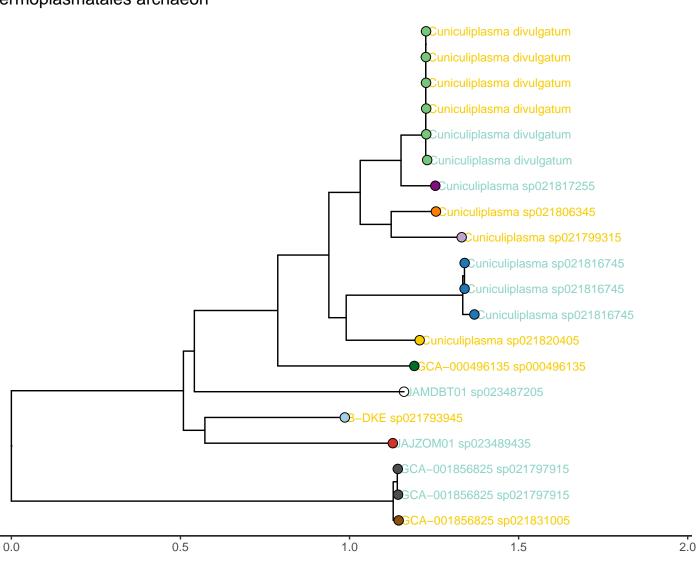
Thermoplasmata archaeon **CRISPR** crispr_negative OJBA184 sp021826685 crispr_positive -OJBA184 sp021828195 OJBA184 sp021821785 **Species** OJBA184 sp021801925 B8-G13 sp003649745 JAKIVR01 sp021828665 EX4484-36 sp002254765 JAJYEA01 sp021809545 Ferroplasma sp021820565 Oun c Thermoplasmata GCA-000496135 sp021845325 JAGGXW01 sp021158865 OJAJZXB01 sp021846395 JAJYEA01 sp021809545 -OFerroplasma sp021820565 JAJZXB01 sp021846395 Picrophilus sp021826785 JAJZXY01 sp021796175 OJBA582 sp021818765 JAJZXY01 sp021817225 Oun g JAKAFX01 JAKIVR01 sp021828665 **GCA**-000496135 sp021845325 Picrophilus sp021826785 UBA184 sp021801925 JAJZXY01 sp021796175 UBA184 sp021821785 ■JAJZXY01 sp021817225 UBA184 sp021826685 EX4484-36 sp002254765 UBA184 sp021828195 JAGGXW01 sp021158865 UBA582 sp021818765 Oun_g_DRIF01 un_c__Thermoplasmata **-**038-G13 sp003649745 un_g__DRIF01 un_g__JAKAFX01 0.0 0.5 1.0 1.5 2.0 2.5

Thermoplasmatales archaeon

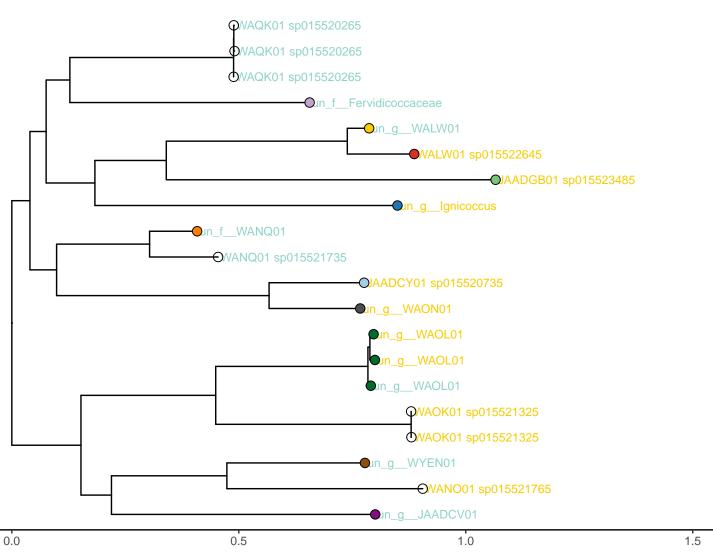


Species

- B-DKE sp021793945
- Cuniculiplasma divulgatum
- Cuniculiplasma sp021799315
- Cuniculiplasma sp021806345
- Cuniculiplasma sp021816745
- Cuniculiplasma sp021817255
- O Cuniculiplasma sp021820405
- GCA-000496135 sp000496135
- GCA-001856825 sp021797915
- GCA-001856825 sp021831005
- JAJZOM01 sp023489435
- O JAMDBT01 sp023487205

