

Table S3
FlaFind 1.2 Results

Organism	#FlaFind	#[DE]	NCBI accession	Processing
(Crenarchaeaota)				
<i>Ignicoccus hospitalis</i> <i>KIN4/I</i>	18	3	YP_001434791.1	KGLT
			YP_001434819.1	KGVI
			YP_001434961.1	RAQS
			YP_001435045.1	RALI
			YP_001435062.1	RALL
			YP_001435091.1	RGMT
			YP_001435109.1	KGQA
			YP_001435207.1	KAAL
			YP_001435259.1	KGVS
			YP_001435387.1	DALT
			YP_001435554.1	EAVA
			YP_001435619.1	RGLS
			YP_001435636.1	RGAL
			YP_001435673.1	EAEI
			YP_001435714.1	KALV
			YP_001435778.1	RGLT
			YP_001435787.1	KAIT
			YP_001435924.1	RALT
<i>Acidianus hospitalis</i> W1	13	2	YP_004457213.1	KAIL
			YP_004457338.1	EALS
			YP_004457353.1	KGIS
			YP_004457908.1	KALI
			YP_004458199.1	KGLS
			YP_004458715.1	EGII
			YP_004459028.1	KGIS
			YP_004459031.1	KGIS
			YP_004459032.1	KGLS
			YP_004459045.1	RALS
			YP_004459051.1	KAVS
			YP_004459053.1	RAII
			YP_004459251.1	RAII
<i>Thermoproteus</i> <i>neutrophilus</i> (<i>Pyrobaculum</i> <i>neutrophilum</i> V24Sta)	17	3	YP_001793514.1	RGMT
			YP_001793519.1	RGQA
			YP_001793521.1	EAVV
			YP_001794187.1	EAAA
			YP_001794192.1	RGAV
			YP_001794246.1	KALS
			YP_001794256.1	KALA
			YP_001794391.1	RGAL
			YP_001794406.1	RAAA
			YP_001794466.1	RGLL
YP_001794548.1	RAIV			

			YP_001794591.1	RGLT
			YP_001794818.1	KALV
			YP_001795165.1	EALL
			YP_001795225.1	RALA
			YP_001795235.1	RGIS
			YP_001795258.1	RGAV
<i>Sulfolobus acidocaldarius</i> DSM 639	20	1	YP_255069.1	RAVS
			YP_255196.1	KAFL
			YP_255229.1	KGAV
			YP_255417.1	KAFI
			YP_255688.1	KAIS
			YP_255805.1	KGVS
			YP_255818.1	RGLA
			YP_255934.1	KGIS
			YP_256110.1	KAIS
			YP_256284.1	KAIS
			YP_256287.1	KAIS
			YP_256288.1	RAIS
			YP_256306.1	KAIT
			YP_256485.1	¹ EADL / KAVI
			YP_256555.1	KGIL
			YP_256686.1	KAVS
			YP_256752.1	RGMS
YP_256841.1	KAQS			
YP_256893.1	RALS			
YP_256897.1	RALS			
<i>Sulfolobus solfataricus</i> P2	28	0	NP_341612.1	KGIS
			NP_341682.1	KAIS
			NP_341683.1	KGLS
			NP_342020.1	KGFS
			NP_342480.1	RGLS
			NP_342629.1	KAIS
			NP_342630.1	KAFL
			NP_342637.1	RGIA
			NP_342696.1	KGFV
			NP_342996.1	KGDV
			NP_343020.1	KGFI
			NP_343270.1	RAVS
			NP_343534.1	RGLS
			NP_343686.1	KGLA
			NP_343692.1	RALV
			NP_343942.1	KAIL
			NP_343949.1	KGLA
			NP_344010.1	KGQA
			NP_344011.1	RGIS
NP_344033.1	KALS			
NP_344166.1	RAIS			
NP_344167.1	KGLT			

