEVEHEGA..TA
Trichoderma_arundinaceum_RFU80530.1:19-474 TTVADELERWIEVSGVDGFNL..AHVTNPGSFEDIIEHLLPELRRRGVFR..NGIEKEGATA
Aspergillus_thermomutatus_210_XP_026614594.1:15-4 AQVADEMERWVREADVDGFNL..AYAVKPGSFKDIIDLLLPELRRRGLFW..EDYAVERGTY
Serratia_liquefaciens_WP_044551273.1:4-449 QQVADALLQWIDQADIDGFNL..TRIVNPGSYRDFIDLVVPELQSRGRYK..TAYRAG..SL
Micrococcus_luteus_WP_065572847.1:19-468 ESAARQLVEWADETDVDGFNL..AYHITPGTFEDIVEFVVPELQKLGRYK..TAYTDG..TL
Halolamina_rubra_WP_049979911.1:1-449 EQVADELVYWHESVGVDGFNV..KEAVRTGSLDEFVDQVVPELQDRGLFR..TEYEGD..TL
Acinetobacter_pittii_WP_075382847.1:7-452 EEVAEYLIHLLDETDIDGFNL..TRTVAPESHHDFIRLVIPELQQRGRYK..TAYKTG..SL
Corynebacterium_variabile_WP_052302534.1:2-464 ESVADQLENWVEATGVDGFNL..AYAVTPGTFRDVIDHVVPVLQARGEYP..TTYAPG..TL
Aspergillus_luchuensis_GAT21254.1:12-471 QQVADQMERWVNEADVDGFNLIQAYAIKPGSFKDIIDLLIPELRKRGLFW..DDYTVKKGTY


Aspergillus_luchuensis
Aspergillus_bombycis_XP_022386026.1:15-472
Agrobacterium_vitis_WP_070163524.1:1-454
Pseudomonas_psychrotolerans_220_WP_074584491.1:5-
Micrococcus_yunnanensis_WP_135040276.1:19-468
Acinetobacter_calcoaceticus_WP_004642549.1:7-452
Penicillium_brasilianum_CEO59775.1:15-472
Aspergillus_cristatus_ODM22551.1:12-469
Pseudomonas_taiwanensis_WP_027907363.1:1-446
Acidovorax_avenae
Staphylococcus_pseudintermedius_WP_101431388.1:4-
Rhodococcus_triatomae_WP_081607437.1:2-451
Alcaligenes_sp._RS4_230_WP_128393375.1:4-450
Gibbsiella_quercinecans_WP_121552947.1:7-454
Acinetobacter_ursingii_WP_044435211.1:5-452
Erwinia_typographi_WP_034887712.1:4-447
Trichoderma_harzianum_KKP01913.1:14-470
Fusarium_graminearum_235_CEF79766.1:12-466
Gordonia_alkanivorans_WP_006357654.1:10-461
Acinetobacter_radioresistens_WP_111281495.1:5-455
Mesorhizobium_plurifarium_WP_073985566.1:5-458
Oceanobacillus_halophilus_WP_121203049.1:1-454
Acinetobacter_tandoii_240_WP_100241535.1:7-457
Burkholderia_plantarii_WP_042624083.1:1-457
Alcaligenes_faecalis_WP_094195208.1:6-457
Bradyrhizobium_arachidis_WP_092214516.1:1-453
Cupriavidus_plantarum_WP_109583068.1:1-458
Variovorax_sp._770b2_245_WP_093443018.1:5-461
RZJ22128.1:4-447
LadB_Geobacillus_thermoleovorans_BAM76371.1
LadAbeta_Geobacillus_thermoleovorans_BAM76372.1
Af1_AFLA_024140_XP_002373925.1
Af3_AFLA_58870_XP_002378631.1
Af4_AFLA_049780_XP_002383105.1
Af5_AFLA_126060_XP_002381799.1
Af2_QMW32876.1:9-463
Yarrowia_lipolytica_CLIB122_YALI0C07546p_XP_50156
Rhizobium_sp._CF122_WP007794079.1
Acinetobacter_sp._NIPH_2100_LLM
Nostoc_sp._PCC_7107_WP_015115963.1
Aspergillus_flavus_NRRL3357_uncharacterized
Paenibacillus_curdlanolyticus_WP006037998.1
LadAbeta_Geobacillus_thermoleovorans_FMN-dependen
SsuD_1M41
Paenibacillus_curdlanolyticus_WP006037998.1
Bacillus
Pseudomonas
LadB_Geobacillus_thermoleovorans_FMN-dependent
Pseudomonas_aeruginosa_PAO1_NP_251290.1
Alkanesulfonate
Alkanesulfonate
Aspergillus_niger_ATCC13496_RDH19503.1
Penicillium_digitatum_Pd1_XP014534980.1
Acinetobacter_rudis_WP_016657872.1

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                                                  420       430       440
LADA_Geobacillus_thermodenitrificans_WP_011888513 REKLF....GKGNYRLPDDHIAARYRNISSNV.........
