

3-3-16. High Density Lipophorin Receptor of Lepidopteran Insect, *Galleria mellonella*

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Lipophorin receptor (LPR) cDNA from the fat body of *Galleria mellonella* (Lepidoptera) was cloned and sequenced. This is the first result in this order, Lepidoptera. It showed the pattern of the VLDL receptor which belongs to the LDL receptor family. The homology with other lipophorin receptors in insects, *Locusta migratoria* and *Aedes aegypti*, was very high and each domain was highly conserved. Polyclonal anti-LPR antibody prepared against expressed fragment between ligand binding domain and EGF-precursor homology domain specifically detected the LPR. Through immuno-blotting, LPR of larval fat body has the approximate molecular mass of 97 kDa under non-reducing conditions. This result was perfectly accordant with that of the ligand-blotting. The variant LPR was expressed in the fat body of *G. mellonella*; one is LPR which lacks 84 bp of O-linked sugar domain and the other is full length form of LPR and both forms were detected by the polyclonal anti-LPR antibody. LPR from the fat body of *G. mellonella* was differently expressed according to the developmental stage with specific abundance in pre-pupal stage. A 20-hydroxyecdysone (20-HE) plays a crucial role on insect development. From this conception 20-HE was treated to the day 1-2 last instar larvae and drastic induction was observed 48 h after treatment. Also, cholesterol leads the induction of the LPR.