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Purification and characterization of a lectin from hard roe of skipjack tuna, *Katsuwonus pelamis*

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A lectin (KPL) from the hard roe extract of skipjack tuna, *Katsuwonus pelamis* was purified by gel filtration on Sephadex G-100 and affinity chromatography on asialofetuin-Sepharose 4B. A molecular weight of intact lectin was estimated to be approximately 150 kDa as measured by gel filtration chromatography and four identical subunits of the lectin appeared on SDS-PAGE under denaturing condition. The lectin seems to be a glycoprotein by Periodic acid-Schiff (PAS) staining technique and it appears to be a tetrameric glycoprotein and the molecular weight of each subunit was 37.5 kDa. The lectin specifically agglutinated human blood type B erythrocytes, but not other human blood types. Hemagglutination inhibitory test indicated that D-galactose, lactose and asialofetuin among the materials tested were potent inhibitors of KPL-induced hemagglutination. The test exhibited an optical pH 6.0-8.5 and temperature, 40℃ in the present of Ca^{2+}. In additon, its activity was inhibited by EDTA and restored by addition of the divalent metal cation. The amino-terminal amino acid sequence of the lectin was revealed as Pro-Val-Gln-Leu-Cys-Asp-Ala-Lys-Cys-Thr.

Key words: *Purification; Characterization; Hard roe; Skipjack tuna; Lectin.*