

Table S1: LSU rRNA primer sequences

Name	Sequence (5'-3')	Reference
F63mod	ACCCGCTGAAYTTAAGCATATHANTMAG	[1]
28S-350rv	CTTTCCTCACGGTACTTG	this study
28S-560rv	CTTTC AACGGYTTACGTGC	this study
28S-C2-fwd	GAAAAGAACTTTGRARAGAGAGT	[2]
28S-D2-rev	TCCGTGTTTCAAGACGGG	[2]
NL4F	GACCCGAAAGATGGTGA ACTA	[3]
NL4R	ACCTTGAGACCTGATGCG	[3]
28S-1260fw	ATTCTCAAAC TTAAATBGGTAAG	this study
28S-1340rv	CATCGCCAGTTCTGCTTAC	this study
28S-1810fw	CGAAAGGGAATCGGGTTAATATTCC	this study
28S-2490fw	CAACCAAGCGCGGGTAAACG	this study
28S-2570rv	AATCTCGTTAATCCATTCATGC	this study
28S-2634fw	TCAAAGTGAAGAAATTCAACCAAGC	this study
R3264	TTCYGACTTAGAGGCGTTCAG	[1]

Additional references

1. Medina M, Collins AG, Silberman JD, Sogin ML (2001) Evaluating hypotheses of basal animal phylogeny using complete sequences of large and small subunit rRNA. *Proc Natl Acad Sci USA* 98: 9707-9712.
2. Chombard C, Boury-Esnault N, Tillier S (1998) Reassessment of homology of morphological characters in tetractinellid sponges based on molecular data. *Syst Biol* 47: 351-366.
3. Nichols SA (2005) An evaluation of support for order-level monophyly and interrelationships within the class Demospongiae using partial data from the large subunit rDNA and cytochrome oxidase subunit I. *Mol Phylogenet Evol* 34: 81-96.