Geobacillus_sp._LEMMY01_WP_079935807.1:1-440      REKLF....GKGNYRLPDDHIAARYRNISSNV.........
Geobacillus_stearothermophilus_ABV66256.1:1-440   REKLF....GKGNYRLPDDHIAARYRNISSNV.........
Geobacillus_sp._B4113_201601_WP_061912600.1:1-440 REKLF....GKGNYRLPDDHIAARYRNISSNV.........
Geobacillus_sp._B4113_201601_5WP_061912600.1:1-44 REKLF....GKGNYRLPDDHIAARYRNISSNV.........
Bacillus_thuringiensis_6WP_029441578.1:1-435       REKLF....GKGNSKLPNNHFINEYRN..............
Lysinibacillus_sphaericus_WP_103976887.1:2-422    REKLF..................NLKHKYR..............
Lysinibacillus_sphaericus_WP_069508309.1:2-422    REKLF..................NLKHKYR..............
Rummeliibacillus_sp._SL167_10_WP_146551437.1:2-42 REKLF..................YGKHEYKF.............
Paenibacillus_sp._DXL2_WP_110843609.1:1-459       RERLF....GGGVVRLPDDHPGARYRRSASPI.........
Paenibacillus_naphthalenovorans_WP_074730028.1:1- RERLF....GKGTVQLPEGHPGSVYRRTTTT.........
Cohnella_sp._HS21_WP_130606586.1:1-453            REKLF....GPGESRLPDRHPGAAFR...............
Streptosporangium_subroseum_15_WP_089205784.1:1-4 RERLL....GPGIHRLPETHPGAAFRR..............
Arthrobacter_sp._Hz2_WP_120147654.1:1-455         RERLF....GPGNTRLFDQHPGARYRN..............
Nonomuraea_solani_WP_103963668.1:1-453            RERLL....GPGVHRLPATHPGAAHRR..............
Arthrobacter_ruber_WP_105030338.1:1-455           RERLF....GPGSARLPDRHPGARYRN..............
Bacillus_aciditolerans_20_WP_121446947.1:1-456    REKLF....NQGSSLLPNDHPGSKYRKTA............
WP_137163763.1:1-458                              RHKLF....GRG.DRLPEGHAGRQVRIQPANT..........
Aeribacillus_pallidus_WP_130157503.1:4-457        REKLF....GKGQSRLPEDHIGAKYRNLS............
Bacillus_megaterium_24WP_098602848.1:4-460        REKLF....GKGQPRLSKEHIGSTYQKISYQI.........
Streptomyces_sp._150FB_WP_078877664.1:5-455       RERLF....GPGSARLLDDHPGKRFRDL.............
Arthrobacter_sp._DWC3_WP_104051071.1:1-454        RERLF....GAGNTRLFDQHPGARYR...............
Cohnella_thermotolerans_WP_027093898.1:1-456      REKLF....GPGKRLLPDHHPGAKVRTF.............