			NP_344287.1	KAQS
			NP_344376.1	KAIS
			NP_344405.1	KALS
			NP_344446.1	KAQS
			NP_344447.1	KGLS
			NP_344448.1	KALS
<i>Sulfolobus tokodaii str. 7</i>	25	1	NP_375949.1	KGLI
			NP_375952.1	KAVS
			NP_375988.1	KGLS
			NP_376573.1	KGFL
			NP_376705.1	RAIL
			NP_376779.1	RGMS
			NP_376991.1	KAQS
			NP_376992.1	KALS
			NP_376993.1	RGIS
			NP_377260.1	KAVI
			NP_377357.1	KGIS
			NP_377358.1	KGIS
			NP_377519.1	KALI
			NP_377558.1	RAVS
			NP_377585.1	RGIS
			NP_377606.1	RGLS
			NP_377700.1	KGLL
			NP_377899.1	KGIS
			NP_378022.1	KAIS
			NP_378254.1	KGIS
			NP_378304.1	KALL
			NP_378392.1	RAVI
			NP_378522.1	KGLA
NP_378524.1	EAIS			
NP_378542.1	RGVS			
<i>Aeropyrum pernix K1</i>	19	1	NP_147341.2	RAEV
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			YP_874839.1	RGFL
			YP_874845.1	RALA
			NP_147585.2	RGQA
			NP_147586.2	RGQA
			NP_147617.2	RAIL
			NP_147656.2	RAAA
			NP_147667.2	RGIS
			YP_874887.1	RAIL
			NP_148067.2	RGEA
			NP_148102.2	RAIT
			YP_874912.1	KALT
			NP_147427.1	RGLS
			NP_147851.1	RGLA
			NP_148115.1	KAQA
NP_148253.1	RGIV			

			NP_148254.1	RGIV
			NP_148659.1	EAIA
<i>Pyrobaculum aerophilum</i> <i>str. IM2</i>	20	2	NP_558427.1	RGIA
			NP_558497.1	RAVL
			NP_558507.1	KGLL
			NP_558525.1	RAIV
			NP_558553.1	RGAA
			NP_558607.1	EGAV
			NP_558678.1	RAVL
			NP_558950.1	RGQV
			NP_559008.1	RGAV
			NP_559060.1	KAIM
			NP_559205.1	KGLS
			NP_559325.1	KAAL
			NP_559593.1	RALL
			NP_559633.1	RGVL
			NP_559658.1	EAVI
			NP_559988.1	RGLT
			NP_559995.1	KAVL
NP_560194.1	KALI			
NP_560716.1	KAIA			
NP_560884.1	KGVI			
(Euryarchaeota)				
<i>Archaeoglobus fulgidus</i> <i>DSM 4304</i>	19	4	NP_069205.1	KGVS
			NP_069293.1	KAFL
			NP_069592.1	KAVS
			NP_069594.1	RGVS
			NP_069595.1	KGQM
			NP_069596.1	RGQT
			NP_069669.1	RAEI
			NP_069832.1	KGAL
			NP_069887.1	KGFT
			NP_069888.1	KGFT
			NP_069925.1	KGVS
			NP_069989.1	¹ DALA / KGLI
			NP_069991.1	¹ DALA / KGLI
			NP_070006.1	EAVI
			NP_070074.1	RAIL
			NP_070104.1	RAAI
			NP_070404.1	KALV
NP_070454.1	KAVS			
NP_070983.1	EGET			
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			YP_003434884.1	KALL
			YP_003434907.1	RGIS
			YP_003434934.1	RGFA