- crispr_negative
- crispr_positive

Desulfurococcales archaeon

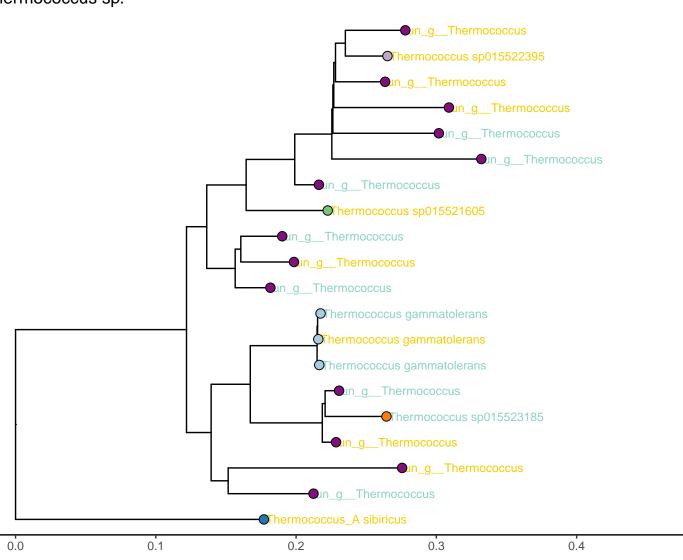


Species

- JAADCY01 sp015520735
- JAADGB01 sp015523485
- un_f__Fervidicoccaceae
- un_f__WANQ01
- un_g__lgnicoccus
- un_g__JAADCV01
- un_g__WALW01
- un_g__WAOL01
- un_g__WAON01
- un_g__WYEN01
- _____
- WALW01 sp015522645
- O WANO01 sp015521765
- WANQ01 sp015521735
- WAOK01 sp015521325
- O WAQK01 sp015520265

- crispr_negative
 - crispr_positive

Thermococcus sp.

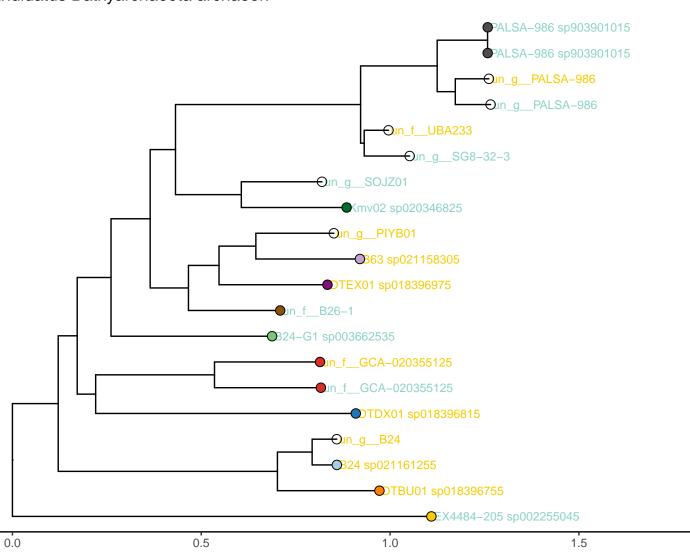


CRISPR

- crispr_negative
- crispr_positive

- Thermococcus gammatolerans
- Thermococcus sp015521605
- Thermococcus sp015522395
- Thermococcus sp015523185
- Thermococcus_A sibiricus
- un_g__Thermococcus