Paenibacillus_bovis_28WP_144921429.1:1-452        RGNLF....GAG.PQLPDHHPGKSY................
Bacillus_aciditolerans_WP_121447760.1:1-452       RESLF....GRG.SQLPGHHPGKQY................
Leifsonia_sp._ALI-44-B_30_WP_077053645.1:1-455    RERLF....GAGNARLFPEHPGARYR...............
Parageobacillus_thermoglucosidasius_WP_064552269. REKLF....NHGSSLLPEDHPGSAYRSKS............
Geobacillus_sp._Y4.1MC1_WP_013399886.1:1-459      REKLF....NYGSSLLPEDHPGSAYRSKS............
Bacillus_methanolicus_35WP_004434428.1:1-462      RQKLF....GHGSNLLPEDHPGSKYRRIYSSV.........
Terribacillus_halophilus_WP_077309754.1:1-448     RENL.....SGNSKLPDRHPA.....................
Paraburkholderia_kururiensis_WP_017777532.1:1-453 REKLH....GGG.ARLAEPHPGARYRS.............
Gracilibacillus_massiliensis_WP_058308419.1:1-456 REKLF....PDGNSRLPEDHPGSKFR..............
Streptomyces_yanglinensis_WP_103888551.1:5-452    RERLF....GAGRTRLPEDHPGTRY................
Trinickia_sp._7GSK02_40_WP_136896361.1:1-452      REKLH....GRG.ARLAEPHPGAAYR...............
Cryobacterium_sp._NEAU-85_WP_123045138.1:1-448    RERLF....DKG.PLAPDAHPAGQAR...............
Alicyclobacillus_acidoterrestris_WP_021298468.1:4 RDNLS....GRG.SFLLDDHPARKYRS.............
Oceanobacillus_senegalensis_WP_085994229.1:1-452  RANLT.....GQDQLPDHHPGKSYR................
Bacillus_sinesaloumensis_WP_077620983.1:1-449     REKLF....PQGKSILPEDHPGSKYRRVPA............
Halopenitus_persicus_WP_021074147.1:6-457         RETMF....ETGDGFLHEDHTGSAYADDS............
Microbacteriaceae_bacterium                       RERLF...EGRG.PLLPERHPAGALREAARS...........
Lysinibacillus_sinduriensis_WP_036201100.1:1-458  REKLF....GTGRNLLPNDHIGAKYRNAYS............
Bacillus_endophyticus_WP_113749053.1:5-457        REKLF....GKGRARLSEEHVGSQYRNMN............
Pseudomonas_monteilii_WP_119371117.1:1-455        REKLF....GDG.PRLPATHPAAGYRDLS.............
Bacillus_endophyticus_50_WP_061801645.1:5-457     REKLF....GKGRARLSEEHVGSQYRNMN............
Planococcus_maitriensis_WP_112233285.1:1-457      REKIY....GKGQAQLKDNHPGRTFKHL.............
Oceanobacillus_profundus_WP_118889880.1:1-447     RDNLF....GKG.DKLLDTH......................
Burkholderia_pseudomallei_WP_141404579.1:1-452    REKLY....RAG.PRLAAPHPAARYR...............
Terribacillus_saccharophilus_WP_095261886.1:1-455 REKLF....DYESSRLPSGHPASNYR..............
Sediminibacillus_albus_WP_093212831.1:4-453       RDNLF....GNG.ARLPENHPGRQDR...............
Sciscionella_marina_WP_020496929.1:1-448          RERLH....GEG.PRLPASHPGAAHR...............
Mycetocola_saprophilus_WP_043321267.1:1-452       RERLF...PGQG.SQLPDTHPAAAYR...............
Lysinibacillus_macroides_WP_053993569.1:4-460     REKLF....GKGKAYLAQEHIGANYRKDSNKA..........
Pseudomonas_putida_WP_086978777.1:1-458           REKLF....GDG.PRLPASHPAAGYRDLSRQL..........