<i>Ferroglobus placidus</i> DSM 10642	31	6	YP_003434935.1	RAVL
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			YP_003434949.1	KAVA
			YP_003435362.1	RAVS
			YP_003435363.1	KALS
			YP_003435365.1	KAQI
			YP_003435366.1	RAQT
			YP_003435367.1	RAQL
			YP_003435531.1	KGLI
			YP_003435552.1	KALT
			YP_003435649.1	RAVA
			YP_003435651.1	RAMA
			YP_003435687.1	KAVS
			YP_003435689.1	EAIL
			YP_003435696.1	RALL
			YP_003435851.1	DALS
			YP_003435865.1	KALT
			YP_003435882.1	RGAI
			YP_003435922.1	KGLV
			YP_003435961.1	KALS
			YP_003435980.1	KAVS
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			YP_003436378.1	KALV
			YP_003436449.1	KGEM
			YP_003436468.1	RGEV
			YP_003436505.1	EAEA
			YP_003436707.1	EGMV
			YP_133989.1	RGQV
			YP_134047.1	EGFV
			YP_134146.1	RAQS
			YP_134176.1	EGLV
			YP_134284.1	RADT
			YP_134748.1	EGQS
			YP_134830.1	KGLL
			YP_134889.1	EGQA
			YP_135469.1	RAAI
			YP_135479.1	KAAM
			YP_135528.1	KAVI
			YP_135627.1	RGAI
			YP_135869.1	EGLT
			YP_135892.1	RGVS
			YP_135893.1	RGVS
			YP_135894.1	RGQL
			YP_135895.1	RGQA
			YP_135896.1	RAQT
			YP_136054.1	RAQA
			YP_136056.1	RAVS
			YP_136057.1	RAQS
			YP_136058.1	RGQS

<i>Haloarcula marismortui</i> ATCC 43049	48	11	YP_136188.1	DAIV
			YP_136253.1	RGFA
			YP_136345.1	RAQS
			YP_136435.1	EALS
			YP_136443.1	RAMS
			YP_136447.1	DAAA
			YP_136520.1	RGQL
			YP_136521.1	RAQL
			YP_136522.1	RAQT
			YP_136741.1	RGQV
			YP_136812.1	RALA
			YP_136880.1	RAVS
			YP_136958.1	RGFA
			YP_137016.1	RALM
			YP_137283.1	RGIA
			YP_137381.1	RGVA
			YP_137423.1	RAAA
			YP_137459.1	RGFL
			YP_137731.1	RGLV
			YP_137804.1	RGFM
			YP_137898.1	RAVI
YP_137899.1	DAVS			
YP_137901.1	DAVS			
YP_137922.1	RALS			
YP_137950.1	RGLA			
YP_138166.1	DAAM			
<hr/>				
			YP_003533169.1	KAAA
			YP_003533212.1	RAVL
			YP_003533221.1	RAVL
			YP_003533445.1	RAFL
			YP_003533476.1	RGQL
			YP_003533499.1	RGDA
			YP_003534066.1	RAIA
			YP_003534069.1	RAVS
			YP_003534070.1	RAVS
			YP_003534231.1	RAMA
			YP_003534233.1	DAIL
			YP_003534269.1	RAQL
			YP_003534324.1	DGLV
			YP_003534385.1	² RGSS
			YP_003534389.1	EAAS
			YP_003534506.1	RAFV
			YP_003534676.1	RGQL
			YP_003534678.1	RAQT
			YP_003534680.1	RGQA
			YP_003534811.1	RAQA
			YP_003535003.1	KAQA
YP_003535029.1	DAVS			
YP_003535206.1	RAVS			

