



**Fig. S1.** Western blot analysis of CAs in chemosynthetic bivalves using anti-CA mouse monoclonal antibody (CokCAmab2). Western blot analysis with the monoclonal mouse antibody CokCAmab2. Each lane was loaded with 2 µg of soluble protein. Lanes 1–5, bivalves harboring thioautotrophic symbionts. Lanes 6 and 7, bivalves harboring methanoautotrophic symbionts. Lane 8, non-symbiotic bivalve. Lane 1, *C. okutanii*; lane 2, *C. soyoae*; lane 3, *C. phaseoliformis*; lane 4, *C. nautilei*; lane 5, *B. septemdierum*; lane 6, *B. platifrons*; lane 7, *B. japonicus*; lane 8, *Mytilus* sp.

Table S1. Summary of assembly and EST data on gill tissue of *C. okutanii*

Number of clones	1152
Number of base-called sequences	2297
5' sequences	1147
3' sequences	1150
Number of sequences (up to 100 bp); ESTs	1891
Number of assembled sequences; ESTs	1202
Total bases	856,112 bp
Average sequence length	453
Number of contigs	161
Number of singletons	61
Contigs with BLASTx matches	60
No hits for contigs	101
Singletons with BLASTx matches	7
No hits for singletons	54