2-7. Molecular Cloning of the cDNA for NAD^+-dependent 15-hydroxyprostagladin Dehydrogenase Gene Homologue from the Mole Cricket, *Gryllotalpa orientalis*

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The NAD^+-dependent 15-hydroxyprostagladin dehydrogenase (15-PGDH) is a key catabolic enzyme responsible for the control of the biological activities of prostagladins. So far the gene has been found in a diverse organism including three insect dipteran species and one lepidopteran species. In this study, a cDNA encoding the 15-PGDH gene homologue was isolated from the cDNA library of the mole cricket, *Gryllotalpa orientalis*. The cDNA encoding 15-PGDH gene homologue of *G. orientalis* is 798 base pairs long with an open reading frame of 266 amino acid residues. The deduced amino acid sequence of 15-PGDH homologue of the mole cricket showed the highest homology to that of dipteran species, *Bactrocera oleae* (46% identity), and least homology to that of the plant species, *Arobidopsis thaliana* (22.1% identity). The phylogenetic analysis with 13 15-PGDH genes from insects, mammals, and plants resulted in a highly inclusive group composed of insect 15-PGDH genes including *G. orientalis* 15-PGDH gene homologue. Alignment of *G. orientalis* 15-PGDH gene homologue with that of other organisms showed the presence of several conserved domains characteristic for the activity of 15-PGDH gene product.