

Supplementary Materials

Assessment of Capnophilic Lactic Fermentation (CLF) pathway in thermophilic anaerobic bacteria *Thermotoga neapolitana*, *Thermotoga maritima* and RQ7

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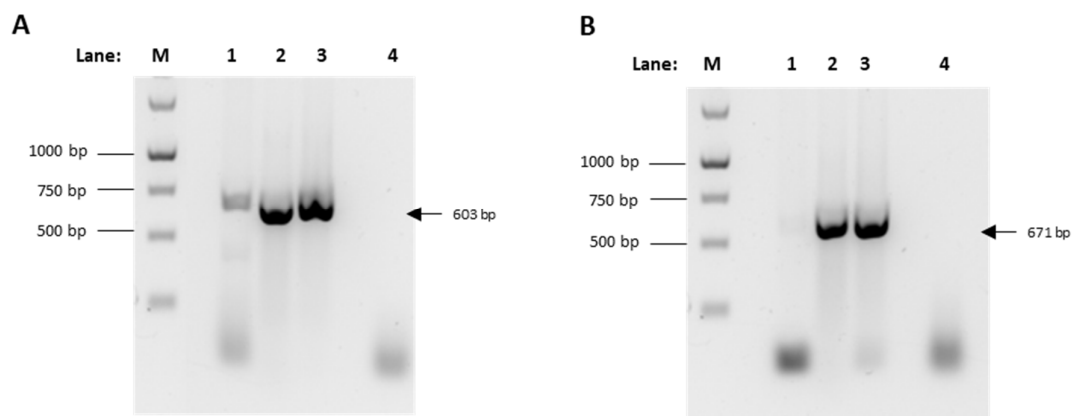


Figure S1: PCR results for the presence of F-type (A) and V-type (B) ATPases on the genomic DNA of *T.nea*, *T.mar* and *T.rq7*. In sequence: M, marker 1Kb; Lane 1, *T.maritima*; Lane 2, *T.neapolitana*; Lane 3, *T.rq7*; Lane 4, negative control. Fragments of 603 bp and 671 bp respectively are expected.

Table S1: Bioinformatic analysis of V-ATPases in *Thermotogacea* family. For each subunit, species and percentage of identity in relation to *T.nea* are indicated.

V-ATPase subunit in <i>T.nea</i>	<i>Trq7</i>	% ID	<i>P.hyp</i>	%ID
subunit A-atpA	TRQ7_06035	100	AJ81_03190	46.37
subunit B-atpB	TRQ7_06040	100	AJ81_03195	51.92
subunit D-atpD	TRQ7_06045	100	AJ81_03200	31.01
subunit E-atpE	TRQ7_06030	99.8	AJ81_03175	27.51
subunit F-atpF	TRQ7_06020	100	AJ81_03165/ AJ81_03170	23.26/ 23.49
subunit G-atpG	TRQ7_06025	100	AJ81_03165/ AJ81_03170	26.79/ 23.05

Table S2: Bioinformatic analysis of F-ATPases in *Thermotogacea* family. For each subunit, species and percentage of identity in relation to *T.nea* are indicated.

<i>T.nea</i> subunits	<i>Tmar</i>	% ID	<i>Trq7</i>	%ID	<i>Tnap</i>	%ID	<i>Tpet</i>	%ID	<i>P.lett</i>	%ID	<i>P.ther</i>
subunit A-atpB	TM_1616	76.52	TRQ7_05640	100	Tnap_1191	75.44	Tpet_1175	76.39	Tlet_0160	51.4	Theth_0
subunit B-atpF	TM_1614	75.75	TRQ7_05650	91.92	Tnap_1193	76.97	Tpet_1177	75.75	Tlet_0162	43.96	Theth_0
subunit C-atpE	TM_1615	86.43	TRQ7_05645	98.83	Tnap_1192	86.04	Tpet_1176	86.43	Tlet_0161	50.19	Theth_0 Theth_0
subunit Delta-atpH	TM_1613	71.37	TRQ7_05655	99.82	Tnap_1194	69.38	Tpet_1178	71.37	Tlet_0163	39.89	Theth_0
subunit Epsilon-atpC	TM_1609	77.47	TRQ7_05675	98.15	Tnap_1198	77.47	Tpet_1182	77.47	Tlet_0167	33.02	Theth_0
subunit Gamma-atpG	TM_1611	76.27	TRQ7_05665	100	Tnap_1196	75.79	Tpet_1180	76.58	Tlet_0165	42.68	Theth_0
subunit Alpha-atpA	TM_1612	82.87	TRQ7_05660	99.88	Tnap_1195	82.87	Tpet_1179	82.93	Tlet_0164	64.02	Theth_0
subunit I-atpI	-	-	TRQ7_05635	100	-	-	-	-	-	-	-
subunit Beta- atpD	TM_1610	81.31	TRQ7_05670	97.87	Tnap_1197	81.31	Tpet_1181	81.31	Tlet_0166	67.23	Theth_0

Table S3: List of primers used for PCR and Real-time PCR analysis on *T.nea*, *T.mar* and *T.rq7*.

Primer	Sequence	Description
PCR-VATPa Fw	AGAGTAAGGGGAGGAGACGT	alfa subunit of V-type ATPase for classic PCR
PCR-VATPa Rv	ACGGGCATTTCTTCCAGTCT	
PCR-FATPb Fw	GACAGATGAACGAACCACCG	beta subunit of F-type ATPase for classic PCR
PCR-FATPb Rv	CAACGTGGAAAGGCTGACTC	
RT-VATPa Fw	AGATGGGCAGAGGCATTGAG	alfa subunit of V-type ATPase for real time PCR
RT-VATPa Rv	ACTGAGCGATTCTGGTAGCG	
RT-VATPb Fw	AGTGCGTTCTATCGCTTCCA	beta subunit of V-type ATPase for real time PCR
RT-VATPb Rv	AAGGTGCTCGAATTCTTCGC	
RT-FATPb Fw	AACCACCTTCGCTCACCTG	beta subunit of F-type ATPase for real time PCR
RT-FATPb Rv	TCGAAGAAGAATCGAGCGGG	