

RESEARCH NOTE

IDENTIFICATION OF IgE-BINDING PROTEINS OF RAW AND COOKED EXTRACTS OF *LOLIGO EDULIS* (WHITE SQUID)

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Abstract. Allergy to different classes of mollusks, including squid, which are members of the class Cephalopods has been reported. Tropomyosin, a major muscle protein, is the only well-recognized allergen in squid. The aim of this study was to characterize IgE-binding proteins of local *Loligo edulis* (white squid) consumed in Malaysia. Protein profiles and IgE-binding proteins were detected by sodium dodecyl sulfate-polyacrylamide gel-electrophoresis (SDS-PAGE) and immunoblotting using sera from 23 patients with positive skin prick test to raw squid extract. SDS-PAGE of the raw extract exhibited 21 protein bands (10-170 kDa) but those ranging from 19 to 29 kDa and 41 to 94 kDa were not found in the cooked extract. Immunoblotting of raw extract demonstrated 16 IgE-binding bands, ranging from 13 to 170 kDa. A heat-resistant 36 kDa protein, corresponding to squid tropomyosin, was identified as the major allergen of both extracts. In addition, a 50 kDa heat-sensitive protein was shown to be a major allergen of the raw extract. Our findings indicate that the allergen extract used for diagnosis of squid allergy should contain both the 36 kDa and 50 kDa proteins.

Key words: *Loligo edulis*, allergy, IgE-binding proteins, SDS-PAGE

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