Sediminibacillus_halophilus_60_WP_074598704.1:4-4 RDNLF....GAG.PRLSENHPGKKY................
Rhizobium_oryzae_WP_085420425.1:1-450             REKLF.....GSPRLPDRHVAAGYR.................
Pseudomonas_extremorientalis_WP_071491956.1:1-455 REKLF....GDG.ARLASNHPGAGYRNLS............
Pseudomonas_fluorescens_WP_016977452.1:1-454      REKLF....GEG.ARLPEVHPGSGYRNL.............
Neorhizobium_sp._T25_27_WP_105419890.1:1-450      REKLF.....GAPRLPDRHIAARYR.................
Pseudomonas_extremaustralis_WP_078833627.1:1-457  REKLF....GEG.PRLPSNHPGAGYRDLSGS...........
Fictibacillus_aquaticus_WP_094253544.1:1-455      REKLF....SHGRSVLPNDHPGRKF................
Pseudomonas_extremaustralis_KAA8559760.1:1-456    REKLF....GDG.ARLSANHPGAGYRNLSA............
Mycobacterium_sp._ACS1612_WP_067812332.1:1-454    RDKLF....GRG.PRLPETHRAAAYRRVKEGV..........
Bacillus_megaterium_WP_116075167.1:1-455          REKLF.....KKSHFLPDEHYGAQYRKTS.............
Pseudomonas_frederiksbergensis_70_WP_123409596.1: REKLF....GEG.PRLPDIHPGAGYRDLA............
Pseudomonas_citronellolis_SFC61163.1:1-452        RERLF....GAGHARLPADHHGARYRDPAA............
Herbaspirillum_chlorophenolicum_WP_050468599.1:4- REKLF.....GGASVLPQNHAAAAFR...............
Arthrobacter_crystallopoietes_WP_074700854.1:1-45 RERLF...PGNG.PLLPATHPGAAYR...............
Terribacillus_goriensis_WP_038558686.1:1-438      REKLY.....G................................
Bacillus_megaterium_WP_025749753.1:1-455          REKLF.....KKSHFLPDEHYGVRYRKTS.............
Neorhizobium_sp._T7_12_WP_105403044.1:1-451       REKLF.....GTQRLPSRHIAARYRT................
Rummeliibacillus_sp._SL167_WP_146553619.1:4-459   REKLF....GESSYLRPDHIGHKYKRIPESI...........
Burkholderia_sp._PAMC                             REKLF....GGA.AHLPQEHAGASFRNLS.............
Pseudomonas_koreensis_WP_064585463.1:4-449        REKLF.....HGEAQLPEQHTGASFR................
Pseudomonas_fluorescens_80_WP_064116961.1:6-451   REKLF.....HGEAQLPEQHTGSSYR................
Pseudomonas_rhodesiae_WP_040265276.1:4-450        REKVF.....HASARLPDQHTGSSYRH...............
Collimonas_sp._OK412_WP_092393355.1:4-454         REKLF....EAGQPTLPGRHPAAGYRQV..............
Pseudomonas_marginalis_WP_058415544.1:1-456       REKLF....GDG.ARLAPNHPGASYRDLAA............
Pseudomonas_antarctica_WP_064452947.1:1-458       REKLF....GEG.ARLASNHPGAGYRDLKATT..........
Pseudomonas_protegens_WP_041115159.1:9-454        REKLF....RQG.RKLPEQHTGAAYR...............
Pseudomonas_synxantha_WP_057024776.1:4-449        REKVF.....HGAARLPEQHTGATYR................
Rhizobium_leguminosarum_WP_128409501.1:2-451      RQKLF....GGGNGRLPAAHPAAQFR................
Pseudomonas_chlororaphis_WP_038359779.1:6-451     REKLF.....HGEAQLPEQHTGAAFR................
Pseudomonas_syringae_90_WP_024642725.1:1-456      REKLF....GDG.PRLEAGHPGAGFRDLAA............