<i>Haloferax volcanii</i> DS2	47	9	YP_003535207.1	RGVS
			YP_003535208.1	RGQL
			YP_003535209.1	RAQA
			YP_003535210.1	RAQT
			YP_003535261.1	RGQV
			YP_003535262.1	RGQV
			YP_003535280.1	DGLI
			YP_003535368.1	DAIA
			YP_003535386.1	RGDL
			YP_003535692.1	RAFV
			YP_003535787.1	RAAV
			YP_003535934.1	RAVA
			YP_003535988.1	DAIL
			YP_003536097.1	RAIL
			YP_003536412.1	RGVS
			YP_003536430.1	RALI
			YP_003536441.1	RAVT
			YP_003536470.1	KAVI
			YP_003536471.1	DAVS
			YP_003536472.1	RAVS
YP_003536481.1	DAIT			
YP_003536619.1	RAFA			
YP_003536702.1	RALL			
YP_003536720.1	RGIS			
<i>Natronomonas pharaonis</i> DSM 2160	34	5	YP_325734.1	RAFA
			YP_325737.1	RGQL
			YP_325738.1	RGQL
			YP_325739.1	RGQA
			YP_325740.1	RAMS
			YP_325741.1	RAQS
			YP_326002.1	DAVA
			YP_326498.1	RAVI
			YP_326594.1	RGAV
			YP_326596.1	DAIV
			YP_326632.1	RAVS
			YP_326674.1	KAVV
			YP_326695.1	RGQV
			YP_326696.1	RGQV
			YP_326697.1	RGQV
			YP_326707.1	KALA
			YP_327104.1	RGVS
			YP_327133.1	DALS
			YP_327152.1	RAAT
			YP_327299.1	RAVL
YP_327341.1	RGQI			
YP_327536.1	RAAV			
YP_330733.1	RAVS			
YP_330734.1	RAVS			
YP_330735.1	RGVS			

			YP_330736.1	RGQL
			YP_330737.1	RGQA
			YP_330738.1	RGQT
			YP_331080.1	EAAL
			YP_331126.1	DAII
			YP_331146.1	RGQS
			YP_331148.1	RGQS
			YP_331238.1	RAVL
			YP_331401.1	RAVS
<i>Methanocaldococcus jannaschii</i> DSM 2661	19	5	NP_246981.1	KGQL
			NP_247131.1	DAII
			NP_247153.1	KGLA
			NP_247201.1	EGVA
			NP_247405.1	KGQL
			NP_247503.1	EALA
			NP_247824.1	RGQI
			NP_247828.1	KAQV
			NP_247886.1	RGAM
			NP_247887.1	RGAM
			NP_247888.1	RGAI
			NP_247949.1	EGLI
			NP_248009.1	KGDA
			NP_248133.1	DGFL
			NP_248282.1	KGFI
			NP_248403.1	KGQI
NP_248405.1	KAIS			
NP_248406.1	KAIS			
NP_248473.1	KAQI			
<i>Methanococcus maripaludis</i> C5	16	1	YP_001096841.1	KGQL
			YP_001097235.1	KGQI
			YP_001097390.1	KGQL
			YP_001097449.1	DGIS
			YP_001097526.1	RGQL
			YP_001097527.1	KGQI
			YP_001097596.1	KGQV
			YP_001097873.1	KAAL
			YP_001097949.1	KGQV
			YP_001097952.1	RAQI
			YP_001098232.1	KGQV
			YP_001098233.1	KGQL
			YP_001098250.1	KGAV
			YP_001098251.1	KGAS
			YP_001098252.1	KGAS
YP_001098253.1	KGAS			
			NP_632346.1	KGFT
			NP_632347.1	KGFT
			NP_632442.1	KAFT

