

E107 Phosphatidyl Inositol-Specific Phospholipase C Related Oligonucleotides
 Inhibit Maturation of Frog Oocyte

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PLC(Phospholipase C) performs a critical role in cell signalling. Previous investigation demonstrates that PI-PLC(phosphatidyl inositol-specific PLC) and PC-PLC (phosphatidyl choline-specific PLC) participate in oocyte maturation induced steroid hormone. We performed PCR(polymerase chain reaction) to obtain PI-PLC related DNA fragment with a set of primers that designed to conserved X domain of mammalian PI-PLC. We obtained two PCR clones from chromosomal DNA of *Rana nigromaculata* and then named pX1 and pX2. By sequence analysis, these clones were homologous to X domain of mammalian PI-PLC. To study of effect on oocyte maturation, we prepared two PI-PLC related anti-sense oligonucleotides based on the sequence of clones. Two PI-PLC related anti-sense oligonucleotides were microinjected to oocyte of *Rana nigromaculata*. Both oligonucleotides inhibit progesterone-induced oocyte maturation in a dose dependent manner. Anti-sense oligonucleotide of pX1 was more sensitive than anti-sense oligonucleotide of pX2 to inhibit oocyte maturation.

E108 The Expression of EF-1 α Genes and the Activity of EF-1 α
 Proteins Are Regulated During *Drosophila* Development

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The expression of two EF-1 α genes, F1 and F2 through *Drosophila* development was investigated using RT-PCR technique with specific primer sets for each gene. F2 gene has been known to be expressed only in pupation stage while F1 gene is expressed constitutively as a house keeping gene. F1 transcript was detected at a constant level through all stages of developemen as reported by Hovemann *et al.* (1988). However, F2 transcript was also detected in all stages of development, with changes in amounts. The result was controvertial to the Hovemann's result maybe due to the increased sensitivity of detection method, RT-PCR compared to the dot blot performed by Hovemann. The protein EF-1 α was detected as two bands, 49 kDa and 51 kDa on western blottingt. The amount of 49 kDa protein varied through developmental stages. Also, the tRNA transfer activity was changed through development. The change pattern of the quantity of protein and activity implies that 49 kDa protein is responsible for the activity changes. However, the correspondance of each protein band to each gene is to be elucidated further.