The expression level of 13 myosins in *Tetrahymena thermophila*

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SUMMARY

Myosin is a eukaryotic actin-dependent molecular motor which plays important roles in muscle contraction, cell motility, cytokinesis, cell-cell adhesion, vesicle transport, and signal transduction. Molecular evolution of myosins can help to elucidate phylogenetic relationships between organisms. There are 13 genes for myosin (*MYO1–13*) in *Tetrahymena thermophila*. Remarkably, *Tetrahymena* myosins are too different to classify into the 35 current myosin classes. We have demonstrated for the first time that all of the *Tetrahymena* myosin genes are transcribed in the vegetative stages. The myosins are classified into four subclasses on the basis of functional domains in the tails. These are MyTH4 domain (Myo4, 6, 8), FERM + MyTH4 domain (Myo1, 2, 5, 7, 9), ATS1 domain (Myo3, 10, 11, 12) and coiled-coil domain (Myo13). We have also tried to estimate expression levels of mRNA using semi-quantitative RT-PCR.