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Comparative Immunohistochemical Analysis of Antheraea pernyi Arylphorin with Storage Proteins of the Wild Silkworms, Antheraea yamamai, Samia cynthia pryeri and Actias gnoma

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The occurences of proteins related to *A pernyi* arylphorin in haemolymph, fatbody, integument, mid gut and silkgland of the wild silkmoths, *A. yamamai*, *A. pernyi*, *S. cynthia pryeri* and *A. gnoma* were analysed byimmunohistochemical 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 80kDa 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 80kDa were also observed in the haemolymph, integument and fat body except mid gut and silkgland. Also the *A. pernyi* arylphorin were detected immunohistochemically in cuticle, fat body, midgut, testis, posterior silkgland, middle silk gland, Malpighian tubule and ovary of the larva. These results reveales 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 and is distributed in several tissues and reproductive organs of the worm eventhough it is synthesized only in fat-body cells. 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.