Candidatus Bathyarchaeota archaeon

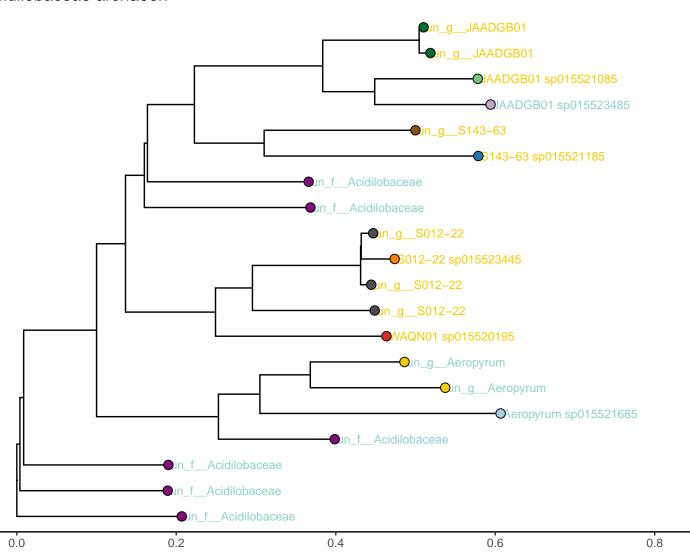


CRISPR

- crispr_negative
- crispr_positive

- B24 sp021161255
- B24-G1 sp003662535
- B63 sp021158305
- DTBU01 sp018396755
- DTDX01 sp018396815
- DTEX01 sp018396975
- EX4484-205 sp002255045
- Kmv02 sp020346825
- PALSA-986 sp903901015
- un_f__B26-1
- un_f__GCA-020355125
- un_f_UBA233
-) un_g__B24
- O un_g__PALSA-986
 - un_g__PIYB01
- un_g_SG8-32-3
- un_g_SOJZ01

Acidilobaceae archaeon

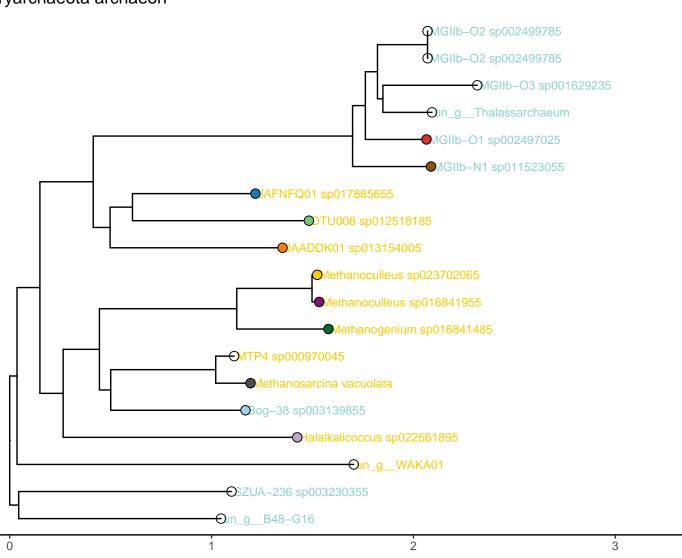


CRISPR

- crispr_negative
- crispr_positive

- Aeropyrum sp015521685
- JAADGB01 sp015521085
- JAADGB01 sp015523485
- S012-22 sp015523445
- S143-63 sp015521185
- un_f__Acidilobaceae
- un_g__Aeropyrum
- un_g__JAADGB01
- un_g_S012-22
- un_g__S143-63
- WAQN01 sp015520195

