Characterization of an Aminopeptidase and a Proline Iminopeptidase from Cabbage Leaves

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Aminopeptidase, preferring phenylalanine-*p*-nitroanilide as substrate, and proline iminopeptidase, highly-specific for proline-*p*-nitroanilide, were isolated from cabbage leaves (*Brassica oleraceae* var. *capitata)*. As pH optima, 7.2–7.5 for aminopeptidase activity and 8.0–8.5 for proline iminopeptidase were determined. Both peptidases were strongly inhibited by *p*-chloromercuribenzoic acid, heavy metal ions and urea. The molecular weights were determined by gel filtration to be 56 and 204 kDa, respectively. The iminopeptidase was decomposed during SDS electrophoresis to four subunits of 50 kDa. Minor impurities of myrosinase-associated protein (~70 kDa) were found in both preparations. Preliminary data of their amino acid sequences showed similarities to those of aminopeptidases N (family M1) and proline iminopeptidases (family S33).

Key words: Cabbage, Aminopeptidase, Proline Iminopeptidase