Figure 2.1 Micrograph of dinoflagellates. Pictures (not in scale) were taken under an inverted light microscope. The vegetative cells (control) of *A. catenella* (diameter ~30 μm), *A. carterae* (diameter ~5 μm), and *C. cohnii* L (diameter ~10 μm) are shown on the left panel. For cultures of *A. catenella, A. carterae, and C. cohnii* treated with 1 mM 5MT, pellicle cysts of dinoflagellates induced by 5MT were shown (right panel). During encystment, cells shed the theca wall (arrowheads) and form a new cyst wall.
Figure 3.4 Membrane proteins in *C. colhii*. SDS-polyacrylamide gel separation of 20 μg of *C. colhii* BaD1 membrane proteins. The membrane proteins were separated on 5% stacking and 12.5% separating gel. Clear and discrete bands were observed after staining with Coomassie blue.
Figure 3.5 Immunodetection of G proteins in *C. colnii*. (A) 20 μg of membrane proteins from *C. colnii* BaD1 were resolved on a 12.5% SDS-polyacrylamide gel, transferred to PVDF membranes, and subsequently analysed by immunoblotting with Gα-specific antisera GA/1 (anti-α_com) and AS/7 (anti-α_i1/2). (B) The migration distance of protein standard against molecular weight was plotted.
Figure 4.11 Autoradiography of PTX- or CTX-catalyzed ADP ribosylation of membrane proteins. Crude plasma membranes were prepared from C. coli and subjected to [32P]ADP ribosylation by the bacterial toxins. After the ADP ribosylation reaction, 30 μg of membrane proteins from C. coli or Swiss 3T3 fibroblasts were resolved on a 12.5% SDS gel and subjected to autoradiography.
Figure 5.4 Detection of Gα proteins in C. cohni and rat brain by Northern hybridization analysis. 20 μg of total RNA from C. cohni BaD1 (Cc) and rat brain were fractionated on 1% formaldehyde agarose gel. RNA was visualized after staining with ethidium bromide. Discreet ribosomal RNAs of rat (28S and 18S) and C. cohni (24S and 17S) were detected. RNAs were transferred to nylon membrane and probed with Gα12, Gα2G'G fragment, or Gαv. Hybridization was carried at 42°C and washed with 2X SSC/0.1% SDS at 55°C.
Figure 5.5 A PCR amplification product containing multiple species of DNA. cDNA prepared from C. cohnii RNA was subjected to PCR amplification (42°C annealing temperature; 1.5 mM MgCl₂) with a series of different primers: CT1415/MP21CT49 (lane 1); CT1415/Ta29CT50 (lane 2); CT1516/MP21CT49 (lane 3); CT1516/Ta29CT50 (lane 4); iMP41/MP21CT49 (lane 5); iMP41/Ta29CT50 (lane 6); iMP19CT48/MP21CT49 (lane 7); iMP19CT48/Ta29CT50 (lane 8). PCR products were fractionated on 1.2% agarose gel electrophoresis.
Figure 5.10 Detection of G125-3 and G124-1 by Southern blot hybridization analysis. 2 μg genomic DNA of C. cohni was digested with EcoRI/SalI (lane 1), EcoRI/PvuII (lane 2), HindIII (lane 3), HindIII/SalI (lane 4), and PvuII (lane 5). Digested DNAs were fractionated on 0.7% agarose gel by electrophoresis. DNAs were transferred to nylon membrane and probed with G125-3 and G124-1.