Euryarchaeota archaeon

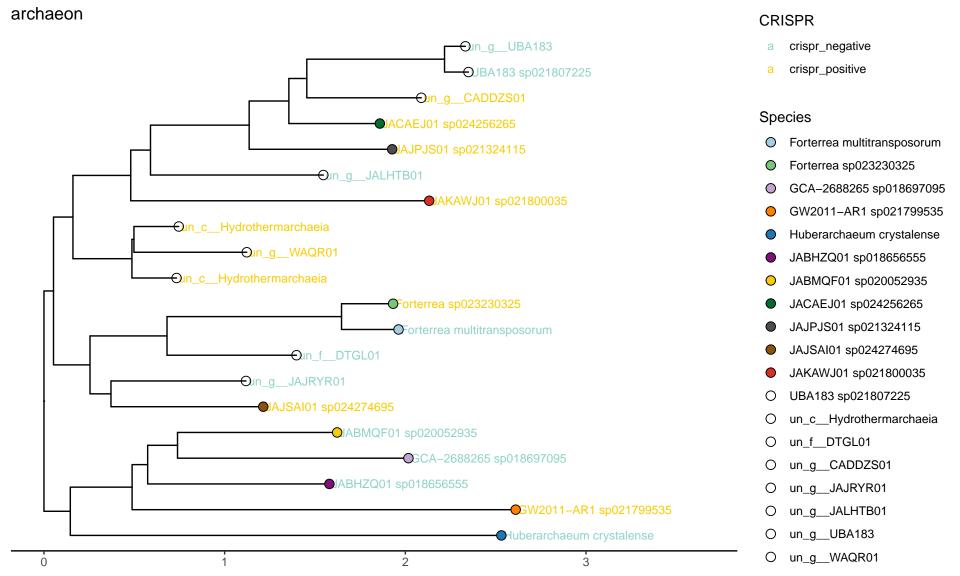


Species

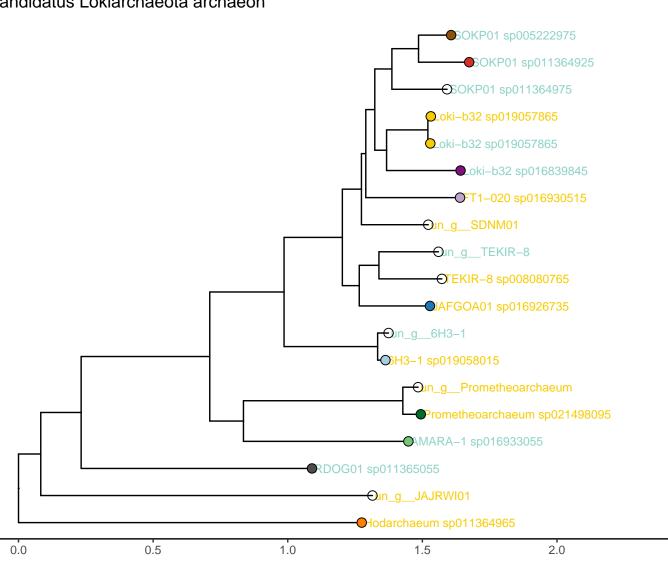
- Bog-38 sp003139855
- DTU008 sp012518185
- Halalkalicoccus sp022561895
- JAADDK01 sp013154005
- JAFNFQ01 sp017885655
- JAFNFQUI SPUI7885055
- Methanoculleus sp016841955

 Methanoculleus sp023702065
- - Methanogenium sp016841485
- Methanosarcina vacuolata
 - MGIIb-N1 sp011523055
 - MGI
 - MGIIb-O1 sp002497025 MGIIb-O2 sp002499785
 - O MGIIb-O3 sp001629235
 -) MTP4 sp000970045
 - O SZUA-236 sp003230355
 - un g B48-G16
 - un_g__Thalassarchaeum
 - un_g__WAKA01