Collimonas_fungivorans_WP_061540754.1:4-453       REKLF....EAGQPTLPARHPAASYRQ...............
Rhizobium_leguminosarum_WP_116409027.1:2-451      RQKLF....GGGNGRLPAAHPAARFR................
Microvirga_ossetica_WP_099511173.1:1-454          REKLF....GEGRNHLPAEHWGARFRS...............
Pseudomonas_caspiana_WP_087268376.1:4-451         REKLF....PEGGARLPEQHVGASYRS...............
Pseudomonas_lundensis_WP_048375063.1:4-451        RQKLF....TEGDAHLPQRHTGASYRH...............
Caballeronia_mineralivorans_WP_047894899.1:4-456  REKLF....GRG.AKLPDEHTGASFRRL..............
Pseudomonas_paralactis_WP_057702387.1:4-450       REKVF.....HGTARLPEQHTGSSYRH...............
Pseudomonas_taetrolens_WP_048381143.1:4-453       RQKLF....TDGSAHLPDRHTGAAFRHTT.............
Pseudomonas_psychrophila_WP_123750761.1:4-450     RQKLF....VEGDAHLPERHTGASFR................
Collimonas_arenae_100_WP_061532973.1:4-454        REKLF....DTGQATLPARHPAAGFRQL..............
Pseudomonas_viridiflava_WP_122210720.1:4-451      RKKLF....PQGTDRLPPQHAGAGYRQ...............
Kocuria_varians_WP_068470402.1:1-454              RESLY....GAGQDRVKETHPAAAYRG...............
Pseudomonas_wadenswilerensis_WP_115084816.1:4-455 REKLF....ASDQPHLPADHPGASYRHTPTT...........
Pseudomonas_syringae_WP_011266344.1:4-452         RKKLF....PQGTDRLPERHAGAAHRHI..............
Pseudomonas_sp._286_105WP_122415793.1:4-453       RRKLF....PQGTDRLPPQHAGAGYRQGS.............
Geobacillus_vulcani_WP_031406843.1:1-461          REKLF....GNG.PRLSHDHPAAAFRPIGSRT..........
