

P73

## Molecular Cloning and Characterization of cDNA Encoding the Luciferase Gene from the Firefly, *Pyrocoelia rufa*

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To clone cDNA encoding the luciferase gene of the firefly, *Pyrocoelia rufa*, we have synthesized cDNA library and isolated the luciferase gene using RACE-PCR with gene specific primers. Sequence analysis of the cDNA encoding the luciferase gene of *P. rufa* was carried out. The 1647 bp cDNA has an open reading frame of 548 amino acid and a predicted MW of 60 kDa. The luciferase gene of *P. rufa* showed 97 % homology to that of *P. miyako*. The nucleotide sequence were used to construct a phylogenetic tree. The genomic Southern blot analysis was performed, and also, the tissue specific expression of luciferase gene was identified by Northern blot analysis.