- crispr_negative
- crispr_positive



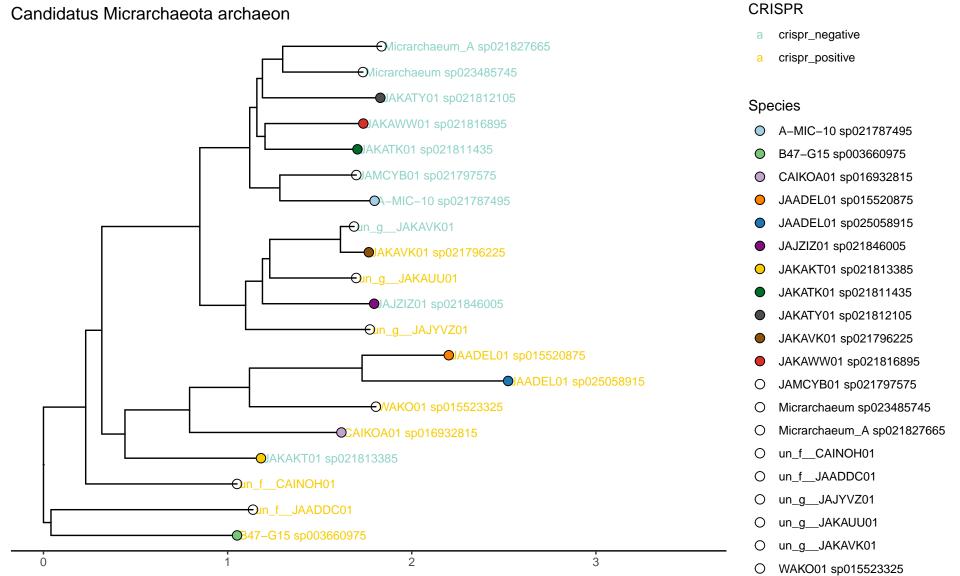
Candidatus Lokiarchaeota archaeon



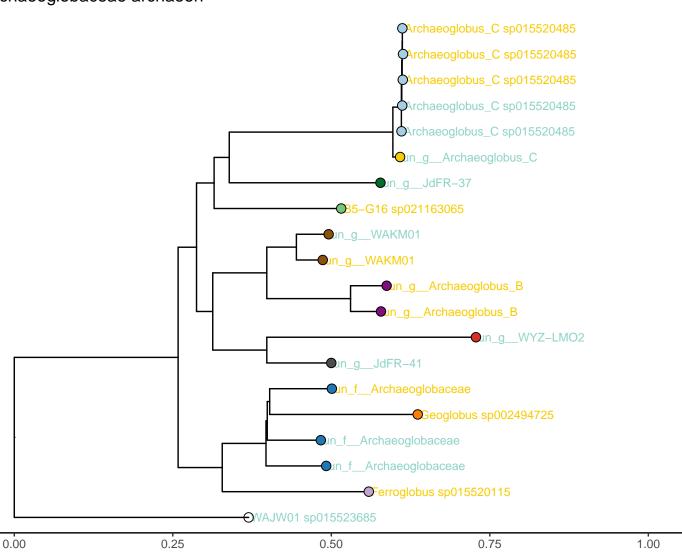
CRISPR

- - crispr_negative crispr_positive

- 6H3-1 sp019058015
- AMARA-1 sp016933055
- FT1-020 sp016930515
- Hodarchaeum sp011364965
- JAFGOA01 sp016926735
 - Loki-b32 sp016839845
- Loki-b32 sp019057865
 - Prometheoarchaeum sp021498095
- RDOG01 sp011365055
- SOKP01 sp005222975
- - SOKP01 sp011364925 SOKP01 sp011364975
- - TEKIR-8 sp008080765
 - un_g__6H3-1
 - un_g__JAJRWI01
 - un_g__Prometheoarchaeum
 - un_g__SDNM01
 - un_g__TEKIR-8



Archaeoglobaceae archaeon



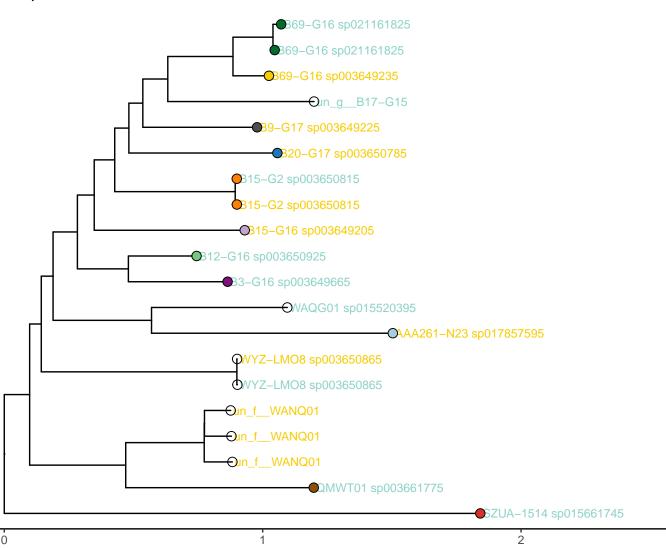
CRISPR

- crispr_negative
- crispr_positive

- Archaeoglobus_C sp015520485
- B5-G16 sp021163065
- Ferroglobus sp015520115
- Geoglobus sp002494725
- un_f__Archaeoglobaceae
- un_g__Archaeoglobus_B
- un_g__Archaeoglobus_C
- un_g_JdFR-37
- un_g__JdFR-41
- un_g__ourit ii
- un_g__WAKM01
- un_g__WYZ-LMO2
- WAJW01 sp015523685

