

Table 1. Primer sequences used in PCR amplifications and sequencing.

Primer	Target site	Sequence 5' → 3'	Applied for	Reference
7mcF	7–23	CTC CCG TTG ATC CTG CG	All “Nanoarchaeota”	This study
8aF	8–23	TCY GGT TGA TCC TGC C	Archaea (as control)	[3]
344aF	344–363	CGG GGY GCA SCA GGC GCG AA	Clone OP9, clone CU1 (two mismatches)	[3]
518mcF	518–536	GCA GCC GCC GCG GGA ACA C	“ <i>N. equitans</i> ”, clone LPC33	This study
1116mcR	1100–1116	GCG GGT CTC GCC TGT TT	“ <i>N. equitans</i> ”, clone LPC33	This study
1119aR	1101–1119	GGY RSG GGT CTC GCT CGT T	Clone OP9, clone CU1 (one mismatch)	[2]
1511mcR	1490–1511	CGG CTA CCT TGT GTC GAC TTA G	All “Nanoarchaeota”	This study
1512uR	1493–1513	ACG GHT ACC TTG TTA CGA CTT	Archaea (as control)	[3]

Table 2. Sequence similarities between the “Nanoarchaeota” sequences and representatives of major phylogenetic groups.

	“Nanoarchaeota”			Cren- archaeota	Eury- archaeota	“Kor- archaeota”	Bacteria
“Nanoarchaeota”	“ <i>N. equitans</i> ”/ Clone LPC33	Clone OP9	Clone CU1				
“ <i>N. equitans</i> ”/ Clone LPC33	–	82.7	83.2	80–71	80–67	75–72	70–60
Clone OP9	82.7	–	92.7				
Clone CU1	83.2	92.7	–				
Crenarchaeota	80–71			–	84–69	82–75	73–62
Euryarchaeota	80–67			84–69	–	80–70	74–60
“Korarchaeota”	75–72			82–75	80–70	–	72–64
Bacteria	70–60			73–62	74–60	72–64	–

Table 3. Comparison of standard 16S rDNA primers with the corresponding sequences of the “Nanoarchaeota”.

Primer (Reference)	8aF [3]	344 aF [3]
Sequence	TCY GGT TGA TCC TGC C	CGG GGY GCA SCA GGC GCG AA
“ <i>N. equitans</i> ” / LPC33	TCC C T TGA TCC TGC C	CGG GGC GCA CCA GG GCG AA
Clone OP9 / CU1	n. d.	CGG GAT GCA CCA GG GCG AA
Primer (Reference)	519uF [3]	934aR [13]
Sequence	CAG CMG CCG CGG TAA TAC	GTG CYC CCC CGC CAA TTC CT
“ <i>N. equitans</i> ” / LPC33	CAG CCG CCG CGG GAA C AC	GTG CTC CCC CGC CTA TTC CT
Clone OP9 / CU1	CAG TCG CCA CGG GAA TAC	GTG CCC CCC CGC CTA TTC CT
Primer (Reference)	1044 aF [2]	1119aR [2]
Sequence	GAG AGG WGG TGC ATG GCC G	GGY RSG GGT CTC GCT CGT T
“ <i>N. equitans</i> ” / LPC33	GAG AGG AGG TGC ATG GCC G	GGC GCG GGT CTC GC C GT T
Clone OP9 / CU1	GAG AGG AGG TGC ATG GCT G	GGT GCG GGT CGC GCT CGT T
Primer (Reference)	1406uR [3]	1512uR [3]
Sequence	ACG GGC GGT GTG TRC AA	ACG GHT ACC TTG TTA CGA CTT
“ <i>N. equitans</i> ” / LPC33	ACG GGC GGT GAG TGC AA	ACG GCT ACC TTG T TA CGA CTT
Clone OP9 / CU1	ACG GGC GGT GAG AGC AA	n. d.

Base exchanges in “*N. equitans*” are boxed; in the sequences of clones OP9 and CU1 they are written in bold. Base exchanges shared among all “Nanoarchaeota” are highlighted.
n. d. = not determined.