Geobacillus_icigianus_WP_033018365.1:1-461        REKLF....GNG.PRLAHDHPAAAFRPIGSRT..........
Pseudomonas_floridensis_WP_083182568.1:4-453      RKKLF....PQGTDRLPPHHAGAGYRHRS.............
Pseudomonas_asturiensis_WP_073167523.1:4-451      RKKLF....PQGTDRLPPQHAGAGYRQ...............
Geobacillus_vulcani_110_WP_031406843.1:1-461      REKLF....GNG.PRLSHDHPAAAFRPIGSRT..........
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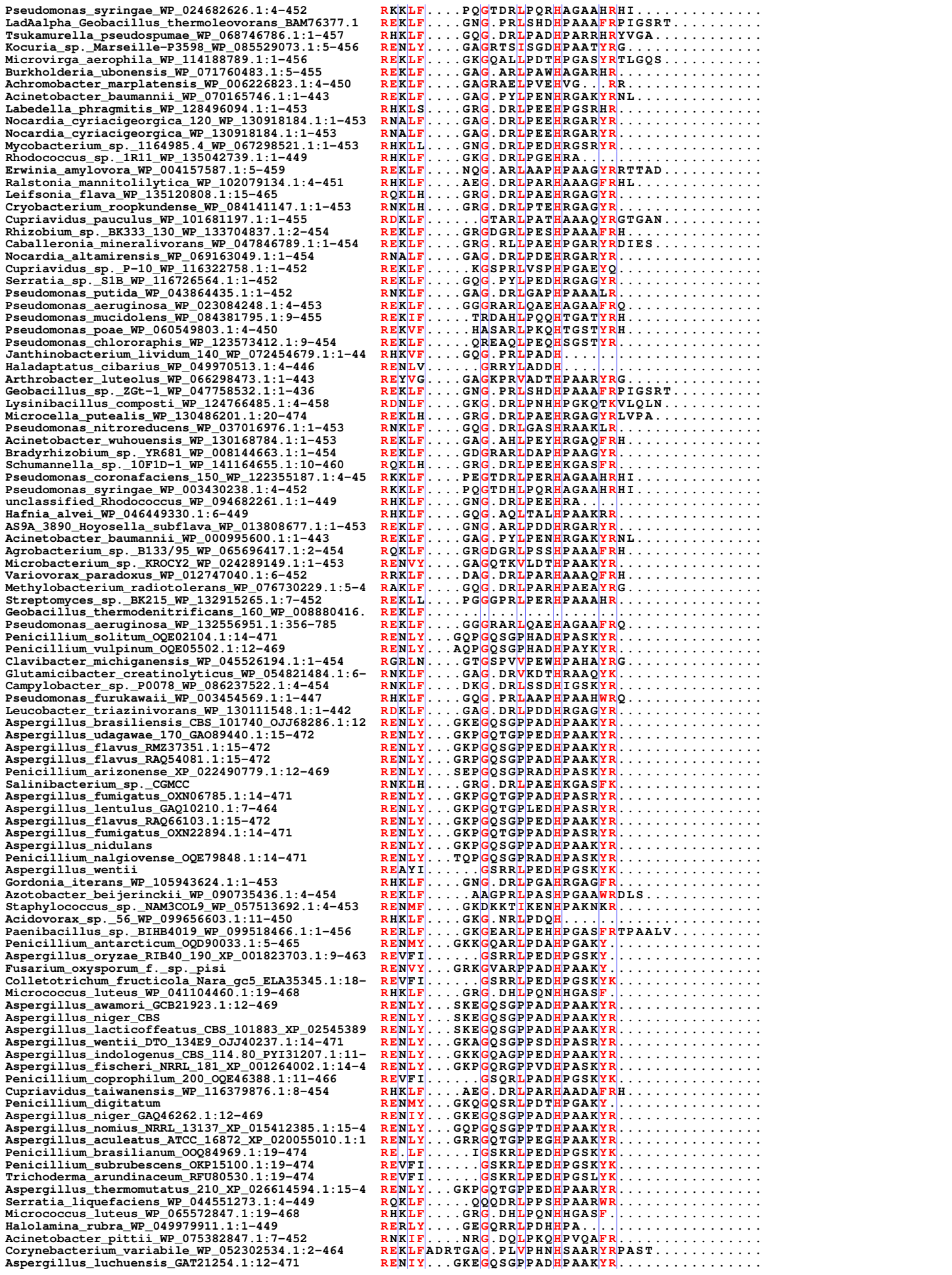
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Tsukamurella_pseudospumae_WP_068746786.1:1-457
Kocuria_sp._Marseille-P3598_WP_085529073.1:5-456
Microvirga_aerophila_WP_114188789.1:1-456
Burkholderia_ubonensis_WP_071760483.1:5-455
Achromobacter_marplatensis_WP_006226823.1:4-450
Acinetobacter_baumannii_WP_070165746.1:1-443
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Nocardia_cyriacigeorgica_120_WP_130918184.1:1-453
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Mycobacterium_sp._1164985.4_WP_067298521.1:1-453
Rhodococcus_sp._1R11_WP_135042739.1:1-449
Erwinia_amylovora_WP_004157587.1:5-459
Ralstonia_mannitolilytica_WP_102079134.1:4-451
Leifsonia_flava_WP_135120808.1:15-465
Cryobacterium_roopkundense_WP_084141147.1:1-453
Cupriavidus_pauculus_WP_101681197.1:1-455
Rhizobium_sp._BK333_130_WP_133704837.1:2-454
Caballeronia_mineralivorans_WP_047846789.1:1-454
Nocardia_altamirensis_WP_069163049.1:1-454
Cupriavidus_sp._P-10_WP_116322758.1:1-452
Serratia_sp._S1B_WP_116726564.1:1-452
Pseudomonas_putida_WP_043864435.1:1-452
Pseudomonas_aeruginosa_WP_023084248.1:4-453