<i>Methanosarcina mazei</i> Go1	18	5	NP_632501.1	KGLA
			NP_632551.1	KALT
			NP_632808.1	DAAS
			NP_633142.1	KGDT
			NP_633144.1	KGIL
			NP_633174.1	DGAS
			NP_633534.1	KAVS
			NP_633535.1	KAVS
			NP_633538.1	EAAV
			NP_633584.1	EGLS
			NP_633594.1	KALI
			NP_633951.1	RAII
			NP_634567.1	KADS
			NP_634786.1	EAVI
NP_634852.1	RGQV			
<i>Methanospirillum hungatei</i> JF-1	20	12	YP_501529.1	KGLV
			YP_501598.1	EAIS
			YP_501751.1	KAAI
			YP_501757.1	EAVS
			YP_501787.1	DAVS
			YP_501800.1	EAVS
			YP_502347.1	DGMV
			YP_502453.1	RALS
			YP_502683.1	DAVS
			YP_502684.1	DAVS
			YP_502693.1	EADS
			YP_503265.1	DGLI
			YP_503496.1	RGLV
			YP_503837.1	KAVS
			YP_503846.1	DALS
			YP_503847.1	RAVS
			YP_503848.1	DGLS
			YP_504081.1	KAIV
			YP_504190.1	KGIV
YP_504543.1	DGFS			
<i>Picrophilus torridus</i> DSM 9790	9	1	YP_022796.1	KGVA
			YP_022880.1	KALI
			YP_022933.1	KAIV
			YP_022939.1	KAFA
			YP_023272.1	DALL
			YP_023299.1	KALV
			YP_023382.1	RGII
			YP_023701.1	KAMA
YP_023895.1	KGAI			
			NP_577924.1	KGIT
			NP_578016.1	KGLT
			NP_578066.1	KGAI

<i>Pyrococcus furiosus</i> DSM 3638	18	1	NP_578125.1	KGFL
			NP_578136.1	KALV
			NP_578201.1	RAQT
			NP_578216.1	KAIV
			NP_578728.1	EGAI
			NP_579033.1	RGFI
			NP_579034.1	KGFI
			NP_579137.1	KGLL
			NP_579238.1	KGQV
			NP_579239.1	KAQL
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			NP_579449.1	RGLS
			NP_579490.1	RGVL
			NP_579794.1	KALA
NP_877886.1	KALI			
<i>Pyrococcus horikoshii</i> OT3	23	3	NP_142203.1	KGVI
			NP_142312.1	KGAS
			NP_142361.1	DALL
			NP_142515.1	KGAV
			NP_142516.1	RGAV
			NP_142517.1	KGAV
			NP_142518.1	KGAI
			NP_142519.1	RGAI
			NP_142877.1	KGLI
			NP_143023.1	KAFL
			NP_143221.1	KGQI
			NP_143224.1	RGQL
			NP_143225.1	RGFI
			NP_143226.1	RGFI
			NP_143281.1	RALL
			NP_143529.1	EAFM
			NP_143700.1	KGIS
			NP_877783.1	DAII
			NP_877787.1	KAAI
			NP_877792.1	RAQS
NP_142856.2	KGEA			
NP_143223.2	RGQT			
NP_877850.1	RALA			
			YP_182416.1	KGVL
			YP_182451.1	KGAV
			YP_182452.1	RGAV
			YP_182453.1	RGAV
			YP_182454.1	RGAI
			YP_182455.1	RGAI
			YP_182474.1	RAVL
			YP_182735.1	KGFV
			YP_182769.1	KAFL
			YP_182811.1	KALV

<i>Thermococcus kodakaraensis</i> KOD1	38	0	YP_182942.1	KALV
			YP_182982.1	KAAI
			YP_183074.1	RALL
			YP_183119.1	RAVS
			YP_183184.1	KALV
			YP_183253.1	RAAV
			YP_183517.1	KAVI
			YP_183642.1	RAII
			YP_183657.1	RAQA
			YP_183794.1	KALA
			YP_183802.1	RAVL
			YP_183876.1	RGAS
			YP_183984.1	KALV
			YP_184076.1	RGFV
			YP_184077.1	RGQI
			YP_184078.1	RGQT
			YP_184079.1	RGQL
			YP_184080.1	RGQI
			YP_184095.1	KAHV
			YP_184114.1	KALI
			YP_184115.1	KAII
			YP_184212.1	KGIT
			YP_184319.1	KALL
YP_184475.1	KAVA			
YP_184533.1	KAVA			
YP_184588.1	RALA			
YP_184591.1	RAAL			
YP_184708.1	RAAS			
(Nanoarchaeaota)				
<i>Thermoplasma acidophilum</i> DSM 1728	6	2	NP_393520.1	KGDA
			NP_393973.1	KAVS
			NP_394027.1	KAET
			NP_394136.1	EAIA
			NP_394310.1	KAVS
			NP_393478.1	DALL
(Nanoarchaeaota)				
<i>Nanoarchaeum equitans</i> Kin-4-M	6	0	AAR38990.1	RGAI
			AAR38993.1	RALS
			AAR39224.1	RAVS
			NP_963429.1	RGAI
			NP_963432.1	RALS
			NP_963663.1	RAVS
(Korarchaeaota)				
			YP_001736547.1	KAFL
			YP_001736571.1	KGET
			YP_001736602.1	EADL

