

## Additional File 1

Class	Species	Data type	Reference	Source
<b>Hexactinellida</b>	<i>Aphrocallistes vastus</i>	Transcriptome	Riesgo et al 2014	<a href="https://doi.org/10.7939/R3S000">https://doi.org/10.7939/R3S000</a>
<b>Demospongiae</b>	<i>Ephydatia muelleri</i>	Transcriptome	n/a	Unpublished
	<i>Spongilla lacustris</i>	Transcriptome	Riesgo et al 2014	GenBank BioProject PRJNA225591
	<i>Eunapius fragilis</i>	Transcriptome	n/a	Unpublished
	<i>Petrosia ficiformis</i>	Transcriptome	Riesgo et al 2014	GenBank BioProject PRJNA162901
	<i>Chondrilla nucula</i>	Transcriptome	Riesgo et al 2014	GenBank BioProject PRJNA225590
	<i>Ircinia fasciculata</i>	Transcriptome	Riesgo et al 2014	GenBank BioProject PRJNA225586
	<i>Pseudospongosorites suberitoides</i>	Transcriptome	Riesgo et al 2014	GenBank BioProject PRJNA225580
	<i>Crella elegans</i>	Transcriptome	Perez-Pollo et al 2013	<a href="http://dx.doi.org/10.5061/dryad.50dc6/4">http://dx.doi.org/10.5061/dryad.50dc6/4</a>
	<i>Halisarca dujardini</i>	Transcriptome	Borisenko et al 2016	<a href="http://www.ebi.ac.uk/ena">http://www.ebi.ac.uk/ena</a>
	<i>Amphimedon queenslandica</i>	Accessioned sequences	Adamska et al 2007, 2010	<a href="https://www.ncbi.nlm.nih.gov/">https://www.ncbi.nlm.nih.gov/</a>
<b>Homoscleromorpha</b>	<i>Corticium candelabrum</i>	Transcriptome	Riesgo et al 2014	GenBank BioProject PRJNA162903
	<i>Oscarella carmela</i>	Transcriptome	n/a	<a href="http://www.compagen.org/">http://www.compagen.org/</a>
	<i>Oscarella lobularis</i>	Accessioned sequence	Lapebie et al 2009	<a href="https://www.ncbi.nlm.nih.gov/">https://www.ncbi.nlm.nih.gov/</a>
<b>Calcarea</b>	<i>Sycon ciliatum</i>	Accessioned sequences	Leininger et al 2014	<a href="https://www.ncbi.nlm.nih.gov/">https://www.ncbi.nlm.nih.gov/</a>
	<i>Leucosolenia complicata</i>	Transcriptome	Fortunato et al 2012	<a href="http://www.compagen.org/">http://www.compagen.org/</a>
	<i>Sycon coactum</i>	Transcriptome	Riesgo et al 2014	GenBank BioProject PRJNA162899