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Molecular Cloning of the Defensin Homologue Gene from the Firefly, *Pyrocoelia rufa*

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A cDNA encoding the defensin homologue was isolated from the cDNA library of the firefly, *Pyrocoelia rufa*. Sequence analysis of the cDNA encoding the defensin homologue of *P. rufa* found the 168 bp cDNA has an open reading frame of 55 amino acid residues. The deduced amino acid sequences of the defensin homologue gene from *P. rufa* showed significant homology with the known defensins. Also 6 cystein residues in the *P. rufa* defensin homologue were conserved in the similar position as those of the known defensins. The genomic organization of the defensin homologue gene in *P. rufa* was analyzed by Southern blot hybridization. This banding pattern suggests that the defensin homologue gene exists as a single copy number in *P. rufa*. The tissue–specific expression of the defensin homologue gene was confirmed at the transcriptional level by Northern blot analysis, indicating that the defensin homologue gene is tissue–specifically expressed in the *P. rufa* fat body.