SUPPLEMENTARY MATERIAL

Thermococcus henrietii sp. nov., a novel extreme thermophilic and piezophilic sulfur-reducing archaeon isolated from a deep-sea hydrothermal chimney (EPR 9°N)

Karine Alain,[1,2] Erwann Vince,[1,2] Damien Courtine,[1,2,3] Lois Maignien,[1,2] Xiang Zeng,[4,2] Zongze Shao[4,2] & Mohamed Jebbar[1,2]

[1]Univ Brest, CNRS, Ifremer, Laboratoire de Microbiologie des Environnements Extrêmes LM2E, IUEM, Rue Dumont d'Urville, F-29280 Plouzané, France

[2]IRP 1211 MicrobSea, Sino-French Laboratory of Deep-Sea Microbiology, LM2E (Plouzané, France)-KLAMBR (Xiamen, China)

[33]Aix Marseille Univ, CNRS, INSERM, CIML, Turing Centre for Living Systems, Marseille, France – Current address

[4]Key Laboratory of Marine Genetic Resources, Third Institute of Oceanography, Ministry of Natural Resources, Xiamen 361005, China

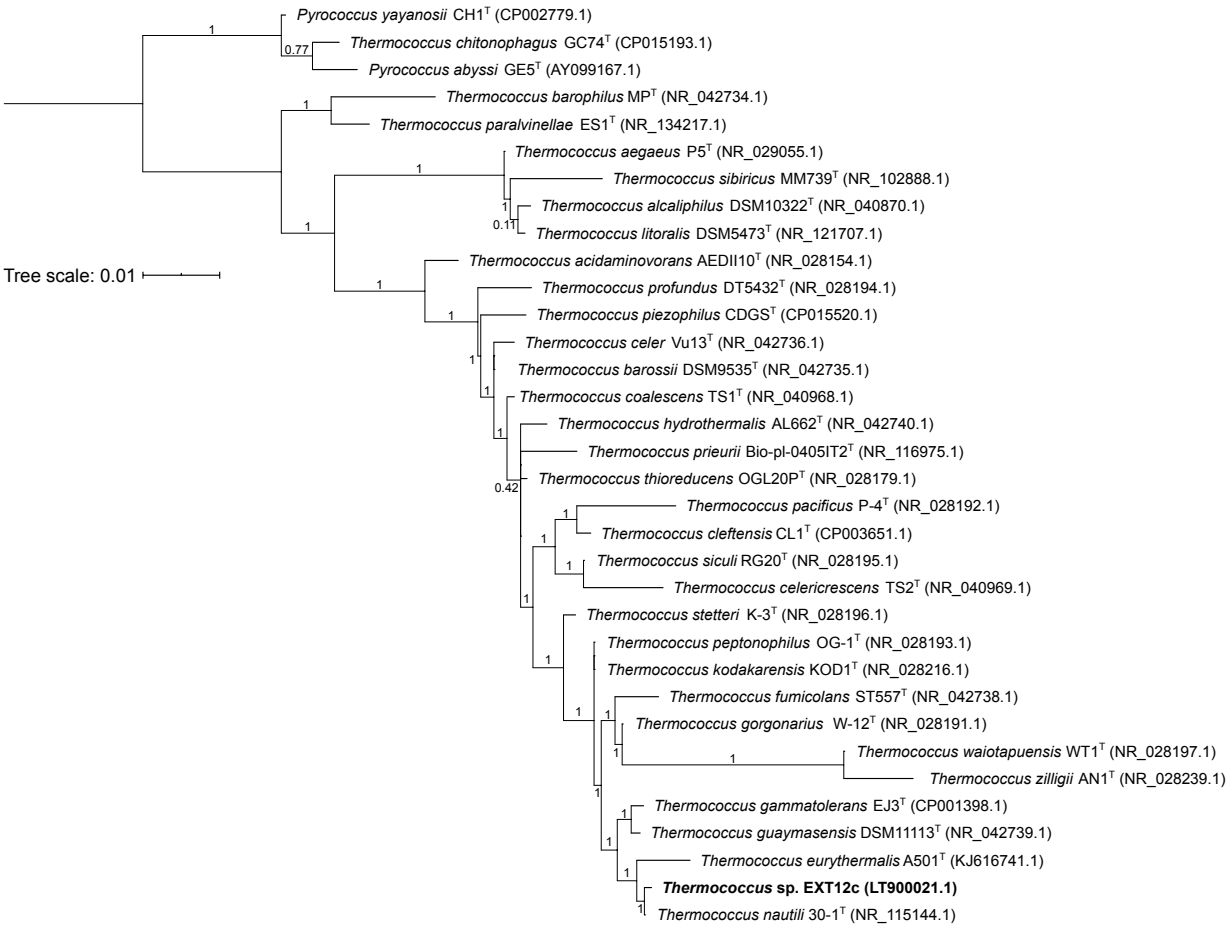

Fig. S1. PhyML phylogenetic tree showing the phylogenetic positions of strain EXT12c^T and representatives of some other related taxa, based on 16S rRNA gene sequences. This phylogenetic reconstruction was calculated by using *Pyrococcus* species as outgoup. Branch supports, computed with the aLTR SH-like method, are shown at branch nodes. Bar, 0.01 nucleotide substitution rate (K_{nuc}) units.