<i>Candidatus Korarchaeum cryptofilum OPF8</i>	12	3	YP_001736752.1	DGLS
			YP_001736786.1	RAIV
			YP_001737094.1	RGIS
			YP_001737117.1	KGAI
			YP_001737228.1	RGIS
			YP_001737438.1	KGVI
			YP_001737493.1	RALI
			YP_001737681.1	RGVL
			YP_001737744.1	EALI
(Thaumarchaeota)				
<i>Cenarchaeum symbiosum A</i>	15	3	YP_874978.1	DGAI
			YP_875121.1	RGEL
			YP_875170.1	KAVI
			YP_875416.1	RALL
			YP_875435.1	KGAV
			YP_875473.1	KAQI
			YP_875504.1	RGAA
			YP_875624.1	KGAL
			YP_875640.1	RAQS
			YP_875832.1	KAAA
			YP_875838.1	RAII
			YP_876160.1	DALM
			YP_876407.1	KGMI
YP_876433.1	RALA			
YP_876664.1	DGLM			
<i>Nitrosopumilus maritimus SCM1</i>	10	0	YP_001581374.1	KAIT
			YP_001581516.1	KGIV
			YP_001581542.1	KGVI
			YP_001581788.1	KGIV
			YP_001581973.1	KGVI
			YP_001582384.1	RAQA
			YP_001582436.1	KAAI
			YP_001582533.1	KGIL
			YP_001582748.1	KGIA
YP_001582814.1	KAML			
<i>Candidatus Caldiarchaeum subterraneum</i>	18	3	BAJ49887.1	RGFL
			BAJ50000.1	DAFI
			BAJ50029.1	DGFV
			BAJ50061.1	RALL
			BAJ50088.1	RALA
			BAJ50104.1	RAAT
			BAJ50209.1	RAVL
			BAJ50391.1	KALS
			BAJ50432.1	KAVS
			BAJ50511.1	KALS
			BAJ50526.1	KAVS

			BAJ50687.1	EGFM
			BAJ50731.1	RAQL
			BAJ50734.1	KALT
			BAJ50793.1	RAAL
			BAJ51168.1	RAIS
			BAJ51240.1	KAVS
			BAJ51484.1	KAVV
<i>Candidatus Nitrosoarchaeum limnia SFB1</i>	19	3	ZP_08256578.1	DAFL
			ZP_08256729.1	RGVI
			ZP_08256731.1	RGVI
			ZP_08256733.1	RGVI
			ZP_08256854.1	RAVA
			ZP_08256855.1	RGIS
			ZP_08256856.1	RGVT
			ZP_08256965.1	RAQI
			ZP_08257222.1	KGMI
			ZP_08257473.1	KGIL
			ZP_08257478.1	KAQL
			ZP_08257789.1	DGML
			ZP_08257791.1	KAIT
			ZP_08257919.1	RAII
			ZP_08257925.1	DAEI
			ZP_08257985.1	KGIA
ZP_08258111.1	RGQL			
ZP_08258137.1	KAAI			
ZP_08258142.1	KGLV			

FlaFind1.2 positive containing [DE] at -2

¹FlaFind1.2 positive with both [KR] and [KRDE] motif

²YP_003534385.1 (hvo_0308) FlaFind1.2 positive upon reannotation
Contains Duf1628