Candidatus Woesearchaeota archaeon **CRISPR** •JAIPET01 sp021736975 crispr_negative ●PWWA01 sp003562145 crispr_positive **─**NJJD01 sp014729915 Oun_f__UBA10200 **Species** -GW2011-AR11 sp12027u 1-14-0-10-32-24 sp018655525 OGCA-2688775 sp016185815 B72-G16 sp003650545 Oun g JAFCDQ01 GCA-2688775 sp016185815 GW2011-AR11 sp12027u QJAIPIC01 sp021734865 JABIKK01 sp016845225 **372–G16** sp003650545 JACOVP01 sp018302985 **-**01−14−0−10−32−24 sp018655525 JACPNE01 sp016185615 Oun g GW2011-AR9 JAIPET01 sp021736975 €NJKV01 sp019323495 JAIPIC01 sp021734865 QVAPY01 sp015520525 PWWA01 sp003562145 **O**WAPY01 sp015520525 UBA583 sp002505525 **ONAPY01** sp015520525 un_f__UBA10200 un_g__GW2011-AR9 **OJBA583** sp002505525 un_g__JAFCDQ01 JACOVP01 sp018302985 un_g__Poseidonia JABIKK01 sp016845225 WAPY01 sp015520525 OJACPNE01 sp016185615 WJJD01 sp014729915 -Oun_g__Poseidonia WJKV01 sp019323495

Thermoprotei archaeon

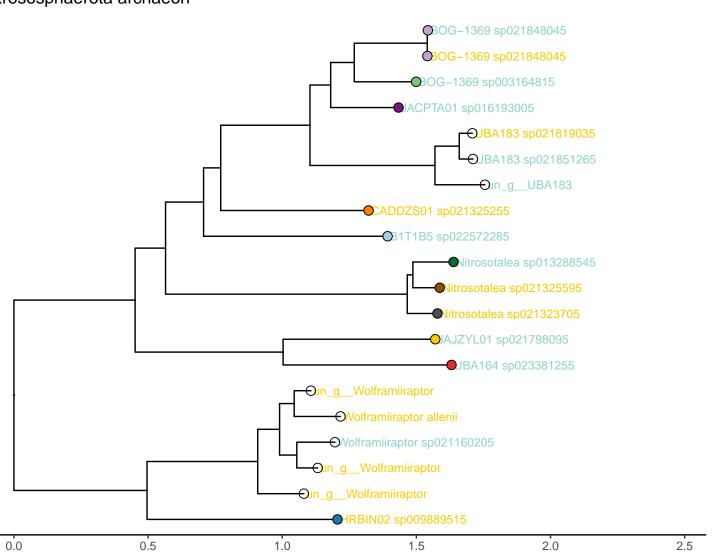


CRISPR

- crispr_negative
- crispr_positive

- AAA261-N23 sp017857595
- B12-G16 sp003650925
- B15-G16 sp003649205
- B15-G2 sp003650815
- B20-G17 sp003650785
- B3-G16 sp003649665
- B69-G16 sp003649235
- B69-G16 sp021161825
- B9-G17 sp003649225
- QMWT01 sp003661775
- SZUA-1514 sp015661745
- un_f__WANQ01
- un_g_B17-G15
- WAQG01 sp015520395
- WYZ-LMO8 sp003650865

