The Antheraea pernyi Arylphorin That is Immunologically Cross-Reacted with the Storage Proteins of the Wild Silkmoths, Antheraea yamamai, Samia cynthia pryeri and Actias gnoma

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The occurrences of proteins related to Antheraea pernyi arylphorin in haemolymph, fat body, integument, mid gut and silkgland of the wild silkmoths, A. yamamai, A. pernyi, Samia cynthia pryeri and Actias gnoma in the 5th larval instar were investigated by immunoblot analysis using mouse polyclonal antibody for A. pernyi arylphorin as probe. In A. yamamai, A. pernyi and A. gnoma, the major immunoreactive proteins with a molecular weight of 80 kDa were observed in the haemolymph, integument, fat body and mid gut except silkgland. In S. cynthia pryeri, the immunoreactive proteins with a molecular weight of 80 kDa were also observed in the haemolymph, integument and fat body except mid gut and silkgland. These results revealed that the A. pernyi arylphorin has almost same identity with those of the wild silkmoths, A. yamamai, S. cynthia pryeri and A. gnoma with respect to immunological reactivity. In addition, it can be considered that the A. pernyi arylphorin has been evolved from a common ancestor gene of the wild silkmoths described as the above.