Pseudomonas_mucidolens_WP_084381795.1:9-455
Pseudomonas_poae_WP_060549803.1:4-450
Pseudomonas_chlororaphis_WP_123573412.1:9-454
Janthinobacterium_lividum_140_WP_072454679.1:1-44
Haladaptatus_cibarius_WP_049970513.1:4-446
Arthrobacter_luteolus_WP_066298473.1:1-443
Geobacillus_sp._ZGt-1_WP_047758532.1:1-436
Lysinibacillus_composti_WP_124766485.1:4-458
Microcella_putealis_WP_130486201.1:20-474
Pseudomonas_nitroreducens_WP_037016976.1:1-453
Acinetobacter_wuhouensis_WP_130168784.1:1-453
Bradyrhizobium_sp._YR681_WP_008144663.1:1-454
Schumannella_sp._10F1D-1_WP_141164655.1:10-460
Pseudomonas_coronafaciens_150_WP_122355187.1:4-45
Pseudomonas_syringae_WP_003430238.1:4-452
unclassified_Rhodococcus_WP_094682261.1:1-449
Hafnia_alvei_WP_046449330.1:6-449
AS9A_3890_Hoyosella_subflava_WP_013808677.1:1-453
Acinetobacter_baumannii_WP_000995600.1:1-443
Agrobacterium_sp._B133/95_WP_065696417.1:2-454
Microbacterium_sp._KROCY2_WP_024289149.1:1-453
Variovorax_paradoxus_WP_012747040.1:6-452
Methylobacterium_radiotolerans_WP_076730229.1:5-4
Streptomyces_sp._BK215_WP_132915265.1:7-452
Geobacillus_thermodenitrificans_160_WP_008880416.
Pseudomonas_aeruginosa_WP_132556951.1:356-785
Penicillium_solitum_OQE02104.1:14-471
Penicillium_vulpinum_OQE05502.1:12-469
Clavibacter_michiganensis_WP_045526194.1:1-454
Glutamicibacter_creatinolyticus_WP_054821484.1:6-
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Aspergillus_udagawae_170_GAO89440.1:15-472
Aspergillus_flavus_RMZ37351.1:15-472
Aspergillus_flavus_RAQ54081.1:15-472