Nitrososphaerota archaeon

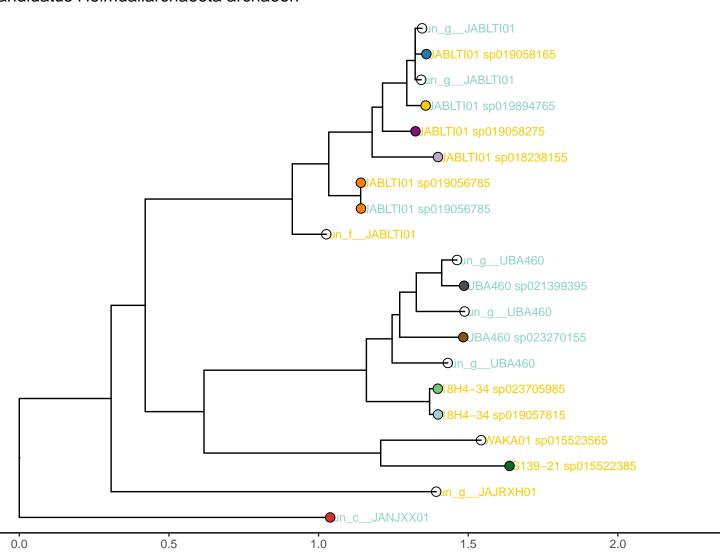


Species

- B1T1B5 sp022572285
- BOG-1369 sp003164815
- BOG-1369 sp021848045
- CADDZS01 sp021325255
- HRBIN02 sp009889515
 - JACPTA01 sp016193005
 - JAJZYL01 sp021798095
- Nitrosotalea sp013288545
- Nitrosotalea sp021323705
- Nitrosotalea sp021325595
- UBA164 sp023381255
- O UBA183 sp021819035
 - UBA183 sp021851265
 - un_g__UBA183
 - un_g__Wolframiiraptor
 -) Wolframiiraptor allenii
 - Wolframiiraptor sp021160205
 -

- crispr_negative
- crispr_positive

Candidatus Heimdallarchaeota archaeon



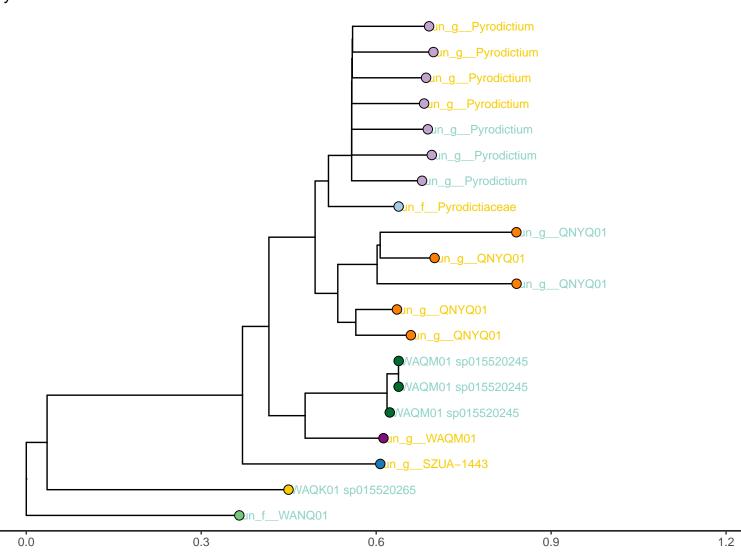
Species

- 18H4-34 sp019057815
- 18H4-34 sp023705985
- JABLTI01 sp018238155
- JABLTI01 sp019056785
- JABLTI01 sp019058165
- JABLTI01 sp019058275
- JABLTI01 sp019894765
- S139–21 sp015522385
- UBA460 sp021399395
- UBA460 sp023270155
- un_c__JANJXX01
- un_f__JABLTI01
- O un_g__JABLTI01
- O un_g__JAJRXH01
- O un<u>g</u>_UBA460
 - O WAKA01 sp015523565

- crispr_negative
- crispr_positive

Candidatus Aenigmarchaeota archaeon **CRISPR** Oun o CG10238-14 crispr_negative crispr_positive • JACOWB01 sp016187415 €NAMV01 sp015522145 **Species** Oun_g_CG10238-14 CG10238-14 sp002789635 **CG10238-14 sp002789635** CS3-C152 sp011772645 •QMZT01 sp003663325 JACOWB01 sp016187415 **CS3-C152** sp011772645 JACQIB01 sp016198755 JAFGFG01 sp016931255 JACQID01 sp016198685 QMZY01 sp003663415 JACQNX01 sp016202875 -OJAFCEM01 sp017609145 JAFCEM01 sp017609145 Oun_f__SZUA-1535 JAFGFG01 sp016931255 JAGGUE01 sp021158665 OJACQIB01 sp016198755 JAGVVW01 sp018304635 - JACQID01 sp016198685 QMZT01 sp003663325 JACQNX01 sp016202875 QMZY01 sp003663415 On o GW2011-AR5 un_c_Nanoarchaeia **-** JAGVVW01 sp018304635 un_f__SZUA-1535 **-** JAGGUE01 sp021158665 un_g_CG10238-14 Oun_g_JAGGVU01 un_g_JAGGVU01 Oun_o_ GW2011-AR5 un_o_CG10238-14 un_o__GW2011-AR5 -Oın_c_Nanoarchaeia WAMV01 sp015522145 0.0 0.5 1.0 1.5 2.0