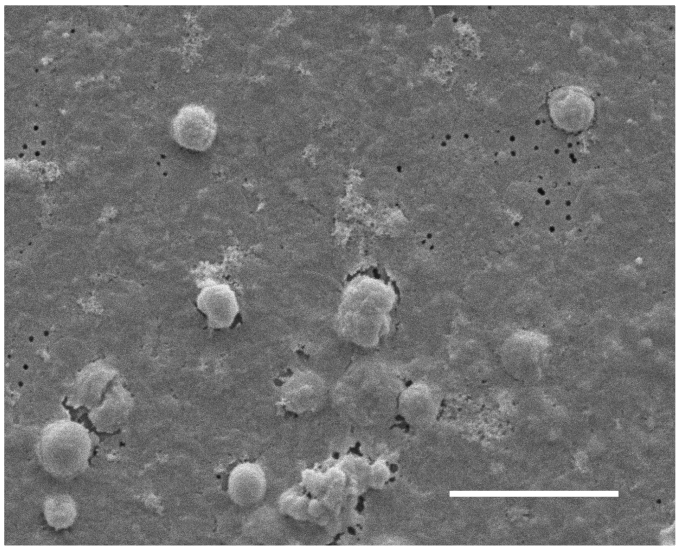

Fig. S2. Scanning electron micrograph of cells of strain EXT12c^T. Bar, 5 µm.

Table S1. Overall genome relatedness indexes between strain EXT12c^T and its closest relatives. Shaded boxes correspond to unavailable genomes. Average Nucleotide Identity scores were calculated using the ANI calculator tool provided by the EzBioCloud web server (https://www.ezbiocloud.net/tools/ani). Digital DNA-DNA hybridization (dDDH) estimate values were determined using the formula 2 of the genome-to-genome distance calculator GGDC v2.1.

	16S rRNA gene sequence similarity	OrthoANIu (%)	dDDH (%)
T. henrietii EXT12c^T (this study)	100	100	100
T. nautili 30-1^T	99.93	91.54	43.60
T. gammatolerans EJ3^T	99.66	82.84	29.40
T. guaymasensis DSM 1113^T	99.40	80.63	25.50
T. eurythermalis A501^T	99.38	82.30	25.50
T. peptonophilus OG-1^T	99.60	77.02	20.40
T. kodakarensis KOD1^T	99.60	76.97	20.70
T. gorgonarius W-12^T	99.26	77.16	21.90
T. marinus EJ1^T	99.24		
T. fumicolans ST557^T	99.10		
T. coalescens TS1^T	98.99		
T. stetteri K-3^T	99.04		
T. barossii SHCK-94^T	98.92	77.64	21.90
T. onnurineus NA1^T	98.92	75.89	20.30
T. celer DSM 2476^T	98.86		
T. thioreducens DSM 14981^T	98.79		
T. cleftensis CL1^T	98.79	78.64	22.20