Penicillium_arizonense_XP_022490779.1:12-469
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Aspergillus_lentulus_GAQ10210.1:7-464
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Aspergillus_fumigatus_OXN22894.1:14-471
Aspergillus_nidulans
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Azotobacter_beijerinckii_WP_090735436.1:4-454
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Acidovorax_sp._56_WP_099656603.1:11-450
Paenibacillus_sp._BIHB4019_WP_099518466.1:1-456
Penicillium_antarcticum_OQD90033.1:5-465
Aspergillus_oryzae_RIB40_190_XP_001823703.1:9-463
Fusarium_oxysporum_f._sp._pisi
Colletotrichum_fructicola_Nara_gc5_ELA35345.1:18-
Micrococcus_luteus_WP_041104460.1:19-468
Aspergillus_awamori_GCB21923.1:12-469
Aspergillus_niger_CBS
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Aspergillus_indologenus_CBS_114.80_PYI31207.1:11-
Aspergillus_fischeri_NRRL_181_XP_001264002.1:14-4
Penicillium_coprophilum_200_OQE46388.1:11-466
Cupriavidus_taiwanensis_WP_116379876.1:8-454
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Trichoderma_arundinaceum_RFU80530.1:19-474
Aspergillus_thermomutatus_210_XP_026614594.1:15-4
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Micrococcus_luteus_WP_065572847.1:19-468
Halolamina_rubra_WP_049979911.1:1-449
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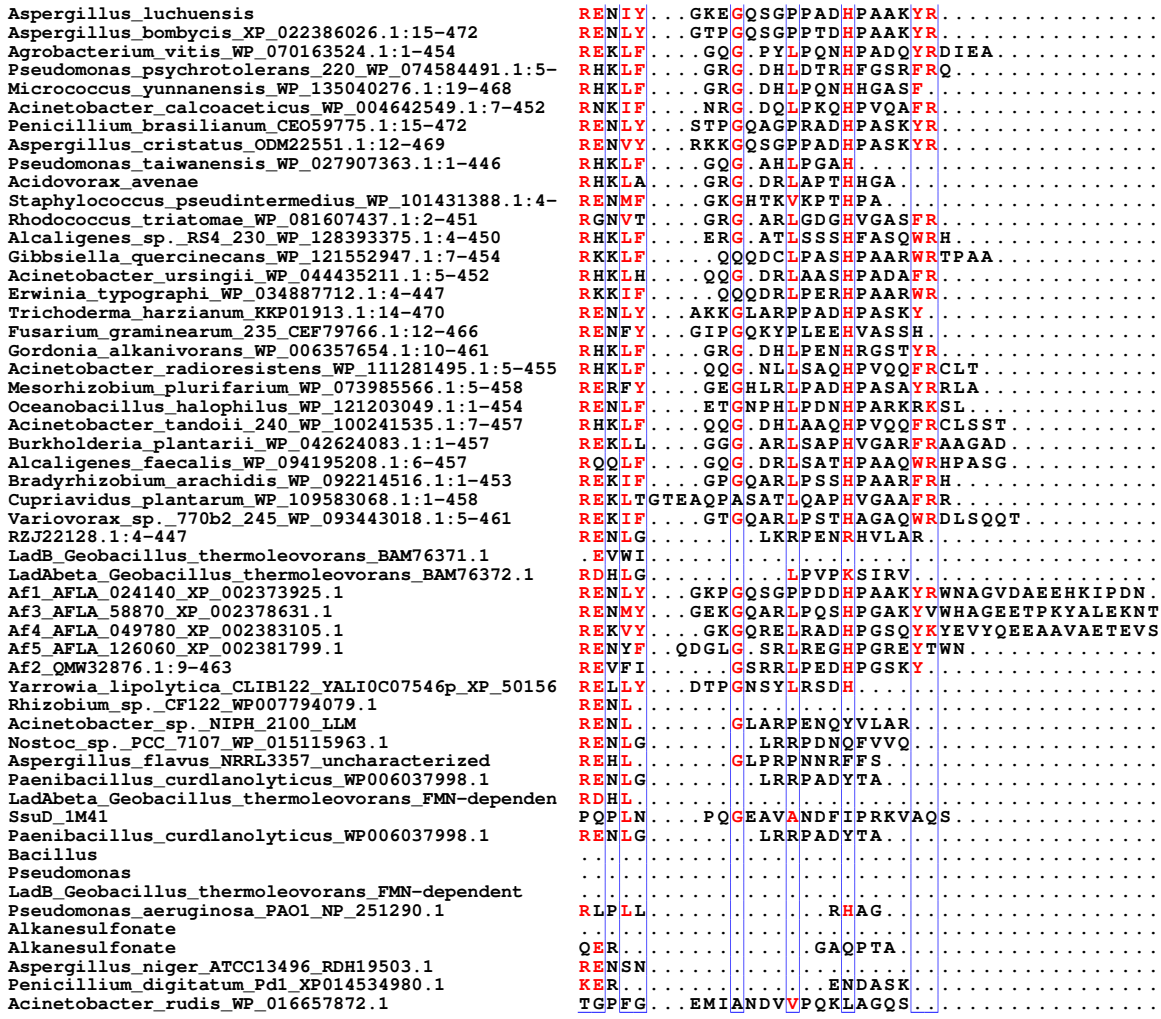
Corynebacterium_variabile_WP_052302534.1:2-464
Aspergillus_luchuensis_GAT21254.1:12-471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