Pyrodictiaceae archaeon

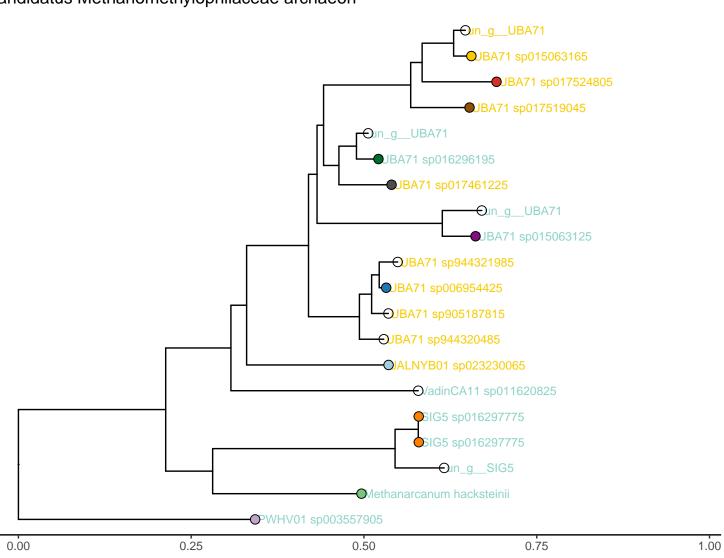


CRISPR

- crispr_negative
- crispr_positive

- O un_f__Pyrodictiaceae
 - un_f__WANQ01
- un_g__Pyrodictium
- un_g__QNYQ01
- un_g__SZUA-1443
- un_g__WAQM01
- un_g__vvAQivio1
- WAQK01 sp015520265
- WAQM01 sp015520245

Candidatus Methanomethylophilaceae archaeon

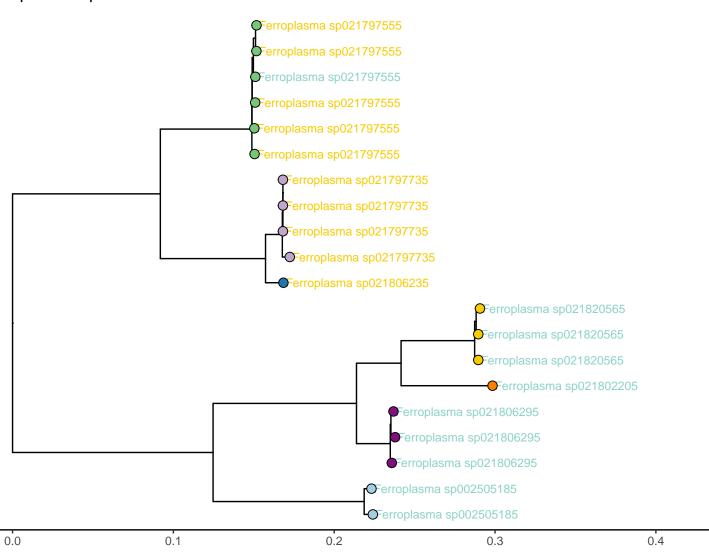


CRISPR

- crispr_negative
- crispr_positive

- JALNYB01 sp023230065
- Methanarcanum hacksteinii
- PWHV01 sp003557905
- SIG5 sp016297775
- UBA71 sp006954425
- UBA71 sp015063125
- UBA71 sp015063165
- UBA71 sp016296195
- UBA71 sp017461225
- UBA71 sp017519045
 - UBA71 sp017524805
- UBA71 sp905187815
- UBA71 sp944320485
-) IIDA71
- UBA71 sp944321985
 - un_g__SIG5
- un_g__UBA71
- VadinCA11 sp011620825

Ferroplasma sp.



CRISPR

- crispr_negative
- crispr_positive

- Ferroplasma sp002505185
- Ferroplasma sp021797555
- Ferroplasma sp021797735
- Ferroplasma sp021802205
- Ferroplasma sp021806235
- - Ferroplasma sp021806295 Ferroplasma sp021820565